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Global health is an immensely complex undertaking. No single approach can fit every situation. No one-size-fits-all solution can address every challenge. Context matters. History matters. People matter.

For two decades, ICAP at Columbia University has been navigating the complexities of global health to help bring about measurable change in the lives of countless people across the globe.

Through a unique approach that combines design, implementation, and scale-up of novel health delivery models, training and education, research, and impact measurement, ICAP has developed the tools, resources, expertise, and vision needed to meet the most critical health challenges facing the world – from HIV, tuberculosis, and malaria to COVID-19, mpox, antimicrobial resistance, and the health effects of climate change and displacement.

At the heart of this special formula is partnership. From health providers to program planners and implementers; from policymakers to community members; from funders to recipients of services, our work is firmly anchored in partnership and collaboration at every level.

As you will note from this report, ICAP's impact this past year was a collective achievement. Within these pages, we hear from the people who *are* global health – health providers, educators who train the health workforce, peers and mentors who work relentlessly to guide and support others in their communities,

those who design improvements to health infrastructure that make all the difference in the quality of services delivered. It is all of these people – and many more – working together with a shared vision of healthy people, empowered communities, and thriving societies.

As we head into ICAP's third decade, we do so with a sense of solidarity, optimism. and humility. The support we have provided in advancing the global HIV response, the steps we took to help confront the COVID-19 pandemic, the actions we are taking with our partners to prepare the world for the health threats of tomorrow and to usher in a new era of health equity for all people - these efforts put ICAP at the center of a global commitment to improve the health and well-being of populations across the globe. We are confident that, with each passing year, we will continue to take knowledge to action as we work to meet whatever challenges lie ahead.

And, as we take this opportunity to reflect on our most recent achievements, I wish to thank all who have supported our work. These successes belong to you as well. Today, and tomorrow, we are all global health.

Wafaa El-Sadr, MD, MPH, MPA

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





ICAP works in 40 countries across 5 continents to solve some of the world's most pressing health challenges

- HIV/AIDS
- COVID-19
- Tuberculosis
- Malaria
- Emerging Infections
- Maternal and Child Health
- Climate Change
- Migration
- Antimicrobial Resistance

# **ICAP's Expertise**

- Global Health Security
- Human Resources for Health
- Infection Prevention Control
- Laboratory Strengthening
- Quality Improvement
- Strategic Information
- Surveys
- Technical Assistance
- Human-Centered Design

# Through ICAP **Support:**

51,000,000

People have been tested for HIV

9,200,000

HIV patients have been screened for TB

2,400,000

People have received **HIV** treatment

12,000,000

Pregnant women have received HIV testing

**790,000** Women have received antiretrovirals to prevent HIV transmission to their babies

400,000

Health workers trained

**218,000** People have received pre-exposure prophylaxis (PrEP)

**7,965** Health facilities supported

**7,025** Laboratories provided with technical assistance

# We Have Been Transforming Global Health for Two Decades and Counting...

2003

# 2002

The Mailman School of Public Health at Columbia University launches a groundbreaking effort to make services to prevent mother-to-child transmission of HIV the entry point to lifelong HIV care and treatment for women, their partners, and children. The MTCT-Plus Initiative is the first multi-country program to prove that it is possible to make HIV treatment a reality in resource-limited settings.

# 2003

ICAP at Columbia
University is founded
under the leadership
of Wafaa El-Sadr to
support the rapid
scale-up of HIV care
and treatment in
sub-Saharan Africa.

# 2004

ICAP launches a large-scale program to help eight African countries bring lifesaving HIV treatment to their people, with a particular focus on families living with HIV.

# 2005

Recognizing health system strengthening as key to responding effectively to HIV and other health threats, ICAP supports the training of health workers and improvement of laboratory, supply chain, and data systems.

# 2009

ICAP launches the Global Nurse Capacity Building Program, a nine-year effort to support human resources for health on the front lines, with a focus on nurses and midwives, the backbone of health systems in Africa and around the world.

# 2008

ICAP takes on the long-term challenge of combating malaria, beginning in one of the hardest-hit countries: Ethiopia.

# 200

ICAP launches the Next Generation program, the first of several continuing initiatives to give students field-based global health training.

# 200

ICAP pilots the Nurse Mentorship Teaching Program in South Africa, a comprehensive HIV training program for nurses that, in the coming years, would expand across sub-Saharan Africa.

#### 2010

ICAP expands its work beyond HIV treatment to include diverse biomedical, behavioral, and structural HIV prevention efforts.

ICAP establishes and builds the capacity of local non-governmental organizations in six countries to implement PEPFAR programs

#### 0011

In communities where it has been working, ICAP broadens its support to address additional health threats, including maternal and child health, tuberculosis, and non-

communicable diseases.

#### 2012

ICAP completes the eightyear Multi-Country Columbia Antiretroviral Program (MCAP), which results in more than one million people receiving HIV care and more than 500,000 starting on HIV treatment in eight sub-Saharan African countries. This formed the foundation for further expansion of ICAP's global reach and its contribution to treatment scale-up.

#### 201

Using a novel approach focused on migrant miners and their families in Lesotho, ICAP puts in place a comprehensive, family-focused program that integrates HIV and tuberculosis care.

# 2**017**

ICAP extends its tradition of cutting-edge knowledge generation — conducting epidemiological, clinical, implementation science, and behavioral research around the world. A renowned thought leader, ICAP continues to shed light on critical issues such as precision public health, the intersection between HIV and non-communicable diseases, HIV and aging, surveillance and surveys, and new imperatives in migration and health.

# 6

To support health systems coping with the large numbers of people seeking HIV treatment, ICAP focuses on patient-centered differentiated service delivery models, launching the multicountry HIV Coverage, Quality, and Impact Network (CQUIN).

ICAP responds to the Ebola epidemic in West Africa by leading a rapid evaluation of community care centers in Sierra Leone.

# 2014

ICAP launches the groundbreaking Population-based HIV Impact Assessment (PHIA) project to measure progress in the national HIV response in more than a dozen PEPFAR-supported countries and to serve as a blueprint for future direction.

# 201

ICAP engages in a series of innovative multi-year, multi-country efforts to improve the ability of countries to advance toward HIV epidemic control – including OpCon, QCIP, Optimize, TRACE, and Resilient and Responsive Health Systems.

# 201

Results from the Evidence for Contraceptive Options and HIV Outcomes study – supported by ICAP via Eswatini's first-ever interventional randomized clinical trial – offer groundbreaking insight into HIV risk and reversible methods of contraception.

# 202

ICAP takes a lead role in responding to the global COVID-19 pandemic through research, surveillance, and resource mobilization in regions worldwide.

# 20

ICAP expands into Central America with a focus on HIV prevention in El Salvador, Guatemala, Honduras, Nicaragua, and Panamá.

2023

# 202

ICAP launches new Global Health Security projects designed to increase pandemic preparedness in Georgia and war-torn Ukraine.

# 0

ICAP expands its focus on the health of migrants and displaced persons with projects in Colombia, Perú, and Mozambique, and conducts the Uganda Refugee Population-based HIV Impact Assessment (RUPHIA) survey.





Around the world, the long distances between remote communities and health facilities hinder many people from accessing the lifesaving health services they need. In East Kazakhstan, which is predominately mountainous and rural, many communities are located far from the closest AIDS center, which provides antiretroviral treatment (ART) for people living with HIV.

In November 2022, in collaboration with the East Kazakhstan AIDS Center, ICAP conducted a training for primary health care providers from the towns of Altai, Shemonaikha, and Glubokoe on how to provide early initiation of ART.

ICAP's trainers showed the providers how to counsel patients in their homes while specialists at the East Kazakhstan AIDS Center – located in East Kazakhstan's regional center, Oskemen City - supervise via a telehealth platform. Following these initial consultations, the providers continue to support people living with HIV to initiate ART within seven days of diagnosis at health facilities in their own communities.

"Decentralization of HIV services is vital for ensuring that people living with HIV can receive the treatment they need as early in their diagnosis as possible," said Anna Deryabina, MD, DrPH, MScIH, regional director of ICAP in Eurasia. "The trainings we are providing are giving health care workers the tools and knowledge they need to make that possible."

The results of this work have been striking. In the first quarter of 2022, only 41.6 percent of all newly diagnosed people living with HIV started ART within seven days of diagnosis. Following the project's decentralization efforts in 2023, this increased to 79.6 percent, indicating a significant improvement in ART initiation rates among newly diagnosed people living with HIV.

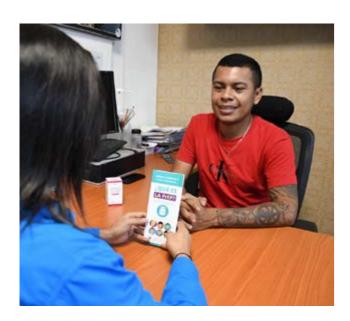
> Supported by the U.S. President's **Emergency Plan for AIDS Relief** (PEPFAR) through the Centers for **Disease Control and Prevention** (CDC).



Forced migration is a major determinant of health. Refugees and migrants are among the most vulnerable members of society, often facing discrimination, poor housing and working conditions, and limited access to health services. Mobile populations can also face higher vulnerability to HIV acquisition.

In Latin America, ICAP is working to increase access to basic health services, as well as HIV prevention, care, and treatment services, for migrants.

In Central America, key populations – including sex workers, transgender people, and people who inject drugs, among other populations – face barriers to HIV prevention, care, and treatment. For example, in Panamá City, most female sex workers are also migrants, living in fear of deportation, and thus, reluctant to visit health facilities.



To improve access to pre-exposure prophylaxis (PrEP) for HIV prevention, ICAP collaborated with the NGOs Putamente Soñadoras, Probidsida, and Asociación Hombres y Mujeres Nuevos de Panamá, organizations dedicated to supporting the health of female sex workers and other key populations, to perform rapid HIV testing and deliver PrEP in the community. Close coordination with the Panamá Ministry of Health made it possible to link clients to follow-up visits at public health facilities for continued care.

"PrEP access can be a challenge for migrant populations, and with other factors such as sex work, gaps in access to health services are even further magnified," said Ricardo Mendizabal, MPH, ICAP regional director in Latin America. "Collaboration with NGOs is crucial for helping migrants and other mobile populations maintain adherence to HIV prevention strategies and consistency in ongoing testing."

Meanwhile, long-standing economic and political crises in Venezuela have led to an unprecedented displacement of populations throughout Latin America and the world. In Perú and Colombia, which host nearly 1.5 million and 2.5 million Venezuelan migrants, respectively, ICAP is collaborating with the non-profit AID for AIDS, the Centers for Disease Control and Prevention (CDC), and the ministries of health of both countries to develop innovative strategies to bring comprehensive HIV prevention, care, and treatment services to Venezuelan refugees, who otherwise face obstacles to care.

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



On November 23, 2021, the South West Ethiopia Peoples' Regional State was officially constituted as Ethiopia's 11th region. Just six months later, a malaria outbreak slammed the fledgling state following unseasonable rainfall, making it the third largest malaria-reporting region in the country.

In May 2022, South West Ethiopia's government requested emergency help from ICAP, and it immediately responded. Within a week, ICAP – in cooperation with the Ministry of Health – deployed a clinical advisor to the region, along with a team of laboratory and monitoring and evaluation experts. The team assessed the malaria situation and then provided emergency support to overburdened health facilities.

"We trained and mentored hundreds of laboratory personnel working in the region in malarial microscopy and quality-assurance procedures," explained Ayenachew Abebe, MD, ICAP's team leader for the response. "We also mentored health extension workers and clinicians working in the health posts and health centers on how they can best apply rapid diagnostic tests for malaria diagnosis."

In addition, the ICAP team provided on-the-job training to health practitioners and supplied health facilities with essential tools and materials such as fever case management and malaria treatment guidelines, malaria epidemic monitoring charts, malaria diagnosis registration books, and patient information documentation forms. Finally, it launched a Malaria Mass Test and Treat initiative in two districts that showed the highest burden of malaria cases.

Thanks to the quick response of ICAP and its partners, malarial transmission rates dropped by almost 75 percent within six weeks, and many lives were saved.

Supported by the Malaria
Diagnosis and Treatment Activity
(MDTA), an initiative funded
by the United States Agency
for International Development
(USAID) via the U.S. President's
Malaria Initiative.









At the onset of the COVID-19 pandemic in early 2020, resources intended for infectious disease management – including for HIV – were suddenly rationed across health facilities globally.

To address interrupted access to health services, the RISE program in Nigeria quickly pivoted by implementing a community-based model that ultimately improved viral load suppression among people living with HIV.

RISE's community-based ART surge strategy harnessed differentiated service delivery (DSD) - a responsive, client-centered approach that adapts HIV services across the care cascade to better serve individual contexts - to improve viral load testing and antiretroviral treatment (ART) uptake, which were severely disrupted during the pandemic. RISE supported ART refills and viral load sample collection in a variety of spaces, including homes, communitybased private health facilities, and public health facilities. The ICAP RISE team also introduced multi-month dispensing, meaning recipients of care could receive ART for three or six months at a time, requiring fewer trips to health facilities. When the timely return of viral load test results became a challenge, RISE enabled remote e-results, decreasing turnaround time from 35 to 25 days.

"Integrating routine viral load services into existing DSD models," said Timothy Yakubu, a senior laboratory advisor for RISE in Nigeria, "enabled uninterrupted, client-centered HIV services, even in the face of an evolving pandemic."

ICAP, through RISE, supports 102 facilities in Akwa Ibom, Cross River, and Taraba states in Nigeria. As a result of the program's client-centered approach, ART uptake among recipients of care at these facilities increased from 59 to 75 percent just six months into the pandemic. There was also an increase in viral load coverage from 71 to 96 percent and viral load suppression from 83 to 90 percent.

The RISE program's ability to rethink how health services could be provided at a time when people around the world were faced with unprecedented challenges proved to have long-term, sustained impacts – ultimately improving health outcomes for people living with HIV. By April 2023, RISE Nigeria had routinized the community services it had enhanced during the pandemic, resulting in 98 percent viral load suppression.

"We worked as a team," said Friday Abbah, a lab advisor for RISE in Nigeria, "and every contact with a patient in the health facility or community, whether by a lab scientist or case manager, was an opportunity to provide services."

RISE is a Jhpiego-led consortium supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the U.S. Agency for International Development (USAID).



Maria Isabel Rodriguez is a nurse at CMI Benguela health facility in Angola. The recipients of care she works with, she said, know her number by heart. But that wasn't always the case.

"I used to see women run away when they learned they were HIV-positive," she said. "Now, we have developed a system that supports them to be treated immediately after they test positive."

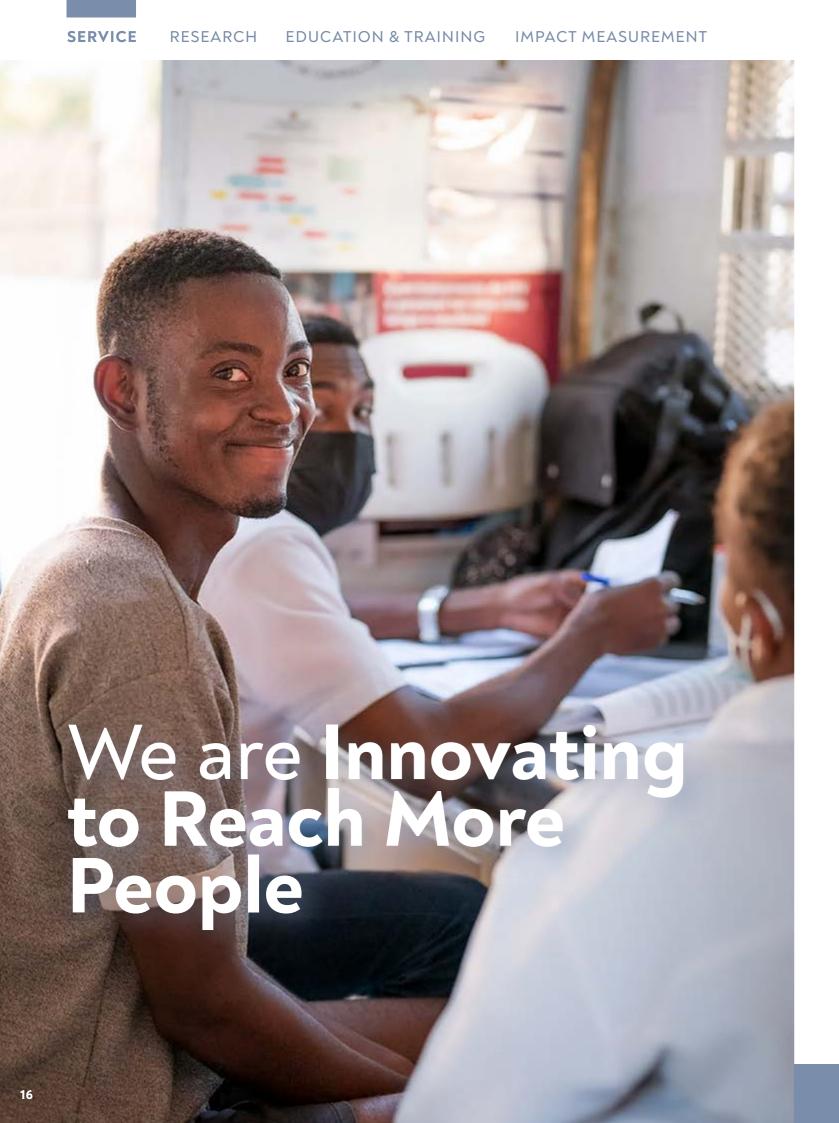
ICAP in Angola provides technical assistance to 22 health facilities - 17 offering antenatal care - in four provinces of the country.

At CMI Benguela, ICAP provides Rodriguez and other health staff mentorship and reinforcement for counseling pregnant and breastfeeding women seeking HIV services. A crucial aspect of Rodriguez's work is verifying clinical files, adding reminders to files of patients who are due for viral load testing. She is also responsible for medical calls to recipients of care who have missed appointments or failed to initiate treatment.

"When a pregnant or breastfeeding woman learns of her positive test results," Rodriguez said, "she needs a lot of support."

Since ICAP's launch in Angola, the program has catalyzed major improvements in antenatal care with the support of health staff like Rodriguez. In 2023, 99.6 percent of pregnant women knew their HIV status compared to 38.6 percent of pregnant women in 2019. By March 2023, viral suppression among pregnant women living with HIV was 94.7 percent.

"We build a strong bond with these women," Rodriguez said. "They trust us, we become a family, and they call us when they need us."





"The first thing I do is give myself as an example," said Miriam Lete (pictured above). "I tell people to look at me and I ask - don't I look healthy?"

Lete is a community counselor and is living with HIV. She collaborates with ICAP's mobile clinics, which provide comprehensive HIV and tuberculosis (TB) prevention with general health services at the community level in Nampula, Mozambique. Her job is to coordinate activities between the mobile clinics and the community.

As a woman living with HIV – and someone who also lost a parent to the virus – Lete builds trust with people seeking services by using herself as an example of someone who is successfully living with HIV, but she also understands some of the barriers, including stigma, that people continue to face.

"This mobile clinic is a safe space for people," Lete said, "where they do not experience discrimination for accessing services."



In 19 districts, ICAP's mobile clinics offer HIV testing, pre-exposure prophylaxis (PrEP), condoms, antiretroviral treatment initiation and continuation, sexually transmitted infection screening and treatment, psychosocial support, viral load testing, and TB prevention, among other general health services.

Importantly, mobile clinics are situated close to households, workplaces, and congregation areas, providing both daytime and evening mobile clinic options, and serving general populations, key populations, adolescents and youth, and internally displaced people. At the site Lete serves, the mobile clinic parks at an evening "hotspot" frequented by sex workers and their clients.

Between October 2022 and March 2023, the mobile clinics provided health services to 23,951 people, of whom 11,782 were tested for HIV, with 901 people identified as HIV-positive. Over the course of the year, a total of 1,252 people initiated antiretroviral treatment at mobile clinics in Nampula.

"Mobile units take away the barriers," said Eduarda Pimentel de Gusmao, MD, MPH, ICAP's country director in Mozambique. "They meet communities where they are."



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



Beatrice (pictured above), who is HIV-positive, has just arrived for her appointment at Mazabuka General Hospital in Zambia's southern province. Walking into the health facility, she follows the path from check-in to check-out. First, nurses take her vitals; second, she meets with a doctor to discuss her medication regime; third, a health staff administers her viral load test. For the first time, the ICAP in Zambia team has integrated a valuable fourth step that Beatrice and other recipients of care will take following an appointment - giving feedback about her experience.

In October 2022, ICAP introduced the patient feedback kiosk program at the hospital. At the end of an appointment, patients are given the option of filling out a survey about their appointment experience. Their answers provide valuable information used to build more effective programs.



In three different language options - English, Lozi, and Tonga - the kiosk asks patients a series of simple questions: How was the service you received today? What would you like to see improved? The survey can be read aloud to a patient who cannot read.

From October 2022 to March 2023, 542 patients participated in the kiosk survey and, since then, teams have begun integrating feedback into hospital programs. When some patients noted, for example, that they would like to see decreased waiting times and improved attitudes from their care providers, health staff both developed time slots for patients to arrive at designated times of the day and underwent "customer care" training to better relate to their

"Data is a powerful tool," said Philip Koni, strategic information director at ICAP in Zambia. "This kiosk is helping us understand what might improve patient experience at the facility, thus increasing the likelihood they would come again, and ultimately improving their health outcomes in the long run."

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



In Lubumbashi, Democratic Republic of Congo (DRC), women gather, carrying with them the money they earned that week.

The women belong to a savings group for HIVpositive and HIV-negative caregivers of orphan and vulnerable children. Members gather not only to discuss their own or a family member's health status, but also to gain financial skills to save for the future - a future many of them now have after maintaining antiretroviral treatment for the first time.

Members of savings groups contribute to a communal bank; ICAP provides training on important financial planning skills, such as tracking money spent on a personal ledger and starting a personal business. Ultimately, the bank serves as a crucial safety net for its members.

Janinette, for example, who is living with HIV, took out a loan to start her own business sewing and selling clothes. With the money she made, she was able to pay for her mother's doctor's bills. Next, she said, she hopes to buy a sewing machine.

Louise - who is not living with HIV, but cares for her three-year-old granddaughter who is - turns to the savings group for long-term economic stability. Louise's own daughter passed away from HIV two years prior, leaving the granddaughter in Louise's

"When my daughter passed, it was incredibly hard, but now I am surviving," Louise said. "By the end of the year, my granddaughter will go to school for the very first time, healthy."

Many members of the savings groups benefit from an ICAP-supported scholarship program that sends children from the families to school, tuition costs and fees covered.

Among the 34 groups ICAP supports, its members saved nearly \$24,000 in just one year.

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



Adolescents and younger children on antiretroviral treatment (ART) for HIV often have lower viral suppression rates when compared to adults due to challenges in adherence related to their developmental issues, stigma, and other obstacles.

To address this challenge in South Sudan, ICAP has introduced Operation Triple Zero (OTZ), a program that puts young people front-and-center in the effort to keep their peers on lifesaving ART and to believe in themselves.

Operation Triple Zero stands for zero missed appointments, zero missed drugs, and zero viral load. When the program began in South Sudan in March of 2022, 143 adolescents and young people were enrolled at Juba Teaching Hospital and Al-Sabah Children's Hospital. Within a few weeks,



through regular meetings with caregivers and OTZ Champions – young people living with HIV who have committed to supporting their peers – 100 percent of those enrolled in the program were adhering to their treatment.

"I tell them, I am also affected, don't be afraid, I can be a friend. If you need help, I can help you. So any challenge you have to bring to me, then I will look for a solution," said Ruta (pictured below), an OTZ Champion at Al-Sabah Children's Hospital, when asked why the program has been so successful. "If their drugs are finished, they don't have money for transport, we will have motorbikes here. We make the refills for them, then we collect their medicine, we go to the community, we help them out to make it easy for them, we show them we are on their side."

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



"I know I am not alone," said Leilla.
"Hope comes with education and counseling."

When Leilla tested positive for HIV, she felt shame and even decided to stop her antiretroviral treatment (ART) three months after starting it. After learning about – and joining – the peer educator program in her home region of Gitega, Burundi, Leilla found the community she needed to maintain treatment and now supports other adolescents living with HIV to do the same.

In Burundi, RISE established the adolescent peer educator program in 11 health facilities in May 2022. Thirty adolescents enrolled in the program, including Leilla, were trained using ICAP's adolescent peer educator training curriculum, Positive Voices, Positive Choices.

Following the training, Leilla became involved in supporting other adolescents living with HIV, conducting follow-up home visits for individuals who missed appointments or interrupted treatment, helping schedule clinic appointments, providing education on sexual and reproductive health, and supporting health care workers to plan and conduct ART adherence club meetings for youth living with HIV.

"I felt sad when I first tested positive," said Leilla. "But not only did I regain hope, I believe I can help others."

By the end of March 2023, viral load suppression among adolescents at health facilities that offer peer education was 98 percent.

We are Responding to Emerging Health



surveillance program in Georgia to track the presence of COVID-19 and other pathogens. ICAP is providing technical assistance to Georgia's National Center for Disease Control and Public Health (NCDC) to develop, plan, and implement the program, and to help build local capacity for

interpreting wastewater surveillance data.

Wastewater surveillance data can be an important tool for informing public health actions by providing early warnings in advance of clinical detection of rising COVID-19 cases. It also requires far fewer resources, equipment, and personnel than the

scale of COVID-19 and its variants, as well as other pathogens that can be detected in wastewater, can help predict a pandemic's pathway.

"Wastewater surveillance is such a vital tool because a virus like SARS-CoV-2 can be detected even if people do not have symptoms," said Suzue Saito, PhD, MIA, MA, director of Strategic Information at ICAP and principal investigator of the project. "It's this kind of knowledge that is going to help us get ahead of major outbreaks."





Supported by the U.S. Centers for **Disease Control and Prevention** 



Threats



A WHO and UNICEF estimate showed that within one year, due to the COVID-19 pandemic, the number of unvaccinated children in Sierra Leone increased from 15,020 in 2021 to 25,000 in 2022 – leaving large numbers of children vulnerable to such diseases as measles, polio, diphtheria, tuberculosis, and hepatitis, among others.

To improve and strengthen Sierra Leone's vaccination efforts, ICAP provided technical, strategic management, and operational support to the Sierra Leone Ministry of Health's Child Health/Expanded Program on Immunization (CH/EPI).

"An ICAP assessment of the barriers to vaccination in Sierra Leone showed several gaps," said Mame Awa Toure, MD, MSc, ICAP's country director in Sierra Leone. "We found that the lack of coordination between health development partners, inadequate microplanning at district and health facility levels, and knowledge gaps on integrated immunization among health care workers were some of the reasons for low vaccination uptake in communities."



ICAP supported Sierra Leone's Ministry of Health and Sanitation (MoHS) to develop a national strategic vaccination plan that would highlight the gaps and areas of interventions for all health development partners (HDPs) to implement. ICAP and the HDPs developed micro-plans to address immunization barriers, conducted nationwide training of supervisors and vaccination teams, and mobilized local government agencies to increase vaccination demand in communities.

Through these concerted efforts, Sierra Leone reduced the number of zero-dose unvaccinated children by 35 percent within a month. Between February and March 2023, the Sierra Leone MoHS vaccinated 8,750 out of 25,000 children.

"ICAP's interventions have strengthened the collaboration between the National Immunization Program, the National Council of Paramount Chiefs, and other health development partners," said Chief Fayia Sovula, chairman of the Sierra Leone National Council of Paramount Chiefs. "We are determined to generate demand for vaccines and to communicate vaccination interventions so we can improve the health of our communities."

Supported by the U.S. Centers for Disease Control and Prevention's Coronavirus Disease 2019 International Vaccine Implementation and Evaluation (CIVIE) Program. The CIVIE program was established by the CDC to work with ministries of health to support the planning, execution, and evaluation of COVID-19 vaccination programs.



Since 2017, CQUIN has fostered knowledge-sharing activities for participating countries as part of global efforts to end the AIDS epidemic as a public health threat by 2030. This support has been mainly focused on supporting the Ministries of Health to scale-up high-quality, differentiated service delivery models for HIV treatment in Africa through webinars, workshops, meetings, and country-to-country learning exchanges. However, that focus has shifted with research showing that HIV testing is critical to achieving epidemic control and the UNAIDS 2030 targets.

"While most CQUIN partner countries have made great strides in scaling up HIV treatment, the percentage of people who know their status is far too low in many settings," said Miriam Rabkin, MD, MPH, director for Health Systems Strategies at ICAP (pictured below, center). "New testing strategies and new testing technologies makes this a good time for country teams to share lessons learned and think about ways to accelerate progress."

CQUIN has developed a Differentiated HIV Testing Services Capability Maturity Model – a tool for countries to self-assess successes, gaps, and challenges in their national HIV testing programs. Results from that self-assessment form the basis for developing most country-specific plans. In addition, CQUIN has established a community of practice for network members interested in differentiated HIV testing services while continuing to focus on shaping HIV treatment models for people established on HIV treatment, those with advanced HIV disease, tuberculosis and HIV, and those with HIV and non-communicable diseases.

Supported by the Bill and Melinda Gates Foundation.









Drug-resistant bacteria have posed a considerable threat to human health in Ukraine for several years now. In fact, a study of 17 Ukrainian regional hospitals from 2019 to 2021 found that 85 percent of health care-associated infections were from multidrug-resistant organisms.

Since the Russia invasion of Ukraine in February 2022 and the resulting war, global health experts believe antimicrobial resistance (AMR) in Ukraine has only worsened, especially with the rise in traumatic wounds and an increasingly overburdened health care system.

ICAP is supporting AMR activities in Ukraine, including laboratory detection, antimicrobial stewardship, and infection prevention and control, as well as laboratory-based surveillance, environmental surveillance, and laboratory systems strengthening.

ICAP is also supporting technical training that includes clinical and laboratory twinning between international AMR experts and Ukrainian clinicians and laboratorians.

In addition to providing AMR support in Ukraine, ICAP is also working to strengthen AMR surveillance systems in Eswatini, in both the human and animal sectors. For example, at Mbabane Bacteriology Laboratory at Mbabane Government Hospital, ICAP's support for laboratory renovation along with new equipment has improved the speed at which technicians can identify pathogens and test their susceptibility to antibiotics.

"The number of samples we can process has increased, and the susceptibility testing result turnaround time improved from seven days on average to 24 hours," said one of the lab technologists. "You cannot imagine how this new equipment is making my life easy."

Ukraine: Supported by the U.S. Centers for Disease Control and Prevention (CDC).

Eswatini: Supported by The Fleming Fund.



Boniface Thuranira had only worked as a registered nurse for seven months when he was made the infection prevention and control (IPC) focal point for Maua Methodist Hospital in Kenya in June 2020. For three months he struggled to learn about and implement IPC procedures at the facility.

"With zero knowledge on IPC, it was hard to initiate a program which was non-existent in a level 4 hospital," Thuranira recalled.

IPC refers to an evidence-based and practical approach to protecting patients and health care workers from contracting avoidable infections at health facilities. Examples of IPC measures include hand hygiene, the use of personal protective equipment, and injection safety at all levels of the health system.

Spurred in part by stories like Thuranira's, ICAP launched the East Africa IPC Network in July 2020 in Ethiopia, Kenya, Tanzania, and Uganda, not long after the COVID-19 pandemic made apparent urgent gaps in IPC practice and preparedness in the region's health facilities. For three years, the network's members — health care workers selected to be IPC focal points by their respective hospitals

 met weekly for IPC virtual training sessions that also included opportunities for them to share on-the-ground experiences and lessons learned as they worked to curb the spread of COVID-19 and other infectious diseases like Ebola and the Marburg virus.

"When ICAP came in to partner with our facility on IPC matters, this became a golden opportunity," Thuranira said. "A journey that seemed impossible became lighter and lighter when the IPC study platform was unveiled, and slowly, with consistency in reading and assignments, what seemed hard has now become part and parcel of my life."

Within three years, he has established what he calls a "robust IPC program" at Maua Methodist Hospital, including an IPC committee.

"After realizing that IPC is the backbone of health care success, my focus now is to go back to school to gain more knowledge and join the leading world health institutions to make more policies to streamline IPC standards in the health sector," Thuranira said.

ICAP is at the forefront of research generating new knowledge to improve access to and quality of health services, strengthen delivery mechanisms, and evaluate public health interventions.

Leveraging years of experience and a committed cadre of accomplished experts, ICAP designs, implements, monitors, and evaluates a range of innovative implementation science, epidemiological, and clinical research studies.



Cervical cancer is the leading cause of cancerassociated mortality in sub-Saharan African women, and in Eswatini, is the leading cause of death in women 15-44 years of age. The added burden of HIV among young women in Eswatini poses a serious public health concern.

Nearly all cases of cervical cancer deaths are caused by human papillomavirus (HPV), which can be prevented by the vaccine; however, there is limited research on the HPV vaccine's effectiveness for people living with HIV.

In partnership with the Ministry of Health, ICAP successfully enrolled 1,400 participants in a study assessing HPV vaccine regimens for children, adolescents, and young women living with HIV in Eswatini. The study is critical to understanding how to best introduce this highly effective vaccine to people living with HIV – a population six times more likely to develop pre-cancerous and cancerous cervical lesions after acquiring HPV infection compared to people not living with HIV.

Conducted in collaboration with Baylor College of Medicine Children's Foundation, Eswatini, The Bristol Myers Squibb Foundation, Merck Sharp & Dohme LLC, and the Reaching Impact, Saturation and Epidemic Control (RISE) consortium, the study compares a two-dose HPV vaccine series among

children (9-14 years) and young women (15-26 years) living with HIV with a three-dose HPV vaccine series among HIV-uninfected young women (15-26 years).

"When I first heard about the HPV vaccine study, I was quite excited and encouraged my patients to participate," said Siphiwo Dube, a doctor at Baylor Center of Excellence Mbabane in Eswatini.

"We have the tools to prevent cancer caused by HPV with vaccination, screening, and treatment," said Elaine Abrams, MD, senior research director at ICAP. "By supporting this study, the Ministry of Health is taking another step towards the elimination of cervical cancer in Eswatini, and ensuring the vaccine reaches some of the most vulnerable populations."

Supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) Office of the U.S. Global AIDS Coordinator and Health Diplomacy (OGAC) through the U.S. Agency for International Development (USAID)-funded RISE consortium led by Jhpiego, with vaccine and immunogenicity testing provided by Merck Sharp & Dohme LLC.



In 2022, cases of mpox – a viral illness that causes symptoms such as skin rash and lesions, as well as severe illness in some – were being reported among networks of gay, bisexual, and other men who have sex with men. The rise in cases were followed by reports of misdiagnoses, lack of readily available vaccines, diagnostics, or treatments, and stigmatic messaging. In New York state, there were over 4,000 mpox cases in 2022-2023, but the true burden of the disease is unknown due to limited seroprevalence data.

To assess previous infection, vaccination, or both infection and vaccine-derived immunity to mpox, ICAP is conducting a seroprevalence study of mpox in New York City among self-identified men and transgender and non-binary people who have had sex with men.

The study launched street-based recruitment in June 2023. Joey Platt, MPH, a senior project officer at ICAP and co-investigator on the study (pictured in small photo), said she was struck by the number of participants who turned down reimbursement for participating, explaining they wanted to participate purely from a desire to help increase knowledge and research about a virus that affected the LGBTQ+ community.

"A lot of people in the LGBTQ+ community have personal experience with mpox and they remember how scary it was in the beginning," explained Platt. "Either they have been diagnosed previously themselves or they have friends who were affected."

Supported by the New York
Community Trust, the Foundation
for AIDS Research (amfAR), and the
U.S. Centers for Disease Control
and Prevention (CDC). McCann
Global Health provided pro bono
marketing and design services for
the study.



In all countries where data are available, transgender women bear a disproportionate burden of HIV infection, with an estimated global prevalence of 19 percent. This translates into a 49-fold increased odds of HIV infection compared to other adults of reproductive age.

ICAP's Harlem Prevention Center (HPC) in New York City has conducted a novel study to test the feasibility and impact of providing oral pre-exposure prophylaxis (PrEP) alongside gender-affirming hormone therapy to transgender women.

"This study focuses specifically on making HIV prevention, namely PrEP, fit into the lives and health priorities of the trans-feminine community," explained Nora Howell, BBA, ICAP's community educator at HPC, who led the team's recruitment and accrual efforts.

Julie Franks, PhD, HPC's lead investigator for the study, said she saw a need for the study that goes beyond answering the question about how to best offer PrEP to women on the trans-feminine spectrum.

"We need to show that it's feasible to recruit and retain transgender women so that other researchers have more of a foundation to build on," she said, pointing to the dearth of public health studies on the trans population. The findings from this study will catalyze more work to support this population.

I AM is a study by the HIV
Prevention Trials Network and
sponsored by the Division of AIDS,
National Institute of Allergy and
Infectious Diseases, US National
Institutes of Health.



Every day, fisherfolk travel far and wide in search of abundance – more fish, healthier fish, and fish that can be sold at a higher price. Mobility is an essential livelihood strategy, but it can also increase vulnerability to health threats, including HIV. In the coastal West African country of Sierra Leone, the fishing industry is a source of livelihood for more than half a million people, and the Ministry of Health and Sanitation (MoHS) identifies these communities as a priority for the national HIV response.

In 2022, ICAP partnered with the National AIDS Control Program at the MoHS, the National HIV and AIDS Secretariat, the Ministry of Fisheries and Marine Resources, and the Unions of Artisanal Fishermen to conduct a study assessing knowledge, attitudes, and preferences for health and HIV services among fisherfolk in Sierra Leone.

The ICAP-led study included surveys and focus group discussions with 113 fisherfolk. Although 69 percent described themselves as at no or low risk of acquiring HIV, many reported HIV risk behaviors. For example, 66 percent reported sex without a condom in the past four weeks and only eight percent had ever heard of pre-exposure prophylaxis (PrEP).

"The study found a striking contrast between risk perception and actual HIV prevalence," said Miriam Rabkin, MD, MPH, director of Health Systems Strategies at ICAP. "Because respondents' data were self-reported, we don't want to over-interpret them, but they do raise important red flags about the need for HIV prevention, testing, linkage, and treatment services for fisherfolk."

Supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the Health Resources and Services Administration of the U.S. Department of Health and Human Services (HRSA).



When Cho-Hee Shrader, PhD, started as a post-doctoral fellow as part of ICAP's T32 Global HIV Implementation Science Research Training Fellowship in 2021, she was unsure if she even wanted a future in academia.

She then became immersed in the fellowship's rigorous program, which includes coursework, joint faculty-fellow seminars, and mentored research placements – many of them international, thanks to ICAP's work in over 40 countries around the world.

"I wasn't totally sure I wanted to be in academia to be honest, but I really love how at ICAP everyone does research but also on-the-ground programmatic work," she said. "ICAP people have this reputation of leading with their heart but also doing it from a science perspective. That's a really great balance I am going to embrace in my career."

"Training in global HIV implementation science is vitally important at this stage of the HIV epidemic, as we are at a critical juncture," explained Andrea Howard, MD, MS, who heads ICAP's Clinical and Laboratory Unit as well as the fellowship program. "With the efforts of well-trained and skilled investigators who can effectively bridge the implementation gap, we can envision a plan to end the epidemic."

In September 2023, Shrader was nominated for Columbia University's 2023 National Postdoc Appreciation Week Excellence Award for her analysis of complex survey data on the number of adolescent girls and young women in Lesotho who are at risk of acquiring HIV.

> Supported by the National Institutes of Health's National Institute of Allergy and Infectious Diseases.





According to U.S. Centers for Disease Control and Prevention data, three out of every four new or emerging infectious diseases in people come from animals. In response, ICAP has emphasized a One Health approach that encourages collaborative efforts of experts working across human, animal, and environmental health. However, for the approach to work, health care workers need to be adequately trained in One Health methodology.

"One of the challenges with One Health education is that many educators lack an integrated competencybased education framework and curriculum that focuses on ensuring trainees master a subject matter thoroughly through various training stages that teach them practical and real-life solutions to emerging public health threats," said Getachew Kassa, MSc, MPH, DrBA, senior technical advisor for ICAP.

In May 2022, ICAP facilitated two regional fourday workshops in collaboration with the Africa One Health University Network (AFROHUN) and the Southeast Asia One Health University Network (SEAOHUN) in Uganda and Thailand. The goal was to bolster country health care system efforts to combat emerging diseases and health threats by training a national workforce that is prepared to prevent and respond to outbreaks and related emergencies.

"Learning about competency-based education and backward design approach to training development will help me make a better assessment of the various learning and development designs our office receives for clearance," said one participant after the ICAPsupported training for university faculty teaching One Health courses.

A pre-and post-assessment to determine the workshop's effectiveness showed a 26 percent increase in knowledge post-training across all countries and participants.

> Supported by the U.S. Agency for International Development (USAID) One Health Workforce -**Next Generation Project.**



"As one of the chief physician assistants at the Columbia University campus during the first wave of the COVID-19 pandemic, I often found that I wanted a 'playbook,' but none existed," said Marianne Grandusky, PA-C, MPAS, chief physician assistant at NewYork-Presbyterian/Columbia University Irving Medical Center (pictured front row, left).

Grandusky is one of five fellows in the second cohort of the Responding to Epidemics and Crises in Health (REACH) fellowship, a collaboration between ICAP and the Dalio Center for Health Justice that provides a select group of NewYork-Presbyterian (NYP) staff an opportunity to learn how to predict, manage, and lead robust responses to complex health emergencies.

The fellows engage in week-long intensive seminars on topics such as surveillance, crisis management and leadership, and communication. In addition to learning from global public health experts, fellows also develop their own capstone projects to identify and address gaps in the health care system. Fellow Danielle Rossi's capstone, for example, focused on reducing emergency department admissions by improving linkages to aftercare.

This cohort of fellows represent different aspects of the health management sector, leading activities within NYP focused on such areas as health system infrastructure, bridging IT and clinical systems, supporting emergency and operational efficiencies, as well as psychological support.

**Health Emergencies** 

"A goal I have with participating in the REACH fellowship is to be able to easily identify areas of vulnerability within our system and to be able to incorporate strategies to offset those vulnerabilities," added Grandusky. "We need a system that can bend and flex to the ever-changing health care climate."

"Now in its third year, the REACH fellowship is actively capturing lessons learned from the COVID-19 response drawing on experience of a range of health professional and settings," said Susan Michaels-Strasser, PhD, MPH, RN, FAAN, ICAP senior director of Human Resources for Health and director of the REACH program. "Through this partnership with New York Presbyterian, we are unpacking the challenges faced in order to become more resilient when crisis strikes and capturing these lessons learned to build a playbook for the future."

Supported by NewYork-Presbyterian Hospital's Dalio Center for Health Justice.



Before the Lesotho Ministry of Health (MOH) implemented an electronic medical records "eRegister" system at the Hermitage Health Center in Lesotho's Qacha's Nek district, reporting and recording HIV patient data was cumbersome. Lay counselors who provide HIV testing service (HTS) delivery would manually fill out and compile multiple HTS reports and enter the data into various platforms.

In response, ICAP supported the Lesotho MOH to implement an automated HTS reporting system, which allows lay counselors to collect and report data directly in the electronic system.

ICAP supported the system rollout by conducting onsite training for the lay counselors on eRegister for HTS documentation in 185 health facilities, including the Hermitage Health Center. ICAP trainers showed counselors how to enter data and generate reports using the system. Once the training was complete, 92 facilities began utilizing the automated HTS reporting system for lay counselors.

"Lay counselors are now recording accurate data and can seamlessly track recipients of care from testing to linkage, track antiretroviral therapy (ART) initiation, and track ART retention," said Suzue Saito, PhD, MIA, MA, director for ICAP's Strategic Information Unit.

For the Hermitage Health Center counselors, the new reporting system has also reduced the time spent filling out paper-based reports, and counselors can now devote more time to seeing patients. "This achievement has improved the completeness, timeliness, and accuracy of HTS reports across the 92 facilities," said Saito.

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



As a Next Generation intern, Melvin Coleman learned the fundamentals of implementing a national HIV survey in Tanzania. Anna Zavodszky tracked information on HIV-positive mother-infant pairs in Mozambique, while Meredith Cohen explored the intersection of mobility and health in Zimbabwe.

Through ICAP's Next Generation Internship program, students engage in the design, implementation, and evaluation of programs while working side-by-side with global health experts. But interns aren't the only ones benefiting from the program - ICAP projects are bolstered by students' fresh perspective and passion for public health.

"It's been amazing to see the mutual benefits that ICAP and interns receive from this collaboration," said Claire Raether, M.Ed, senior training and education specialist for Human Resources for Health Development at ICAP. "Immersed in projects in New York and abroad, interns put to the test what they learn in the classroom - in return, ICAP projects gain innovative approaches to addressing health challenges."

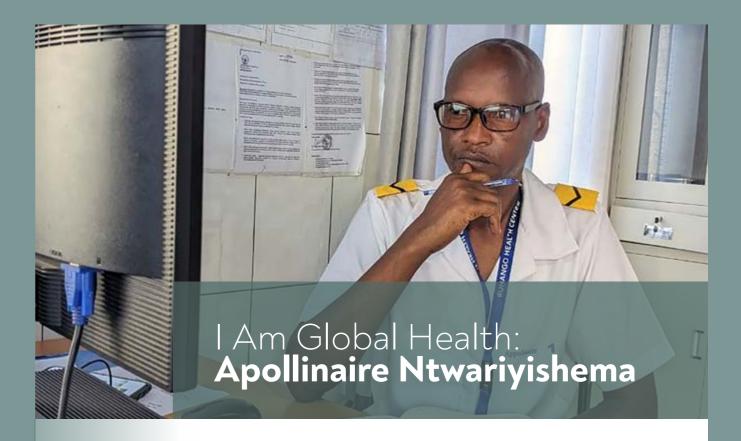
In 2022, ICAP supported 14 Columbia Mailman School of Public Health graduate students, and in 2023, 11 Mailman students and six School of Engineering and Applied Sciences (SEAS) students. Alumni from past cohorts have gone on to pursue careers in public health, including as data analysts, program officers, and PhD and MD candidates.

# **Next Generation Interns** Take the Classroom to the

"This experience both elevated my confidence and provided me a platform to connect with numerous professionals who share a passion for statistics and its powerful applications in public health," said Kimberly Geoffrey, Next Generation intern.



Supported by Columbia alumnus Dr. Bing Zhao and the Dean's office at Columbia Mailman School of Public Health



Apollinaire Ntwariyishema is a nurse working in the Antiretroviral Services Unit at Ruhango Health Center in Rwanda's Southern Province.

Like many health care systems in sub-Saharan Africa, Rwanda faces the dual challenge of staff attrition and budget constraints against the backdrop of rapidly evolving HIV guidelines for prevention, care, and treatment. Despite his 18 years of experience, even Apollinaire said it was hard to stay up to date.

In partnership with Rwanda's Ministry of Health, ICAP launched a telementorship program in August 2022, reaching hundreds of health care workers, mentors, supervisors, and program managers like Apollinaire across Rwanda. In the past, staff would have to travel long distances to inperson trainings, which cost the health system significant amounts of time and money, all of which can now be invested in patient care.

"I acquired a lot of knowledge and learned best practices, plus clarifications on some HIV-related indicators," said Apollinaire. "I am currently reporting improved and accurate data."

By the end of March 2023, 655 health workers at 22 hospitals had enrolled in the interactive two-hour tele-mentoring sessions, covering topics from Ebola preparedness to molecular laboratory design to HIV and tuberculosis diagnosis among children. ICAP plans to expand the program to 31 hospitals by the end of 2023.

"This tele-mentorship program supports health care workers like Apollinaire go the extra mile without having to walk an extra step," said Collins Kamanzi, senior projects coordinator at ICAP in Rwanda. "It has helped the ministry reach many staff in a short time with less financial and time burden."



"We have to thank the community mobilization work that occurred before and during the survey, which helped achieve high participation," said Erika Fazito, PhD, ICAP technical specialist, about the Tanzania HIV Impact Survey (THIS 2022-2023) project.

THIS 2022-2023 is one of the Population-based HIV Impact Assessment (PHIA) surveys - led by ministries of health and implemented with technical support from ICAP and the U.S. Centers for Disease Control and Prevention - which assess the national HIV response in different countries globally. Implementation of PHIA surveys is a collaborative effort. Survey teams involve enumerators, community mobilizers, community leaders, religious leaders, and more who do their part to help inform countries about the progress - and gaps - of ending the HIV epidemic.

To date, ICAP has conducted nearly two dozen PHIA surveys. In March 2023, THIS 2022-2023 reached a major milestone when survey teams completed data collection at remarkable speed, with nearly 33,630 participants in just four months.

In Uganda in March 2023, the Uganda Refugee HIV Impact Assessment (RUPHIA 2021) also reached a major milestone, having interviewed 2,705 adults living in refugee settlements in the West Nile and Western regions of the country.

A third PHIA survey in Eswatini, the Swaziland HIV Incidence Measurement Survey (SHIMS 3). demonstrated remarkable progress in addressing the HIV epidemic over the last decade. Field staff interviewed over 11,000 adults by December 2022. with results revealing that Eswatini had surpassed the UNAIDS 95-95-95 targets for treatment and viral suppression.

"Having participated in data collection in all three SHIMS surveys," said Philile Claudia Dlamini, a data collector, "it is clear that the country's accomplishment of surpassing the UNAIDS targets was done through shared responsibility and solidarity."

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



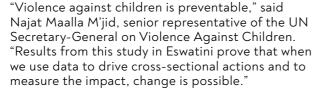
In 2007, Eswatini was the first country globally to conduct a Violence Against Children and Youth Survey (VACS), collecting national-level data on sexual, physical, and emotional violence against girls and young adult females between the ages of 13 and 24 years.

In 2022, ICAP – in collaboration with the Deputy Prime Minister's Office, Ministry of Health, and Central Statistical Office – supported a second VACS in Eswatini, this time assessing experiences of violence for both boys and girls. The survey found that one out of four females and nearly one out of three males experienced violence in their lifetime. One out of 12 females 13-24 years old experienced lifetime sexual violence, and among 18-24-year-old females who experienced lifetime sexual violence, the perpetrator of the first incident was often known to the victim.

In comparison with the 2007 Eswatini VACS, the more recent survey shows substantial improvements in reducing the prevalence of violence among females, and significant reductions in childhood and lifetime sexual violence.







In Ethiopia, ICAP is implementing another Violence Against Children Survey (E-VACS), reaching nearly 7,600 males and females in seven regions and two city administrations of the country.

In collaboration with the Government of Ethiopia through the Ethiopian Statistics Service, ICAP has supported data collection, analysis, and report writing, as well as recruitment and training of key research personnel.

By the end of 2023, survey results are expected to be announced, with findings playing a critical role in enhancing the country's capacity to develop, implement, and evaluate violence prevention programs and establish effective child protection systems.



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



The COVID-19 pandemic revealed significant disparities in our health care infrastructure as certain sectors of society were left to cope with lack of access to vital medical care, emotional and mental health struggles, and isolation.

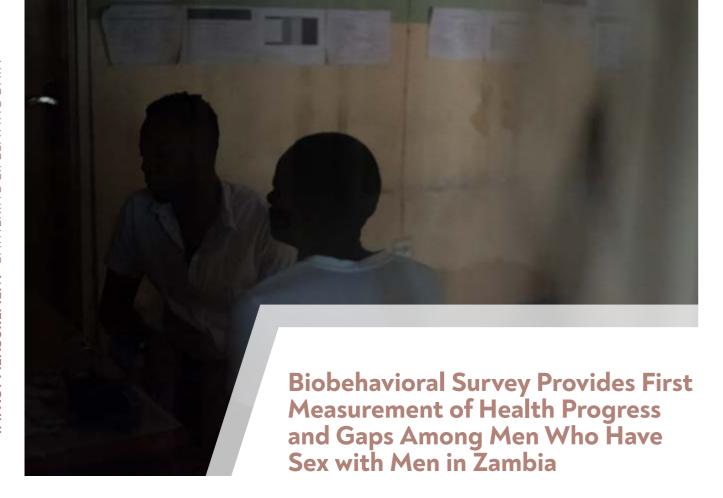
In 2022, ICAP conducted a second SILVER Study, a follow-up to a prior SILVER survey – both conducted via telephone – providing insight into the challenges presented by COVID-19 to older adults aged 70 years and older living at home in New York City.

"This group of New Yorkers has proven extremely vulnerable to the deleterious direct and indirect effects of the COVID-19 pandemic," said Abigail Greenleaf, MPH, PhD, who leads the SILVER research team at ICAP. "We found that the pandemic response exacerbated social, economic, and structural inequities that have resulted in notable negative consequences for older New Yorkers living on their own."

Between the first and second SILVER study, reports of anxiety increased for Black and Latinx participants, as well as those identified as "another race." Importantly, older New Yorkers with limited mobility or who did not often leave their homes were particularly vulnerable to adverse mental health outcomes. Fewer women compared to men indicated having access to and confidence in using technology, depriving them of an important resource for communication and outlet for health services. While access to information regarding COVID vaccination was common, a substantial proportion of participants struggled to discern the accuracy of available information.

Based on the findings, more interventions are needed to prioritize the health – particularly the mental health – needs of older adults with limited mobility who may be more vulnerable to the effects of isolation, improving women's digital literacy, and improving older adults' ability to identify accurate and reliable sources of COVID-19 information.

Supported by the New York
Community Trust and the
Mailman School of Public Health.



While Zambia has made major strides over the last decade addressing the HIV epidemic, men who have sex with men continue to face the risk of HIV and other health challenges. A critical step is measuring the magnitude of impact in this population.

In collaboration with the Zambia National HIV/AIDS/STI/TB Council and the Tropical Diseases Research Centre, ICAP supported a biobehavioral survey in 2021 – with results released in 2023 – among men who have sex with men in four of Zambia's biggest cities. The study assessed the status of HIV, syphilis, hepatitis B, and hepatitis C prevalence in this group, and was the first ever biobehavioral survey of men who have sex with men in Zambia.



Participants received rapid HIV testing with immediate return of results, and those who tested positive received referrals for care. The survey demonstrated that across the four major urban areas assessed, nearly all men who have sex with men who were aware of their HIV-positive status were on antiretroviral treatment (ART), which significantly reduces one's risk of infecting another person with the virus. Among those who had never tested for HIV, the two most common reasons were not feeling at risk for HIV and fear of receiving a positive result.

"This study will be incredibly helpful to Zambia," said Job Mwanza, MD, PgDLM, MPH, technical director for ICAP in Zambia. "The country is committed to using the findings to inform HIV infection and co-infection programming among key populations."

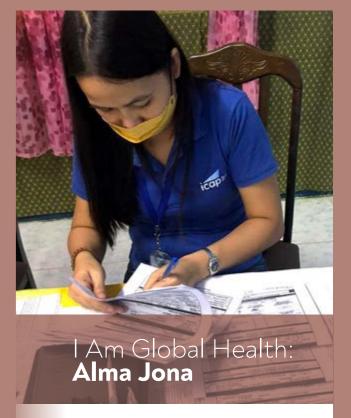
With support from the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the U.S. Centers for Disease Control and Prevention (CDC).



"The most satisfactory part of working in the global health field," said Zar Chi Oo, "is knowing that my contributions directly improve health care access and outcomes for individuals in need."

Zar Chi Oo has worked as a finance officer for ICAP in Myanmar since 2016 – processing payments, managing bank transactions, maintaining financial software, generating financial reports, and beyond. She also helps build her colleagues' capacity in budget monitoring, contributing to a shared understanding of the program budget and sound financial management.

In Myanmar, ICAP is working to accelerate national HIV response progress towards achieving global targets, with a special focus on key populations. For example, the program's U=U campaign – which stands for "Undetectable Equals Untransmittable" – promotes that, if taken as prescribed, antiretroviral treatment can reduce the amount of HIV in the body so much so that cannot be passed on to others.



Alma Jona is a single mother of two in the Philippines who has taken on a number of jobs over the years to support her family. When her local health facility approached her about working as a peer navigator, she jumped at the opportunity.

ICAP in the Philippines developed the peer navigator program to improve delivery of HIV services to key populations. Peer navigators like Alma go into communities to provide HIV prevention services, including pre-exposure prophylaxis (PrEP), and support people living with HIV to get on treatment and stay on it.

After participating in ICAP-supported training, Alma began reaching out to key populations to provide information on HIV, conduct HIV testing and link those testing positive to treatment and those testing negative to PrEP. Within weeks, she learned she had enrolled more people on PrEP than any other peer navigator.

"Being a peer navigator isn't easy," said Alma, "but I'm satisfied every time I listen and help clients. It is very fulfilling seeing them happy when they get good results. Seeing how they root me on, believe in me, and trust in me is heartwarming."



# We Are Doing This Together

ICAP's work would not be possible without the generous support of a wide range of donors. Our ability to achieve global health impact is directly related to the resources we receive from government agencies, foundations, corporations, and individuals, including:

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- Massachusetts General Hospital
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ICAP transforms the health of populations through innovation, research, and global collaboration.

