



Annual Report





Letter from the Director

Dear Friends and Colleagues,

This annual report for 2017 marks a critical milestone for global health at UCSF. In October, UCSF Chancellor Sam Hawgood announced that our academic entity (GHS) had been designated the Institute for Global Health Sciences (IGHS).

This designation is significant because it underscores UCSF's commitment to advancing health worldwide, recognizes our role at UCSF and in the wider global health community and bolsters our capacity to have a positive impact on health both at the local and global levels.

As an Institute, IGHS can be a more integrated structure, enabling us to:

- Facilitate the exchange of expertise and ideas across research and education units and break down barriers to knowledge creation and impact.
- Engage more effectively with others across campus and outside partners, and assemble the skills needed to bring transdisciplinary solutions to global health problems.
- Translate the knowledge we've created into policy and practice to advance health.
- Invest more in education to continue to attract the best students.

This comes at an appropriate time as we celebrated several significant milestones:

 We welcomed our 10th class of master's degree students and our second cohort of PhD students.

- Our Global Health Group celebrated its 10th anniversary with a day-long program discussing their impact, their current initiatives and their opportunities.
- We launched a Lancet Commission on Tuberculosis with Eric Goosby and Dean <u>Jamison</u> as co-chairs.
- Our sponsored program funding topped \$68
 million for the first time, reflecting a growth
 rate of 19% annually since 2011. This
 performance demonstrates the strength of
 our principal investigators across IGHS.

The announcement of the Institute followed a period of strategic planning to lay out our priorities for the next five years and define our aspirations for impact. I encourage you to read more about our plan, our milestones and our work in the pages that follow.

Of course, none of our achievements are possible without the impressive contributions of our faculty, staff, students, partners and funders. To all of you, I express my deepest gratitude for your continued hard work and support.

With warmest wishes,

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Jaime Sepulveda, MD, MPH, DrSc

Executive Director

Haile T. Debas Distinguished Professor



Since its founding in 2003, IGHS has sought to be a pioneer and innovator in academic global heath, with a deep commitment to improving the health of marginalized communities.

IGHS has grown into an enterprise of more than 300 employees with a budget of more than \$80 million. It conducts research on global health issues, trains students to be global health practitioners, builds capacity in low-resource settings, and engages scientists and researchers across UCSF who work in global health. Our sponsored programs have expanded 19% annually since 2011 and we now have more than \$68 million annually in sponsored research.

This growth enables us to solve global health problems so that all people can live healthy, productive lives. This is the vision we aspire to, despite a more challenging environment for global health.

Development-assistance-for-health (DAH) funding - which is a main funding source for academic institutions and other global health programs has grown at only 1.8% per year since 2010, down from an 11%-per-year rate during the first decade of the 2000s. Nationalist and populist sentiments create risks that donor governments may pull back from their historic investments in global health and development. Reductions in funding would be unfortunate because the health risks from disease, conflicts, childbearing and famine remain significant and also threaten the remarkable gains made in the past decade. Plus, new threats, like climate change, drug resistance and pandemics, demand a rapid global response based on research and tools developed in academic labs.

To ensure that we continue to be effective and innovative, we spent significant effort in the past year refreshing our strategic plan to focus our efforts on the following priorities.

Take STEPS to Accelerate Our Impact through Transdisciplinary Solutions

Because the most critical problems in global health are highly complex and often require transdisciplinary solutions, IGHS is believes engaging a full array of academic disciplines across many fields - Science, Technology, Economics, Policy, and Society (STEPS) - is essential to develop effective, implementable solutions. We believe that by incorporating all of these components into our programs, IGHS can develop richer insights about the nature of long-standing challenges in global health and can create solutions to improve health and reduce health inequities in measurable ways.

The STEPS model requires us to:

 Bolster partnerships with basic scientists here at UCSF

- Use technologies to improve surveillance, clinical care and analytics for better health system performance
- Ensure that our research programs consider cost-effectiveness and affordability in developing solutions
- Translate evidence into actionable policy recommendations
- Emphasize implementation science to promote adoption of effective solutions

Much of our current work incorporates these strategies/tactics, as you can read in the following pages, but by including them in our strategic plan, we solidify our commitment to transdisciplinary research.

Double Down on Education Innovation and Learning-based Research

In 2008, GHS launched the nation's first Master of Science in Global Health degree, attracting dynamic students from a diverse range of backgrounds. Our 10th class is no different, and they continue to find the program challenging and stimulating.

But never satisfied with resting on our laurels, IGHS continues to innovate – first with the 2016 launch of a PhD program, and now by developing online courses, considering new learning modalities and enhancements to our existing curricula and more closely linking our research and education programs. We're also developing opportunities, such as our new monthly Grand Rounds, to more directly connect students with cutting-edge faculty and researchers.

Prioritize Support for Campus Programs

While IGHS directs a large proportion of the global health work performed at UCSF, there are many other research and training initiatives in global health

across the campus. As interest in global health grows, IGHS supports our campus colleagues by sharing specific expertise and providing services that address the top priorities for the campus. One significant source of support is our Global Programs Offices in Kenya, Mozambique, Namibia, Tanzania and Uganda.

These offices were established to facilitate expanded presence and operations for UCSF researchers, whether or not they are affiliated with IGHS. Each office works in collaboration with local partners to implement programs and insure project goals are met. In countries without this type of office, researchers often must subcontract work to an NGO or other organization or try to do it on their own.

In-country offices also benefit the University by providing in-country operational support that can help investigators attract additional projects and funding. For example, last spring the Global Strategic Information group at IGHS received a new grant from the Global Fund to Fight AIDS, Tuberculosis, and Malaria to design the data management solution for Mozambique's first National Tuberculosis Prevalence Survey. One key factor in winning the grant was UCSF's in-country presence.

Strengthen a One-IGHS Culture

As IGHS continues its rapid growth, we want to leverage our full capabilities to achieve impact. Operationally, that means being more efficient in our use of resources, and developing a culture that shares expertise regardless of the disease, population or geography in which our people work. As a result, we are working to build a One-IGHS culture through investments in people and team-building activities, standardization of systems and processes and more integrated communications.

Mobilize Resources

Finally, in order to position ourselves to be innovative and have significant impact, we must mobilize additional resources to support our operations and mission. By focusing on the priorities above, we aim to demonstrate to philanthropists that we are an attractive partner. To that end, IGHS will intensify its efforts to generate funds for programs and operations. In particular, we expect our increased efforts to bring together different experts in the STEPS transdisciplinary model will enable us to compete for and win large scale "Grand Challenges" proposals.

UCSF: The Campaign, a \$5 billion capital campaign announced last fall, focuses on Grand Challenge ideas. The campaign provides us with the opportunity to ensure that prospective donors motivated by global health are able to learn more about our activities and impact.

In addition, we must mobilize the people and partnerships necessary to achieve our goals. Over the next five years, we will identify specific recruitment priorities and work to strengthen our team of investigators. We also plan to close gaps in our programs through the cultivation of existing UCSF faculty who have critical expertise and who had not previously considered themselves global health researchers. In particular, we will strive to build a deeper team of junior investigators to work with our excellent team of senior faculty leaders.

By focusing on these strategic priorities, we believe IGHS will not only cement its role as a leader in academic global health, we will dramatically increase our already formidable impact on the health of the world's most vulnerable populations.



Global Health Group Turns 10

When Sir Richard Feachem, DSc(Med), PhD, founded the Global Health Group (GHG) at IGHS in 2007, he had a bold vision: eliminate malaria from the face of the earth. The worldwide global health community was skeptical, at best.

"Richard was willing to talk about eliminating malaria when most people thought resources should be spent on controlling the disease," said Allison Phillips, deputy director of the Malaria Elimination Initiative.

Today, the idea that malaria can be eliminated is accepted by the World Health Organization, donors and other major malaria-fighting organizations. It is just one of a long list of accomplishments GHG can claim. Others include:

- Launching two regional initiatives to accelerate progress toward malaria elimination: The Asia Pacific Malaria Elimination Network, a collaboration among malaria programs and partner institutions from 18 countries in Asia Pacific, and the Elimination Eight Regional Initiative, a similar organization spanning eight countries in Southern Africa
- Leading a seminal series in *The Lancet* on the technical, operational and financial requirements for malaria elimination

- Raising the profile of the role of the private sector in healthcare delivery in low- and middle-income countries
- Leading a Lancet Commission on Investing in Health
- Convening numerous high-level meetings on a wide range of global health issues, bringing together key influencers from different sectors
- Articulating the health implications of climate change and providing technical assistance to low- and middle-income countries on how to address these impacts

Focusing on impact rather than research and publishing within an academic setting was another bold move. But over the past ten years, research has been integral to making an impact, and GHG has raised more than \$100 million in sponsored research and gifts. Publications have happened as well—more than 300, many first authored by staff and not just by faculty.

And the group continues to think and act boldly. "We are considered the elimination experts among malaria groups," said Phillips. "And now we are pushing the malaria community to plan for global eradication."



Surveillance Data Help Countries Plan HIV Response

Global Strategic Information (GSI) at IGHS is partnering with Tanzanian health officials to end the country's HIV epidemic by moving towards the United Nation's 90-90-90 goals: by 2020, 90% of people with HIV know they have the virus, 90% of these people are being treated, and of those treated, 90% are virally suppressed.

GSI works with populations in Tanzania most likely to get or spread the virus. These include socially stigmatized groups—men who have sex with men, female sex workers and people who inject drugs, people living and traveling along major transit corridors and fisher folk on the banks of Lake Victoria. About 6% of Tanzania's population is HIV-positive, but the prevalence is higher among these populations.

With funding from the US Centers for Disease Control through the President's Emergency Plan for AIDS Relief (PEPFAR), the GSI group teams with Tanzania's Ministry of Health, Community Development, Gender, Elderly and Children to better understand what's driving the epidemic in the country and how to stop it.

The team conducts detailed HIV surveillance studies that help to identify: HIV prevalence among the different highrisk groups, behaviors that contribute to transmitting the virus, knowledge about HIV transmission, and which services they are accessing (for example, whether they are on treatment if they are HIV infected).

The team's work has provided valuable information to Tanzanian health officials, including recommendations for specific steps to prevent the spread of the virus, noted Christen Said, the in-country program manager for GSI's Tanzanian projects. The information helps officials better understand risks, characterize progress towards 90-90-90 goals, plan services and allocate resources, she said.

For example, one common finding in the team's work is that people from stigmatized groups don't seek treatment. Health care providers often disapprove of people from these groups and have been known to treat them poorly or even refuse to serve them, Said noted.

A group of providers has now been trained to treat these people "with the same respect and confidentiality that they would treat any other client," Said stated. The providers have also learned about these groups' risk behaviors, which can be different than those of the general population, and "the importance of talking with these individuals about their behaviors in a non-judgmental and friendly way," to help them, no matter the providers' "personal views of these individual's lifestyles," she said. People from stigmatized groups are then referred to these trained providers.



Can Group Prenatal Care Reduce Preterm Births?

Studies in the US have shown that among the most vulnerable populations, especially young African American women, group prenatal care can lead to as much as a 33% reduction in preterm births. Could the same be true for pregnant women in Rwanda?

Preterm birth is the top cause of newborn deaths around the world. Approximately one in 10 babies is born premature each year, according to the World Health Organization (WHO), and almost 1 million of these infants die within the first months of life. Still others face lifelong struggles with health deficits and disabilities.

Working with the Rwanda Ministry of Health and researchers at the Rwanda Biomedical Center and University of Rwanda, the East Africa Preterm Birth Initiative (PTBi-EA) is studying the effects of group antenatal (prenatal) care on preterm birth.

"Attendance at antenatal visits is low in Rwanda," says Tiffany Lundeen, CNM, MSN, MA, a UCSF midwife and PTBi-EA's advisor for group care implementation in Rwanda. "Only about 44% of Rwandan women meet the pre-2016 WHO recommendation of four prenatal health-care visits." (The WHO increased the recommended number of prenatal healthcare contacts to eight in 2016.)

Lundeen and a Rwandan working group, including midwives, doctors and radiologists, laid out a plan to adapt the American group care model to this East African nation.

"It's very close to what's done in the United States," Lundeen says, "except our Rwanda colleagues wanted only four total antenatal care visits – in the US, it's usually 10 or more. And like US group care, the Rwanda study includes a reunion at the six-week postnatal visit."

So far, 8,000 women have enrolled in the study. About 7% of the cohort is age 19 or younger, consistent with the teen pregnancy rate in Rwanda.

Field reports are full of anecdotal evidence that women are sharing deeply in these groups. They are exchanging phone numbers and addresses and getting together socially. In some cases, they have pooled their money for emergencies and contributed to the layette for the poorest women in the group.

While satisfaction with the care and social support mothers receive will be measured, the primary outcome of the trial is the gestational age of the babies at birth. Will the preterm birth rate in the group care cohorts be lower than in the controls? And in cases of premature birth, will infants be more likely to survive because their mothers have higher levels of health literacy and empowerment?

Those questions should be answered in 2019 when analysis of the study is expected.



Using Evidence to Develop Policy Recommendations

Until recently, surgery was largely overlooked in global health, as researchers and policymakers have historically focused on individual disease causes and infectious diseases. But conditions treated by surgery, including obstetric complications, cancer and injury, make up an increasing portion of the global burden of disease.

Lack of access to safe, affordable surgical care results in increased death and disability, with the largest disparities in low- and middle-income countries. In 2010, an estimated 16.9 million people died from conditions needing surgical care, according to *Global Surgery 2030: Evidence and Solutions for Achieving Health, Welfare, and Economic Development*, the report of the Lancet Commission on Global Surgery. This is more than four times the deaths from HIV/AIDS (1.46 million), tuberculosis (1.20 million), and malaria (1.17 million) combined, according to the report.

Improving access to safe, quality surgical care is essential to achieving local and global health goals, including universal health coverage, but making surgery more accessible isn't a simple fix, said Catherine Juillard, director of UCSF's Center for Global Surgical Studies. It requires "health system strengthening, which is a more complex solution than something nice and tidy like a vaccine," she said.

That's where Sara Fewer and IGHS come in. What sets the center apart from others doing similar work is its

multidisciplinary approach to this complex problem, Juillard said. Early in its history, the center began working with Fewer, co-director of the Evidence to Policy Initiative at IGHS, as well as two health economists and a biostatistician. Fewer helps the center identify priority policy questions and design strategies to engage local experts and decision-makers in developing and applying new evidence.

"I'm hoping that, since we have robust data and someone like Sara to deliver this information in a more compelling fashion, we can have some real tangible results," she said.

Data from projects in Cameroon and Uganda will help the center work with local partners to develop evidence on surgical care needs and strategies to improve access and care. This data has important health policy implications. Just as dramatically reducing the deadly toll car accidents took on Americans meant passing legislation requiring seatbelts and child car seats, saving lives in these countries will require policies that fit each country's circumstances.

Having strong partnerships and local evidence is crucial for developing policy recommendations, Fewer said. "The center's research and focus on translating evidence-to-policy will help our country partners raise the visibility of surgical care and design policies and health systems that can improve access," she said.



Master's Program Sparks Ideas and Inspires Action

By Resego Bokete, Master's student

I am in the field of global health because of my first impactful global health experience in 2011 at the SOS Children's Village in Botswana, an orphanage for HIV/AIDS infected children whose parents passed from HIV/AIDS-related illnesses. I was responsible for taking care of the children—making sure they had food to eat and activities to do during the day. That experience was essential to shaping my career choice and led me to the UCSF master's in global health program.

I came to this program confidently thinking I was open-minded as I had interests in HIV, malaria, water sanitation and the hepatitis B virus. Now, halfway through the fast-paced and intense program, I have already realized that I was not as open-minded as I thought. I cared about these issues, but I have found myself researching more about and thinking of ways to actively contribute to issues such as diabetes awareness, violence against women and children and LGBTQ rights, to mention a few. I have never thought my knowledge was inadequate until now, because of the amount of information I have been exposed to. I already feel I can actually make an impact in my community and the world.

Here at UCSF, one of our year-round assignments in the program is to discuss current events globally. In the first quarter, we covered an extensive range of topics including the discrimination of the Rohingya people in Myanmar, the humanitarian crisis in Puerto Rico and President Trump's executive order to rescind the ACA birth control mandate, to mention a few. This is one of many activities

and assignments in the entire program that contributes to the widening of one's knowledge on global health issues and really encourages critical thinking.

Being in a class with 38 other like-minded and yet very different individuals has been really remarkable and has given me the opportunity to be a part of a family that has the same ultimate goal: to address global health issues, become professionals in our fields of interest and actively make a difference through research, clinical professions, governmental organizations and/or academia.

In the past five months, I have realized that there is so much I can do. I have already started thinking of major projects I could potentially start, from building a hospital in my home village, Makuta, in Botswana, to spearheading a project that would make equipment like CT and MRI scans available in the current hospital that is 20km away from my village, in order to reduce the number of referrals to the national hospital that is more than 100km away. I also have thought about non-health-related impacts I can make, such as starting a post-secondary school STEM scholarship opportunity for youth in my village, as well as a community pool that would provide a place to cool down in the very hot area and swimming lessons.

Of course, these are just preliminary ideas. They are vast and clearly unpolished, but once you realize that ideas don't have to remain ideas and can, in fact, become reality by your hands, they keep popping up in your mind. I am ecstatic to literally give back to my community, as well as to other underprivileged communities worldwide.



Global Programs Offices Support UCSF Researchers in Africa

What's a researcher to do when she needs to hire study coordinators, therapists and several short-term, part-time employees to screen study participants in Kenya?

Without strong local support, it can be a nearly impossible.

Susan Meffert, associate professor in the UCSF Department of Psychiatry, was able to hire the staff she needed with the help of a UCSF Global Programs Office in Kisumu, Kenya.

The Kisumu Global Programs Office is one of eight offices in five African countries that IGHS has established on behalf of UCSF to provide researchers a turnkey operation that includes financial management, procurement, logistics and compliance services, as well as local technical expertise.

Meffert works with the Kisumu office to conduct the Mental Health HIV and Domestic Violence (MIND) study, a randomized controlled effectiveness-implementation hybrid trial that treats mental disorders in women with HIV who have experienced domestic violence, using local non-specialists to deliver evidence-based care in a large HIV clinic.

She said the Kenya Global Programs team has provided her "massive help" with hiring. "That allowed me to have a much more complex workforce for my study and save money."

"These offices are here to make it easier for UCSF scientists to conduct international research," said Jane Drake, co-director with Kyle Pusateri of Global Programs Operations at IGHS. "The legal requirements for conducting research are changing, and we ensure researchers are compliant, including helping them avoid risks they may not be aware of."

Currently, 175 local employees work in offices in Tanzania, Uganda, Kenya, Mozambique and Namibia supporting more than 30 projects.

In countries without this type of office, researchers often must subcontract work to an NGO or other organization or try to do it on their own.

"I used to work on my own with refugees in Egypt and earthquake survivors in China," Meffert said, "and can say that not having that infrastructure at least triples the workload." And, with less time to travel and be on the ground than she used to have, "The infrastructure the offices provide is a key factor in being able to continue my global health research. They are an incredible resource."

Leadership

IGHS Faculty Leadership

Alden Blair, MSc, PhD

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Co-Director, UC Global Health Institute

Madhavi Dandu, MD, MPH

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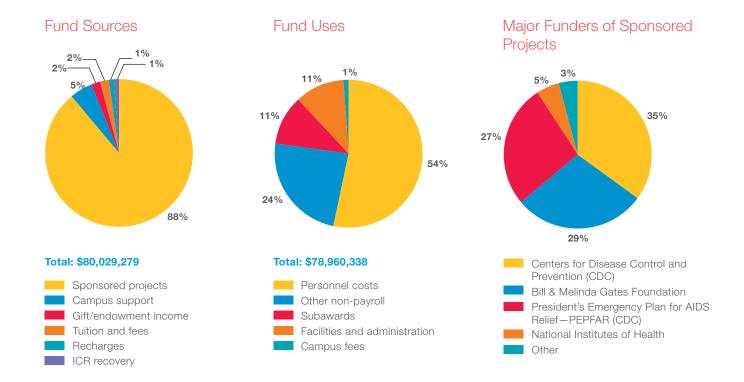
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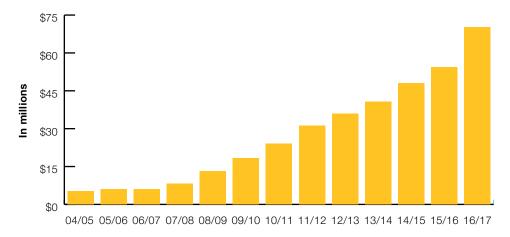
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Financials



Sponsored Projects Expenditures



Data on this page reflects in-year project expenditures for fund year July 1, 2016–June 30, 2017. Total grants awarded in the fund year equal \$80,029,279. 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 research and programs in 2017.

Individuals and Families

\$100,000-\$500,000

Katherine S. and T. Robert Burke Leesa and Martin Romo

\$10,000-\$99,000

Gwendolyn Holcombe and Carl M. Kawaja Elizabeth P. and W. Clarke Swanson, Jr. Anne C. and James M. Van Dyk John L. and Rue Ziegler

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