



UCSF Institute for
Global Health
Sciences

2019
Annual Report

Letter from the Director

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Dear Friends and Colleagues,

Thank you for your support for the Institute of Global Health! It is my pleasure and honor to share with you what your support has made possible through IGHS.

But first we have to acknowledge the elephant in the room. This report is reaching you later in the year because early this spring, our work, like yours, was turned upside down. Since then, every single person IGHS – faculty, staff and students – has found a meaningful way to contribute to the global effort to contain COVID-19. George Rutherford, MD, has been a leader in state and local efforts. Mike Reid, MD, spearheaded a partnership with the San Francisco Department of Public Health that has positioned San Francisco as a national leader. Eric Goosby, MD, and Sir Richard Feachem, PhD, DSc, have also begun projects with ministries of health to develop feasible COVID-19 response plans. I have focused on speaking directly to at-risk Latinx communities in the United States and across the Americas. These efforts have sparked to life alongside work to adapt existing projects to accommodate social distancing. We are including a few more details about new work at the end of this report.

Although 2019 in some ways feels like a lifetime ago, the achievements we made together last year made a real difference in millions of lives around the world and deserve to be celebrated. These projects better positioned our international partners to meet the current challenge head-on, and they will continue to pay dividends in human health.

Thank you for your support!

A handwritten signature in black ink that reads "Jaime Sepulveda".

Jaime Sepulveda, MD, DSc
Executive Director
Haile T. Debas Distinguished
Professor

What to Watch in 2020



AIDS 2020

IGHS faculty were instrumental in efforts to bring the International AIDS Conference, commonly called AIDS 2020, to the Bay Area this June or July. With the emergence of COVID-19 in early March 20,000 researchers, clinicians, government leaders and patient advocates are now expected to gather virtually to address responses to the disease moving forward. The conference offers a major opportunity for UCSF and the city of San Francisco to show continued leadership in responding to HIV/AIDS. Speaker Pelosi, Congresswoman Barbara Lee, Senator Scott Wiener, and the mayors of San Francisco and Oakland have endorsed, invested in, and helped promote the conference.

Top left AIDS ribbons line a waterway in Amsterdam during the 2018 International AIDS Conference in the Netherlands
Courtesy of Marten van Dijk/IAS



Border Humanitarian Health Initiative

Executive Director Jaime Sepulveda is co-leading a project to bring academic researchers, regional policy-makers, and medical providers together to address the health needs of the migrant population coming through Mexico to

the United States, often from Central America. The group has developed a research and advocacy plan, which is of critical importance given the likely spread of the novel coronavirus through migrant populations on the Mexican side of the border.

Top right: X at the Border Humanitarian Health Initiative Summit held in January, 2020 in San Diego, California.
By Eder Escamilla



Center for Tuberculosis

Led by Payam Nahid, MD, MPH, the new UCSF Center for Tuberculosis is working to enhance faculty collaboration and knowledge integration, lead strategic initiatives to accelerate discovery and support early-stage investigators to ensure continuity of TB elimination research.

Climate Change and Health Initiative

Climate change is a major challenge to global health. IGHS is working to mobilize a stronger international response to climate change by putting urgent health needs on the agenda. We are also rolling out a pilot program – beginning in Bangladesh, one of the most vulnerable countries in the world – to work with national leaders to build adaptation plans and resilient healthcare systems to handle new and unpredictable types of illness.

COVID-19 Initiatives

Much of our work has pivoted quickly in the early part of 2020 to address the COVID-19 pandemic. Associate professor Mike Reid, MD, is spearheading a major partnership between UCSF and the San Francisco Department of Public Health that is focused on contact tracing. George Rutherford, MD, is consulting for local and state public health teams. He deserves significant credit for the Bay Area's low disease burden compared with Los Angeles or New York. Dan Kelly, MD, is co-leading a two-arm clinical trial of hydroxychloroquine and azithromycin through the Veteran's Association. Richard Feachem's Global Health Group has stepped into a major partnership with other leading global health groups to support low- and middle-income countries develop COVID-19 responses that will work with their limited resources.



Results of Work to Reduce Preterm Birth in Africa

Watch for compelling findings of the Maternal and Newborn Child Health Cooperative's work to reduce preterm birth in Kenya and Uganda to publish in the *Lancet Global Health* this summer.

Top left: Top: PTBI in Uganda
By Ludowa Abubakar

Top right: Payam Nahid, MD, MPH, director of the UCSF Center for Tuberculosis

Master's alum Jorge Ramírez, connects local and international health work from Santiago, Chile



Quick rollout of HIV training comes in handy for COVID

Jorge Ramírez, MD, MS '16, always planned to return to work in Chile after completing the IGHS Master of Science in Global Health program. The government scholarship that paid for the program required him to work in Chile for at least two years after completion, and Ramírez was happy to comply.

Ramírez returned to the job he had before the master's program, working as an emergency medicine doctor and coordinating the ambulance system for Santiago, a city of approximately 7 million inhabitants.

"I have worked in the public system since I graduated from medical school, and for me it is a way to contribute to the development of my country. For me it's very important to work in Chile," he said.

Since returning, Ramírez has also become director of the Global Health Program in the School of Public Health at the University of Chile. He said, "The master's program experience helped me get recruited and have the skills,

insights and network to develop this young program." (The program launched in 2011.)

Ramírez enjoys studying and teaching topics that range from mental health care to global health diplomacy and immigrant health – a growing issue in a small country that has seen immigration rise sharply in the last 10 years. One of his primary goals is to develop and publish more research both in Chile and abroad, but he said the general lack of support for research in Chile is a challenge: "Research and innovation are not considered as important as in the U.S."

As part of working and collaborating with universities outside of Chile, Ramírez hopes to strengthen an alliance of global health institutions throughout Latin America. Ramírez has seen how international work and connections can pay off.

"During the riots here, we got much support from the international community because of the violation of human rights in Chile," Ramírez said.

Political unrest in Chile was soon followed by the coronavirus pandemic, and Ramírez finds himself now reflecting on a lesson he learned at UCSF.

"For me, the idea of being prepared was a very important perspective I received from the master's program: We know a pandemic is going to happen, but we don't know when. And now it's happening, and again, we weren't prepared," he said.

But with challenge comes an opportunity for change.

"I'm very committed to the reform of the health system," Ramírez said. "It has a lot of inequalities, which is common in Latin America overall, but Chile has some specific circumstances we are fighting to change."

A lot of moving pieces go into developing and maintaining high-quality medical care. In the United States, for example, the Accreditation Council for Graduate Medical Education (ACGME) ensures that medical schools provide rigorous training for up-and-coming doctors. The National Institutes of Health (NIH) guides the medical research agenda to continue to improve outcomes. These are two of many groups that work in parallel to drive medical progress.

As Africa pushes for self-reliance, it is developing its own institutions. In one major step, leading medical and nursing schools launched the African Forum for Research and Education in Health in 2017. AFREhealth, as it's known, works to improve medical education and training and health outcomes across the continent.

Ambassador Eric Goosby, MD, and project director Mike Reid, MD, worked with AFREhealth to develop a team-based training program to improve HIV care. HIV/AIDS remains the leading

cause of death among African adults, but quality HIV care is undermined by the lack of collaboration among providers, which helps them go beyond book knowledge to become effective caregivers in real-world settings.

Strengthening Inter-Professional Education to Improve HIV Care Across Africa (or STRIPE HIV) launched at the AFREhealth conference in 2018 and launched it through the Forum's network in 2019. AFREhealth's infrastructure has helped the program spread like wildfire, training more than 4,400 participants from 50 institutions in 14 countries to provide high-quality HIV care as a multidisciplinary team of doctors, nurses and pharmacists.

Participants learn to address nuances such as treating HIV/AIDS in conjunction with tuberculosis or in pregnant women. They leave confident that they will be able to work as a cohesive group with their colleagues to provide consistent cutting-edge care to their patients.

"STRIPE is an African model for how to train healthcare professionals to address Africa's healthcare needs in the 21st century. It offers a vision for how to deliver high quality care for people living with HIV and other illnesses," said Reid.

As Goosby and Reid see it, STRIPE HIV has served as a kind of test-run for AFREhealth – and it couldn't come a minute to soon, as COVID-19 cases begin to tick up in Africa. STRIPE has put its in-person HIV trainings on hold, but the team is using the same methodology to rapidly create and disseminate a COVID-19 training module. AFREhealth is also educating providers on the epidemiology of the disease, the evidence base supporting various proposed treatments and protocols to keep healthcare providers safe.



Hunting HIV with cutting-edge recent-infection tests

At the peak of an outbreak, a disease appears to be everywhere you look, so it makes sense to test large swaths of the population. Near the end of an outbreak, you have to go looking for the remaining pockets of disease to keep it from reestablishing itself.

“You get to point where testing is no longer cost effective and no longer yielding great results,” explained Susie Welty, MPH, a senior program manager at IGHS. “You’ve flushed out the biggest problem and now you have to go after the remaining cases.”

Incredibly, we are entering that phase of the HIV epidemic, and UCSF is continuing to lead the way.

In the last several years, it has become possible to learn, using blood tests, whether an HIV-positive person contracted the virus in the last 6–12 months. (UCSF faculty contributed to the research that made such testing possible.) In half of all countries that have begun to use the technology, IGHS’s Global Strategic Information group is training government health officials to provide the test as

appropriate in public health clinics, to track the results on a live interactive dashboard and to tailor public health efforts to high-risk groups and regions.

IGHS is doing this work in Namibia, Zambia, Kenya, Uganda, Malawi, Vietnam, Cambodia and Thailand. Principal investigator George Rutherford, MD, and program manager Welty launched these partnerships at the end of 2018 with support from the Centers for Disease Control and Prevention (CDC).

Identifying recent cases guides prevention efforts and monitors their effectiveness; it can also prevent individuals at high risk from contracting the disease. If a partner of a newly infected person is still HIV-negative, s/he can be started on PrEP and remain negative. The process can also work in the other direction: A newly infected person can point back to the person who likely gave them the virus so that person can be started on treatment, reducing their chance of passing it on to anyone else.

“Contact tracing is really Epidemiology 101 – it’s what the San Francisco Department of Public Health is doing right now with COVID19,” Welty explained.

Data use agreements allow UCSF to use the data flowing through the recency dashboards to feed research publications on how HIV is spreading in Africa and Asia. It’s too early to ferret out any new patterns in how the disease is being transmitted, but Welty says she has been struck by how many teenage girls figure among the recent infections. They are seeking care, and being tested, when they become pregnant. Their infected partners are often older men with whom they have had transactional sex.

IGHS won the CDC’s competitive grant to leverage HIV infection recency testing in heavily affected countries thanks to its track record with large HIV surveillance efforts – including most recently, Namibia’s country-wide survey, similar work through the MeSH Consortium which was funded by the Gates Foundation, and a pilot of the recency program conducted in Malawi.



Nurse training program GAIN expands with major gift

In MOTK Kimberly Baltzell, RN, PhD, MS, associate professor in the UCSF School of Nursing and faculty affiliate at the Institute for Global Health Sciences, received a \$2.5-million gift from the Wyss Medical Foundation to support the development of nurse leadership in Malawi, Sierra Leone and Liberia, with a focus on reducing the risk of complications and death during childbirth.

The Wyss Medical Foundation funding will dramatically expand Baltzell’s Global Action in Nursing (GAIN) project.

Malawi has the highest rate of preterm births in the world and high rates of newborn death. Sierra Leone is the single most dangerous place to give birth in the world.

GAIN already provides Malawian nurses – who, like many in developing countries, don’t receive mentored practical training after graduation – with directed training followed by year-long intensive mentoring with expert nurse midwives.

The nurses appreciate the training. “I work confidently because I have all the skills and resources to be used. When I am not sure, I refer to my GAIN guidelines to be sure of the answer,” one participant said.

The gift will kickstart similar programs in Liberia and Sierra Leone, where the supply of healthcare providers has been strained since many died or quit during the 2014 Ebola outbreak. It will also support additional work with the national ministries of health and nursing councils to develop educational pathways for more skilled nursing roles.

GAIN training programs that give nurses the expertise and mentorship they need “to handle, or more importantly to recognize, when something is going to go sideways and refer patients to higher levels of care. You don’t want to wait until someone is in the middle of a hemorrhage to transfer them,” Baltzell explained.

GAIN expects to produce 1,000 new nurses and provide additional pregnancy and delivery training for 500 practicing nurses, each of whom will deliver, on average, 25 babies a month. In Malawi, the statistics suggest that each provider will have at least one opportunity every month to save a baby who would otherwise die.





MEI

Leadership

IGHS Faculty Leadership

Kimberly Baltzell, RN, PhD, MS
Director of Partnerships

Ben Chaffee, DDS, PhD, MPH
Associate Professor, School of Dentistry

Jennifer Cocohoba, PharmD
Professor, School of Pharmacy

Craig Cohen, MD, MPH
Co-Director, UC Global Health Institute

Madhavi Dandu, MD, MPH
Director, Master of Science Program

Haile T. Debas, MD
Founding Executive Director, Global Health Sciences; UCSF Chancellor Emeritus

Elizabeth Fair, PhD, MPH
Director, PhD Program

Richard Feachem, KBE, DSc(Med), PhD
Director, Global Health Group

Eric Goosby, MD
Director, Global Health Delivery and Diplomacy

Roly Gosling, MD, PhD, MS
Director, Malaria Elimination Initiative, Global Health Group

Dean T. Jamison, PhD
Professor Emeritus

James G. Kahn, MD, MPH
Director, Global Health Economics Consortium

Michael Lipnick, MD
Chair, IGHS Faculty Affiliate Program

Joanna Mazet, DVM, PhD
Executive Director, OneHealth Institute, UC Davis *(on sabbatical)*

George Rutherford, MD
Director, Global Strategic Information

Judy Sakanari, PhD
Adjunct Professor, School of Pharmacy

Jaime Sepulveda, MD, MPH, DrSc
Executive Director, Institute for Global Health Sciences; Haile T. Debas Distinguished Professor

Paul Volberding, MD
Director, Global Health Research
Director, AIDS Research Institute

Dilys Walker, MD
Director, Maternal, Newborn and Child Health Research Cooperative

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Leadership Council Co-Chair
President, Gordon & Betty Moore Foundation

William J. Rutter
Leadership Council Co-Chair
Chairman and Chief Executive Officer, Synergenics, LLC

Haile T. Debas
Director Emeritus, UC Global Health Institute

Richard Feachem
Director, Institute for Global Health Sciences
Global Health Group

Sandra R. Hernández
President and Chief Executive Officer, California HealthCare Foundation

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Executive Vice President and General Counsel, Exelixis, Inc.

Wendy Holcombe
Radio Producer and Philanthropist, City Visions at KALW

Nasi Jazayeri
Chief Technology and Product Officer, Salesforce.org

Sanford R. (Sandy) Robertson
Founder, Francisco Partners

Jaime Sepulveda
Executive Director, Institute for Global Health Sciences

Ariel D. Stern
Associate Professor of Business Administration, Harvard Business School

Michael (Mickey) Urdea
Managing Partner, Halteres Associates

Phyllis Whiteley
Partner, Mohr Davidow Ventures; Co-founder & Chief Executive Officer of Didimi

Diede van Lamoen
Founder and Chief Executive Officer, Commure

IGHS Administration

Jeremy Alberga, MA
Chief Operating Officer, Global Health Group

Inez Bailey, MS
Director, Education Strategy and Operations

Alden Blair, MSc, PhD
Associate Director, Master of Science Program

Colin Boyle, MBA, MPP
Deputy Director, Institute for Global Health Sciences

Jess Celentano, MS
Deputy Director, Global Health Delivery and Diplomacy

Jane Drake, MPH
Director, Global Operations

Heidi Frank, MPH, MBA
Director, Grants Management

Lisette Irizarry
Senior Executive Assistant to the Director

Alisa Jenny, MPH
Strategic and Technical Advisor

Usma Khan, MS
Director, Staffing and Strategic Operations

Sun Yu Cotter, MPH
Deputy Director, UC Global Health Institute

Georgina Lopez
Director, Finance and Administration

Ali Mirzazadeh, MD, PhD, MPH
Associate Director, PhD Program

Hannah Park
Deputy Director, Maternal, Newborn and Child Health Research Cooperative

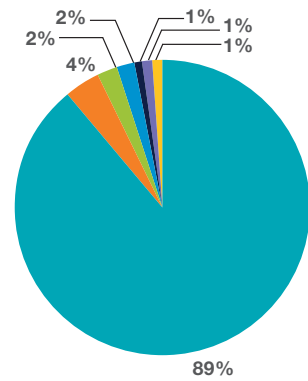
Kemi Amin, MBA
Manager, Communications

Ellyn Woo
Director, Finance Management

Kelly Young, MA
Deputy Director, Global Strategic Information

Financials

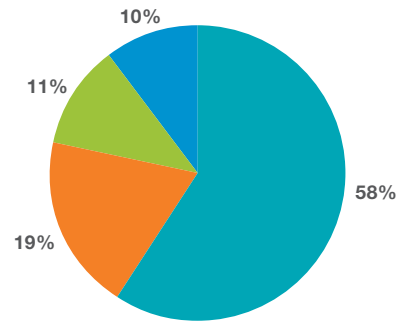
Fund Sources



Total: \$81,786,762

- Sponsored projects
- Campus support
- Tuition and fees
- Gift/endowment income
- Recharges
- ICR recovery
- Other

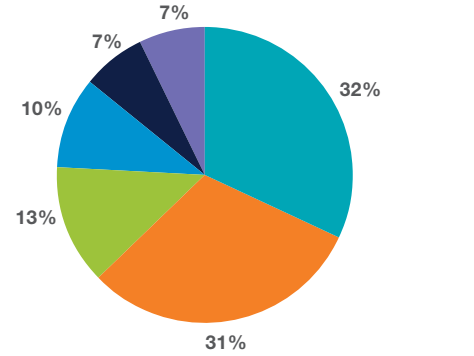
Fund Uses



Total: \$81,678,995

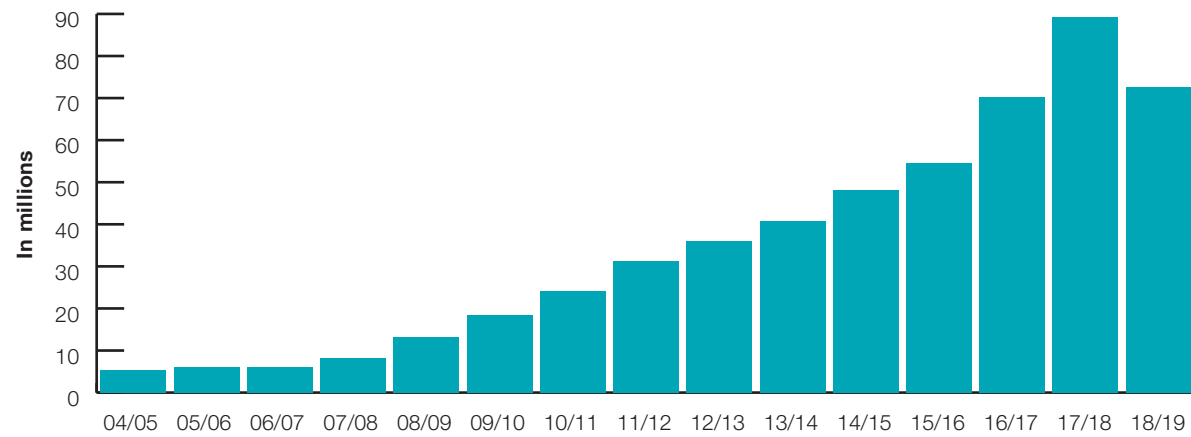
- Personnel costs
- Other non-payroll
- Subawards
- Facilities and administration

Major Funders of Sponsored Projects



- Centers for Disease Control and Prevention (CDC)
- President's Emergency Plan for AIDS Relief - PEPFAR (CDC)
- Other
- HRSA/USAID
- Bill & Melinda Gates Foundation
- National Institutes of Health

Sponsored Projects Expenditures



Data on this page reflects in-year project expenditures for fund year July 1, 2018–June 30, 2019. Total grants awarded in the fund year equal \$98,681,569. Totals include the AIDS Research Institute.

Donors

We are grateful to the individuals, families and organizations that provided generous support to help us advance IGHS and the AIDS Research Institute programs and research in 2019.

Individuals and Families

\$100,000 and up
Gwendolyn Holcombe and Carl M. Kawaja

\$10,000–\$99,999
Lauren and Thomas Akins
Nasi Jazayeri
Edmund P. Jensen
Denise and Nikolajs A. Lapins
Gretchen C. and Howard H. Leach
Leesa and Martin Romo

\$1,000–\$9,999
Vanessa and Miles Adcox
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Marita M. and Kevin L. Daly
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John Maine
Andrea Martin and Jaime Sepulveda
Sally H. '88 and William W. Rankin
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Cameron Scott
(all except p4 by Rachel Cox)

Graphic Designer

Kerstin Svendsen

Photography

Front cover: Master's students Belen Irarrazaval and Annie Ahn talk with an in-patient nurse at Mulago Hospital, in Kampala, Uganda. By Sala Lewis

Inside cover: Jaime Sepulveda by Elisabeth Fall

P4: Master's alum Jorge Ramírez in Santiago, Chile. Courtesy of Jorge Ramírez

P5: HIV Testing Services providers and laboratory staff practice conducting rapid tests for recent infections with their colleagues in Pursat Province, Cambodia. By Alexandra Ernst

P6: An interprofessional group of STRIPE HIV Learners and Facilitators from Kwame Nkrumah University of Science and Technology (KNUST) huddle to work through an interactive module during one of KNUST's STRIPE HIV workshops. By Jessica Celantano

P7: Lab personnel removing malaria DNA for molecular analysis to identify malaria infection. Provincial lab in Aceh, Indonesia. By Paul Joseph Brown

P8: An antenatal patient in Malawi receives an important check for pre-eclampsia from a GAIN nurse. Courtesy of GAIN

Left: Master's student Nardos Darkera conducting her capstone fieldwork related to HIV prevention in Kampala, Uganda. By Sala Lewis

Back cover: Kimberly Baltzell and GAIN expert midwife, Esnath Kapito, participating in Nurses' Day celebrations in Neno district, Malawi. Courtesy of GAIN

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