

UNIVERSITY of WASHINGTON

CELEBRATING



YEARS

2007-2017

DEPARTMENT OF

GLOBAL HEALTH

ANNUAL REPORT 2016

CELEBRATING



WE'RE 10 YEARS OLD!

A TIME TO REFLECT

The Department of Global Health (DGH) was created in 2007. Since the inception of the department, and in different forms in prior years, the University of Washington faculty and staff are at the helm, trying to solve some of the most pressing global health challenges.

1988

The **Center for AIDS Research (CFAR)** launches to support the career development of new and emerging HIV investigators to foster collaborative, interdisciplinary research across UW, Fred Hutchinson Cancer Research Center, Center for Infectious Disease Research, and Seattle Children's Hospital.



1987



Health Alliance International (HAI) begins. HAI promotes policies and supports programs that strengthen government primary health care and foster social, economic, and health equity for all.

2002

The International Training and Education Center for Health (I-TECH) is founded, with the goals of continued development of a skilled health workforce and strengthened health systems across the globe.



While this 2016 annual report focuses on the many accomplishments and impact of the last year, it is also an opportunity to step back and reflect upon the past decade. In 2017, the Department of Global Health (DGH) celebrates our 10th birthday, a wonderful culmination of more than 30 years in which UW has been pioneering changes in global health. The DGH vision is to achieve sustainable, high quality health globally and to reduce health inequities. Our work is rooted in a core value of social justice, achieved through excellence in education and training, research and evaluation, and service.

2003

The **Global Health Resource Center (GHRC)** is established to administer global health fieldwork programs for students, coordinate events and conferences, and develop a central clearinghouse for global health activities at UW.



2007

The **UW Department of Global Health** launches with a generous gift and endowment from the Bill & Melinda Gates Foundation, initial funding from Washington State, and with King Holmes as founding Chair; Judy Wasserheit as Vice Chair; and Steve Gloyd as Associate Chair of Education & Curriculum.

Four Centers form the new Department; Center for AIDS Research (CFAR), Health Alliance International (HAI), International Training & Education Center for Health (I-TECH), and the Global Health Resource Center (GHRC).

Institute for Health Metrics and Evaluation (IHME) launches as an independent global health research center, with DGH as home department.



International Clinical and Research Center (ICRC) gets underway, with the mission to coordinate and implement multi-center international infectious disease prevention trials.

2006

The Kenya Research Program starts to provide an academic forum that supports trainees and investigators in the planning, implementation, analysis, and presentation of research conducted in Kenya. In 2012, establishes as the **Kenya Research and Training Center (KRTC)**.



UNIVERSITY OF WASHINGTON
INTERNATIONAL CLINICAL RESEARCH CENTER

2008



The first academic program starts at DGH, a **Master's of Public Health (MPH) in Global Health**, with a cohort of 25 incoming students.

Strengthening Care Opportunities through Partnership in Ethiopia (SCOPE) forms to strengthen collaboration and understanding between indigenous faith-based and medical communities to address HIV and AIDS.



DGH has grown explosively from a small program, launched in 2007 with three faculty and a half dozen staff, to a robust, highly inter-disciplinary department of 390 faculty, more than 800 staff – most of whom are based in low and middle income countries (LMICs) – and almost 400 students. These faculty, students and staff work closely with partners in 129 countries around the world.

Since our inception, three inter-related dimensions guide our work: **pressing global health challenges, cutting-edge methods, and at-risk populations.** In the early years, our primary focus was initially on infectious diseases such as HIV/AIDS and other sexually transmitted infections, and related reproductive health challenges. Our original methods included the laboratory program in Pathobiology, outstanding clinical trials led by the International Clinical Research Center, and groundbreaking data analysis from the Institute for Health Metrics and Evaluation. DGH prioritized women and children, and the people most at-risk for or living with HIV, particularly in five countries in sub-Saharan Africa.

2010

The **Global Medicines Program (GMP)** launches with support from DGH and the School of Pharmacy, to improve access and use of medicines in resource-poor countries.

Program for Education and Research in Latin America (PERLA) establishes to improve the health and well-being of Latin American people.

The **Global Injury and Violence Prevention Initiative** works to increase capacity for injury control research, training, and interventions in recognition that over 90% of injury-related deaths occur in developing countries.

Disease Control Priorities Network (DCPN) inaugurates to generate reliable, timely, and comparable data on the costs and consequences of varied health policy options.



2012

The **Global Health E-Learning Initiative (eDGH)** originates, offering online courses and educational resources to support students, faculty and health workers worldwide.

The **PhD in Global Health Metrics and Implementation Science**, the first program of its kind in the world, launches.



2009

Afya Bora Consortium Fellowship launches, with four pairs of African and U.S. universities, to prepare future African global health leaders.

The **Health Metrics & Evaluation track** of the Master's in Public Health program commences, strengthening ties between IHME and the DGH.

The **Treatment, Research, and Expert Education (TREE)** program begins with local partnerships in Kenya, Vietnam, Cambodia, and around the globe, offering a multi-faceted approach to medical service delivery and capacity building



2011

The UW undergraduate **minor in global health** begins, galvanizing the interest and enrollment of more than 175 students by its second year.

Global Center for Integrated Health of Women, Adolescents and Children (Global WACH) launches, with a life-cycle approach to scientific innovation and leadership.

The **Strategic Analysis and Research Training (START)** Center commences for UW graduate student to provide research and analytic support to the Bill & Melinda Gates Foundation.

The Program on **Global Mental Health** starts.



Today, DGH programs conduct state-of-the-art research and prepare the next generation of leaders in the most pressing global health challenges of the day: reducing the health impacts of global environmental change, injury and violence prevention, and addressing chronic diseases such as cardiovascular and mental health problems. We consider implementation science a “signature science” of global health, and in 2012 DGH launched the world’s first PhD program in this emerging field. We have also expanded our focus to include the critical, but neglected, population of adolescents. We are building robust partnerships with colleagues in China, Nepal and Bangladesh.

As we enter our second decade, we face new challenges, framed by unprecedented opportunities. Our passionate faculty, staff, and students remain unwavering in their commitment to work with local and global partners to innovate through interdisciplinary education, collaborative research, and professional service, and to achieve large-scale impact in improving health among those most in need.

2014

Judy Wasserheit assumes Chair of the Department of Global Health and is the first female chair in the School of Public Health.

Center for Health and the Global Environment (CHanGE) begins, with the goal of effectively and efficiently managing the risks global environmental change is presenting to human health and well-being.

2016

LANDMARK YEAR FOR GLOBAL HEALTH AT UNIVERSITY OF WASHINGTON

Population Health Initiative launches; receives transformative gift from Bill & Melinda Gates Foundation

In May 2016, UW President Ana Mari Cauce announced the groundbreaking **Population Health Initiative** that will shape a 25-year vision to improve population health locally and globally by focusing on three key areas: human health, environmental resiliency, and social and economic equity.

Five months later the initiative received a **transformative gift of \$210 million from the Bill & Melinda Gates Foundation**. The generous support will serve as a catalyst for the vision, funding construction of a new building for population health, including Department of Global Health, and serve as a place for faculty, staff, students, and collaborators from the many university departments and global partners to work together.

BILL & MELINDA
GATES foundation

2013

Chinese Universities Global Health Partnership forms to strengthen collaboration between UW and Chinese universities and to broaden global health work in China.



2015

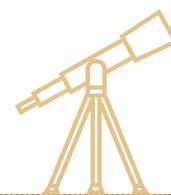
Certificate in Global Health starts for UW Medicine residents and fellows.

The **PhD in Global Health Metrics and Implementation Science** program graduates their 1st student, Peter Cherutich, who returns to work in the Kenya Ministry of Health.



ON THE HORIZON

DGH and the Division of Cardiology jointly launch development of a new program in **Global Cardiovascular Disease Prevention and Care**.





RESEARCH: DRIVING INNOVATION

A ROADMAP FOR BETTER HEALTH GLOBALLY

The Institute for Health Metrics and Evaluation (IHME) creates the most complete and up-to-date roadmap to help policymakers determine how best to help people live longer, healthier lives. Its work in 2016 included the annual Global Burden of Disease study, a collaboration with more than more than 2,000 contributors in nearly 130 nations. Last year's study found that improvements over the past 25 years in sanitation, immunizations, indoor air quality, and nutrition have enabled children in poor countries to live longer, however, such progress is threatened by increasing numbers of individuals suffering from obesity, high blood sugar, and alcohol and drug abuse.

POTENTIALLY LIFE-SAVING DIARRHEA RESEARCH

Researchers from Global Center for Integrated Health of Women, Adolescents, and Children (Global WACH), Kenya Research and Training Center (KRTC), and the Kenya Medical Research Institute are examining whether antibiotics could help save thousands of children from dying of diarrheal disease. The Antibiotics for Children with Severe Diarrhea (ABCD) Trial is the largest clinical trial addressing diarrheal management to date. It will not only answer the question of the potential benefits of antibiotics; it will also address potential harm, such as antibiotic resistance. The four-year \$2.5 million grant is funded by the World Health Organization.



A MULTI-DISCIPLINARY APPROACH TO ZIKA VIRUS AND PANDEMIC DISEASE PREPAREDNESS

More than 2.7 billion people live in areas where the Zika virus may soon spread, with potentially devastating effects for infants born in those areas. In response, Global Health faculty and students are using a broad range of methods across disciplines to stop the spread of the Zika virus and limit its impact:

In Peru, UW landscape architecture students are introducing layered gardens that repel mosquitos and provide the co-benefits of improved rainfall management, edible gardens, and indoor ventilation. Depending on the plant species, 15-60% of mosquitoes can be repelled using plants with mosquito-repellant properties and combining different plants increases the repellent effects.



A GARDEN DESIGNED TO CONTROL VECTORS AND REDUCE RISK OF DISEASE.

Pathobiology faculty recently released a study that details - for the first time - how Zika quickly damages the fetal brain.

Researchers are developing an animal model that will rapidly test a vaccine or therapy and determine its effectiveness in preventing Zika-related fetal brain injury.

MAPPING OF SEMINAL EVENTS IN PHYSICAL GROWTH OVER THE LIFECYCLE

The Strategic Analysis, Research & Training (START) Center team developed a timeline mapping seminal events in growth and development from conception through adolescence, including major causes of morbidity and mortality that could disrupt normal development, and associated risk factors and possible interventions.

The final deliverable, a 14 ft. by 9 ft. printed map, is currently on display in the UW Health Sciences library.



PHOTO: THE DAPIVIRINE RING

PHOTO CREDIT: ANDREW LOXLEY, INTERNATIONAL PARTNERSHIP FOR MICROBICIDES

WOMEN-CONTROLLED HIV PREVENTION

The UW DGH is an internationally-respected leader in HIV research, approaching discoveries and innovations from multiple perspectives across prevention, treatment, and care of the disease. Over the past 10 years, the International Clinical Research Center (ICRC) has played a significant role in expanding the evidence base around pre-exposure prophylaxis (PrEP) as well as other HIV prevention tools.

Some of the work of the ICRC during 2016:

- A pioneering ICRC study found that PrEP is safe for breastfeeding women and virtually eliminates HIV risk when provided to HIV sero-discordant couples (when one person is living with HIV and the other is not) in African settings as part of an integrated package of prevention services, along with treatment for HIV-infected individuals.
- The ICRC is spearheading research on the safety and effectiveness of PrEP for HIV prevention for populations worldwide, including young women who are at risk, pregnant and breastfeeding women, and women and men at high risk for HIV in Africa. Findings will inform the forthcoming implementation guidance by the World Health Organization (WHO).
- The Assisted Partner Services study through the KRTC found that **reaching out to partners of HIV-infected adults is acceptable, feasible, and high yield** in order to identify individuals who test positive for HIV and link them into care. The results of the study were published in LANCET HIV this year.
- The ASPIRE study, conducted in South Africa, Malawi, Uganda, and Zimbabwe, released findings that a monthly vaginal ring containing an antiretroviral drug, dapivirine, was safe and effective for HIV prevention. In a phase III trial the ring reduced HIV risk by 27%, with subsequent analysis suggesting the possibility of improving to a 92% reduction for those who used the ring consistently.
- The HIV Open-label Prevention Extension (HOPE) study builds on the results of ASPIRE to measure use of the ring now that its benefits have been demonstrated and to further study the relationship between adherence and HIV protection. DREAMS (Determined, Resilient, Empowered, AIDS-free, Mentored, and Safe), is a new joint PEPFAR effort to reduce HIV infections among adolescent girls and young women in 10 sub-Saharan African countries.





ACHIEVING IMPACT AT SCALE

Many DGH centers and programs support the scale-up of evidence-based interventions in more than 25 low and middle-income countries.

ELECTRONIC MEDICAL RECORD (EMR) SCALE-UP IN HAITI



Electronic medical records (EMRs) serve a critical role in efforts to achieve sustainable HIV epidemic control. In Haiti, iSanté has become the national EMR and is jointly administered by I-TECH and the Ministry of Public Health and Population (MSPP). iSanté contributes to four of PEPFAR 3.0's five action agendas to sustainably control the HIV epidemic: impact, efficiency, sustainability and partnership. Accessibility of iSanté data also promotes collaboration among I-TECH and partners to identify and apply differentiated models of care to diverse populations of patients.

LOCAL CAPACITY AND OWNERSHIP

The International Training and Education Center for Health (I-TECH) supports activities designed to strengthen the local capacity and leadership of our international partners. In the past decade I-TECH has transitioned nearly **50 projects and products to local government ownership**; an excellent example of sustainable partnerships and capacity building.

SCALING UP INNOVATIVE APPROACHES TO MENTAL HEALTH CARE AND IMPROVING ACCESS

In South Africa, **one in four people** living with common mental disorders don't have access to mental health treatment. DGH faculty are partnering with the University of KwaZulu-Natal to scale-up and evaluate the integration of mental health services in rural primary care settings. Key benefits of the integration of services are:

1. improvements in mental health,
2. adherence with mental health treatment, and
3. prevention and improvement in other chronic diseases.



The Mental Health Integration Program (MhINT), trains non-clinicians to treat patients with common or mild-to-moderate mental disorders and provides referrals to specialists for more severe conditions.

The program, initially serving **60,000 people** with common mental disorders per year, will **scale-up** across three rural districts and has plans to expand.

A mHEALTH PROGRAM IMPROVES BIRTH AND POST-PARTUM OUTCOMES



A three-year impact study of the Mobile Moms/Liga Inan mHealth program in Timor-Leste discovered that women who were connected with a midwife through text and voice communication throughout pregnancy were:

- more likely to have a skilled birth attendant
- deliver in a health facility and
- significantly more likely to receive postpartum and newborn care

Due to the success of the program, the Ministry of Health in Timor-Leste is moving to fully integrate the Liga Inan program into the government health system.



A NURSE IN KENYA HOLDS A NEWBORN BABY.
PHOTO CREDIT: CAITLIN O'BRIEN-CARELLI

MALARIA MEDICINE FOR PREGNANT WOMEN

The Global Medicines Program, a joint effort from the DGH and the School of Pharmacy, contributed to **one of the largest studies on the safety of medicines used to treat malaria in pregnant women in sub-Saharan Africa**, with an emphasis on the safety of artemisinin combination therapies (ACTs) in early pregnancy. The findings informed the World Health Organization Evidence Review Group (WHO-ERG) recommendation that ACTs can be used as a first-line treatment option for pregnant women diagnosed with malaria.



TRANSFORMING CARE THROUGH TECHNOLOGY

Assessments for child development are challenging to implement at scale, but broader use of these tools could enable targeted support for high-risk children. DGH faculty from Global WACH and the Kenya Research and Training Center (KRTC) used the Malawi Developmental Assessment Tool (MDAT) to assess development in hospitalized HIV-infected children in Kenya.

After starting HIV-treatment, children had significant gains in gross and fine motor skills, but their language and social skills did not improve. Children who gained weight more rapidly had greater neurodevelopmental improvements. **Child development and nutritional support, alongside HIV treatment, could benefit children living with HIV.**

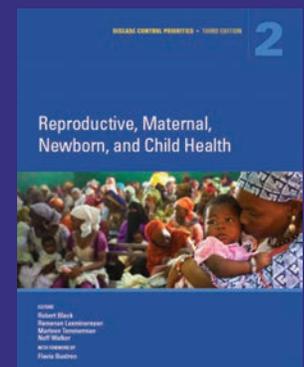
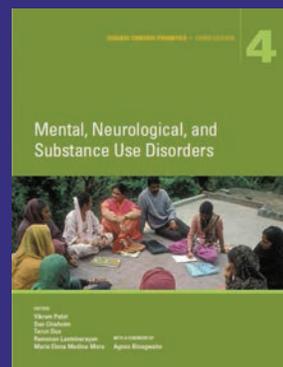
Researchers have since developed an interactive, tablet-based version of the MDAT, streamlining future projects that evaluate child development interventions. The new mobile tool may also help busy HIV treatment clinics monitor children's progress.

COMPILATION OF THE MOST COST-EFFECTIVE INTERVENTIONS

Disease Control Priorities, Third Edition (DCP3) published two landmark volumes in April 2016 that identify and analyze the most cost-effective interventions in resource-constrained settings. The scope of these analyses is unprecedented in depth, breadth, and potential global impact.

- **Investing in quality childbirth and family planning can quadruple returns on investment by reducing maternal and neonatal mortality, preventing stillbirth and reducing disabilities.** *The Reproductive, Maternal, Newborn, and Child Health (RMNCH), volume 2* in the series considers the impact on maternal, newborn, and child deaths and illness, as well as the cost and cost-effectiveness, of scaling up interventions and delivery platforms.
- **Globally mental, neurological, and substance use disorders now account for nearly 1 in 10 years of lost health.** *The Mental, Neurological, and Substance Use (MNS) Disorders, volume 4* in the series addresses inequalities in prevention and treatment of MNS disorders by governments and development agencies. The analysis provides evidence on policies and interventions that should be prioritized in resource-constrained settings.

DCP will publish five additional volumes on a variety of global health topics in 2017.





CAPACITY BUILDING & SERVICE: BUILDING STRONG HEALTH SYSTEMS

INCREASING ACCESS TO LIFE-SAVING MEDICINES

The sub-Saharan African country of Malawi suffers from frequent shortages of medicines and other supplies. Global Medicines Program faculty, staff and graduate students are involved in a three-year program designed to improve health system capacity through training and deploying pharmacy assistants to support primary health care in Malawi. The project has strengthened the availability of medicines in Malawi by assisting with training of **150 pharmacy workers** for village health centers over a three-year period.

MENTAL HEALTH OF WOMEN AND LINK TO PRE-TERM BIRTH



A recently published study from the Global Mental Health program found that in India, the country with the world's highest number of maternal deaths and preterm births, and high rates of domestic violence; psychological abuse and depressive symptoms were associated with increased risk of preterm birth.

Maternal education was a protective factor for preterm birth. Since pre-term birth is a major cause of under-five mortality globally, this study provides strong evidence for education and mental health interventions that support women's well-being and positively impact the next generation.



PHOTO ABOVE: JOSH LACSINA, MD, CHIEF RESIDENT
AT NAIVASHA DISTRICT HOSPITAL IN KENYA
SPEAKS WITH A PATIENT.



STRENGTHENING GLOBAL HEALTH CAPACITY IN CHINESE UNIVERSITIES

China Medical Board (CMB) Program made great strides to strengthen the academic global health capacity in our partner Chinese universities in 2016 - through faculty exchanges, graduate student education, collaborative research projects, and a well-attended, special symposium organized and conducted by the DGH.

Education and Training: CMB supported two Chinese faculty scholars to work with colleagues at the UW to develop research collaborations and learn about global health through DGH coursework. In addition, another faculty scholar was selected for Afya Bora program and is spending one year in Kenyatta Hospital in Nairobi. Two MPH students arrived from Sun Yat-sen and Wuhan Universities to pursue their MPH degrees. Two additional students graduated with their MPH degrees in June; both spent time abroad, one in Zimbabwe and another in Kenya, to complete their thesis projects.

Collaborative Applied Research Projects: Leaders from the UW, Nepal and CMB partner universities SYSU and Wuhan met in Nepal to develop specific objectives to collaborate with the University of Kathmandu (Dhulikhal Hospital) on long-term studies of non-communicable diseases in Nepal. In addition, Chinese students completed research projects in Kenya and Ghana.

China Global Health Symposium at the UW: The Department of Global Health hosted and funded, with support from the UW Office of Global Affairs, a landmark symposium, *Global Health in China: Harnessing the Power of Universities* bringing together global health leaders from top medical universities in China and the U.S. to discuss the future of academic global health in China. The symposium was a great success; it resulted the publication of a seminal article in a special China focused edition of the Lancet of that may help shape the future of global health activities at Chinese Universities. Symposium attendees, led by several of our Chinese partners, collaborated on publishing the article.

PHOTO BELOW: LINCOLN CHEN, PRESIDENT OF THE CHINA MEDICAL BOARD SPEAKING AT GLOBAL HEALTH IN CHINA SYMPOSIUM AT UW, APRIL 2016.
PHOTO CREDIT: KATHERINE TURNER



IMPLEMENTATION SCIENCE

Implementation science offers a systematic, scientific approach to ask and answer questions about how to get 'what works' to people who need it with speed, fidelity, efficiency, quality and relevant coverage.

30+ ONGOING PROJECTS

DGH has 30+ ongoing projects on implementation research, including HIV prevention and health systems strengthening.

7 ACADEMIC COURSES

Seven different academic courses are offered on Implementation Science, including two on-site in Mozambique and Kenya.

Implementation science at work

Preventing mother-to-child transmission (PMTCT) of HIV is a key strategy for halting the HIV epidemic. Providing antiretroviral treatment to women who are pregnant and living with HIV can reduce the risk of HIV passing from mother to child to less than 5%. Yet, effectively implementing PMTCT programs has proven challenging.

Implementation science faculty conducted a randomized trial involving 36 health facilities in Cote d'Ivoire, Kenya, and Mozambique and applied strategies from systems engineering.

RESULTS: A **three-fold** increase in antiretroviral coverage among women who are pregnant and living with HIV and a **17-fold** increase in screening of HIV-exposed infants.

DGH faculty will use these findings and systems engineering strategies to help health facilities strengthen PMTCT service delivery and protect infants from HIV.

HARNESSING THE ROLE OF COMMUNITY TO IMPROVE HEALTH

Strengthening Care Opportunities through Partnership in Ethiopia (SCOPE) was recently funded for a community-randomized trial of SCOPE's "Beruh Tesfa (bright hope)" pilot project. Beruh Tesfa engaged local religious leaders in partnership with health workers to conduct community outreach to improve maternal health. Data from the pilot suggested that doing so increased the number of women seeking antenatal care, retention in antenatal care, and the number of assisted births performed at the health facility. The goals of the randomized trial are to increase:

1. the number of women accessing primary health care facilities for perinatal care,
2. the identification women who are difficult to reach and may not be accessing care, and
3. collaboration between UW investigators and Ethiopian research partners.



EDUCATION & TRAINING:

CULTIVATING THE NEXT GENERATION OF GLOBAL HEALTH LEADERS

OUR STUDENTS

1500+ students took global health courses

47 degrees

38 certificates

69 minors

26 majors represented by our Global Health Minor students.

13% of applicants were admitted into our highly competitive PhD programs.



MENTORSHIP

50+ research assistantships

20 teaching assistantships

RESEARCH AND TEACHING ASSISTANTS

Approximately **55** RAs **20** TAs



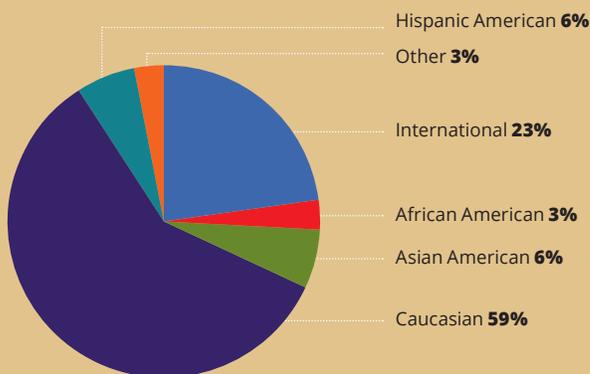
FIELD WORK WITH PARTNER ORGANIZATIONS

30 grants provided to students and residents to travel abroad for mentored research and fieldwork in **10** countries, totaling **\$118,000**.

ENROLLED STUDENTS, AUTUMN 2016 (N=155)

- 68% of our MPH and PhD students are female.
- 23% of our MPH and PhD students are from outside the United States. The main regions of origin are
Africa - 45%
Asia - 55%

RACE & ETHNICITY OF ENROLLED MPH AND PHD STUDENTS, AUTUMN 2016 N = 155



INCOMING STUDENTS, AUTUMN 2016 (N=57)

- 8 PhD entering students
- 49 MPH entering students

PHOTO RIGHT: A TRAINEE IN ZIMBABWE REVIEWS TABLET-BASED MATERIALS FROM AN E-LEARNING COURSE. PHOTO FAR RIGHT: SIMRAN HANDA (LEFT) WORKS WITH LAURA MARTINEZ (RIGHT) IN DR. SALAMA'S LAB AT THE FRED HUTCHINSON CANCER RESEARCH CENTER

GROWING NEW RESEARCHERS

In the last year alone, the Center for AIDS Research (CFAR) supported **275 NIH-funded research projects**, has ushered in a cadre of Principal Investigators to make important advances, as well as supported the development of **23 junior investigators** who are first-time recipients of NIH funding. CFAR fosters collaborative and interdisciplinary work to support the career development of HIV researchers and investigators.



BROAD REACH FOR HEALTH E-LEARNING

E-learning options for Global Health increased this year, with nearly **500 global health students** attending online courses or sections.

In addition, the portfolio of online courses offered to low- and middle-income countries enrolled **6,552 health workers** from **40 countries** and began offering a brand-new course, Fundamentals of Implementation Science.

The Global Health E-Learning Program, which supports these efforts, also partnered with I-TECH, TREE, and other centers and programs to support international training efforts in some **13 countries**, including Kenya, South Africa, Ukraine, and Zimbabwe.

INTERNATIONAL TRAINING PROGRAMS

Afya Bora Consortium Fellowship in Global Health Leadership celebrated its **fifth** year of bolstering health systems in Africa by training health professionals in leadership.

Afya Bora, a program within the Kenya Research and Training Center (KRTC) has trained more than **100 fellows** in leadership from five countries in Africa, as well as China and the US and **100% of graduates** report that the training positively impacted their performance at work.



OUR STUDENTS AND ALUMNI: INTERDISCIPLINARY POTENTIAL

GRADUATION 2016



Jessica Collins (BA '17)

MAJOR IN INTERNATIONAL STUDIES, MINORS IN GLOBAL HEALTH AND CHINESE LANGUAGE

Jessica's academic pursuits culminated in her study abroad experience in fall 2015. In addition to intensive language instruction and cultural emersion, Jessica conducted a month long independent research project on hepatitis C and HIV co-infections among intravenous drug users in Yunnan, China. She presented her research at both the 2016 Western Regional International Health Conference and the UW Undergraduate Symposium. Jessica began her final year at the University of Washington by traveling to Nepal to study development, with funding from the DGH and the Jackson School. Her studies reflect her passions, and she hopes to pursue a career in international aid.

"The professors, advisors, and courses taught in the Department of Global Health are giving me tools to be a conscious global citizen. Although I am sad to be graduating, I am thrilled to enter the real world and feel strongly motivated to heal the wounds of an unequal world."

**UNDERGRADUATE
MINOR**



Brianne Rowan (MPH '16)

GLOBAL HEALTH PATHWAY, 4TH YEAR STUDENT

A student in the dual MD/MPH degree program, Brianne spent a summer in northern Vietnam working with local medical students to develop peer-to-peer support groups that promote appropriate infant and young child feeding practices. In 2015 Jessica received funding to complete her MPH as part of an NIH-sponsored Pre-Doctoral Multidisciplinary Clinical Research Fellowship. Her MPH thesis work, done in partnership with Health Alliance International, focused on the impact of workforce patterns on mother-to-child transmission of HIV in Côte d'Ivoire. Brianne plans to pursue a career in family medicine.

"The Global Health MPH program allowed me the opportunity to pause my training in one-on-one patient-centered medicine and reminded me of the bigger picture of what really determines population health. I am thankful for the opportunities to connect with mentors who combined their medical practice with global health work in creative ways, to learn from my colleagues who came from all over the world, and to engage more deeply in social justice issues."

**MASTER OF
PUBLIC HEALTH**



**PHD IN
GLOBAL HEALTH**

Grégoire Lurton

GLOBAL HEALTH METRICS & IMPLEMENTATION SCIENCE, 4TH YEAR STUDENT

Grégoire is interested in the development of national public statistic systems for health in developing countries and exploring how improved analysis methods can improve the burden of data collection for frontline health workers. His work concentrates on methods to enrich and analyze data routinely collected in hospitals. Originally from Avignon, France, Grégoire graduated in Macroeconomics/Development Economics from Sciences Po, in Paris. Before starting his PhD in Global Health Metrics, he worked for five years with Solthis, a NGO dedicated to strengthening information and reporting systems for national HIV programs in Guinea, Mali, Niger and Sierra Leone. Grégoire envisions his career improving how health statistics are created and used in developing countries.

"Studying at the UW provides access to world class expertise, in DGH and in other departments that are leaders in the fields of Statistics and Computer Science. I love how the doctoral program allows us to tap from all these resources and build knowledge, skills, and values tailored to our needs for our current and future work."



**PHD IN
PATHOBIOLOGY**

Emily Gage

INFECTIOUS DISEASE, 4TH YEAR STUDENT

Emily's interest in vaccinology and infectious diseases led her to pursue an M.S. in Infectious Diseases and Microbiology from the University of Pittsburgh. She continued research at their Center for Vaccine Research, concentrating on the 2009 H1N1 influenza pandemic. Emily was raised in Albany, NY and graduated from the University of Vermont with a B.S. in Biochemistry. Following graduation, she worked as a research technician in the Mucosal Immunology Lab at Wadsworth Center Laboratory, investigating the role of the mannose receptor in the toxicity and inflammation caused by ricin toxin. Emily chose the UW Pathobiology Program where bench laboratory research and global health are uniquely integrated. She joined Rhea Coler's laboratory to continue studying influenza.

"The Pathobiology program and UW global health community are providing me with a wealth of unique research opportunities. UW's close connections to multiple innovative foundations and research institutes in Seattle make DGH programs one-of-a-kind."



**ALUMNI
MASTER OF PUBLIC
HEALTH**

Miriam Alvarado (MPH '13)

Miriam Alvarado is pursuing a PhD in Epidemiology as a Gates Scholar at the University of Cambridge. Her doctoral focus is on the evaluation of a sugar-sweetened beverage tax recently implemented by the Government of Barbados in an attempt to reduce obesity and address the rising burden of non-communicable diseases. After completing her MPH, Miriam was awarded a Fulbright Scholarship to investigate gendered physical activity norms in Barbados. Inspired by some of her findings, Miriam co-founded Get Women Moving, a \$3 dance fitness program with over 500 participants in six months. Miriam worked closely with the Ministry of Health in Barbados on physical activity and childhood obesity and she hopes the evaluation of the sugar-sweetened beverage tax will contribute to the body of evidence around these policies.

"The MPH in Health Metrics and Evaluation prepared me to engage in global health issues with an analytical skill set I can use for many relevant and complex questions. My interest in preventing non-communicable diseases at a population level is a direct product of the training and exposure I received through the MPH."

Alumni continued



**ALUMNI
UNDERGRADUATE
MINOR**

Jared Houghtaling (BS '14)

MAJOR IN BIOENGINEERING WITH HONORS, MINORS IN GLOBAL HEALTH AND MATHEMATICS

A Pacific Northwest native, Jared's interest in global health grew alongside his bioengineering research designing sensitive lateral flow assays to diagnose malaria at the point-of-care. He sat on the UW Global Health Undergraduate Leadership Committee in 2013, where he helped coordinate global health-related events, acted as a student voice in administrative decisions for the minor, and spearheaded a journal club.

After completing his Bioengineering degree at UW, Jared began a PhD in Biomedical Engineering at the University of Michigan. Currently conducting his thesis research in Fribourg, Switzerland, he is in close proximity to the WHO and is involved in ongoing collaborations with global health innovators.

"The minor provided me with a thorough understanding of the aspects, requirements, and constraints of successful global health solutions. My training continues to motivate and guide my approach toward engineering biomedical technologies for use at the point-of-care."



**ALUMNI
PHD IN
PATHOBIOLOGY**

Michael J. Gale, Jr. (PhD 1994)

Dr. Gale is the Director of the Center for Innate Immunity and Immune Disease, and a Professor of Immunology and Global Health at UW. He is a formally trained immunologist and virologist with expertise in studies of virus/host interactions, innate immunity, and immune signaling of RNA viruses.

His research focus is on the innate immune response to infection by emerging RNA viruses, and leveraging this information to build improved vaccines, vaccine adjuvants, and antiviral therapeutics.

Dr. Gale is developing a new class of innate immune-targeted antiviral drugs for broad spectrum application to treat virus infection. These new therapeutics will improve global health by providing effective treatment to the people infected with Ebola virus, Zika virus, or West Nile viruses and dengue virus.

"As a part of the Department of Global Health, I have been able to expand my research programs into new frontiers in innate immunity to improve immune protection against emerging viruses. My involvement in DGH catalyzed my scientific collaborations with other global health researchers with unique expertise that dovetail with my own."



**ALUMNI
GLOBAL HEALTH
PATHWAY FOR
MEDICAL STUDENTS**

Sunil Aggarwal (MD '10)

GLOBAL HEALTH PATHWAY

Sunil completed his undergraduate degree from UC Berkeley, joined the UW Medical Scientist Training Program and received an NSF Graduate Research Fellowship. He completed his Medicine Internship at Virginia Mason, Physical Medicine and Rehabilitation Residency at NYU, and Hospice and Palliative Medicine Fellowship at NIH. Sunil has over two dozen peer-reviewed publications; one of which has been cited over 100 times, translated into Spanish by the Council on Social Science Research, and highlighted in a UN Global Drug report. His dissertation, The medical geography of cannabinoid botanicals in Washington state: Access, delivery, and distress received NIH first-issued Certificates of Confidentiality. He led the AMA to call in 2009 for a review of Cannabis Scheduling. Sunil is a second-generation South Asian American from Muskogee, Oklahoma.

"I believe the core ethical principle of global health is that everyone everywhere is equally entitled to the highest possible standard of physical, social, mental, and spiritual well-being. I am deeply grateful that my advocacy work with Physicians for Social Responsibility and medical geographic work on behalf of those living under the everyday structural violence of the global drug wars was credited as a pathway towards Global Health at UW."



OUR FACULTY AND STAFF:

REACHING BEYOND DISCIPLINES,
ACROSS THE UNIVERSITY AND AROUND THE WORLD

622 PROJECTS IN
129 COUNTRIES

132 HEALTH TOPICS

390 FACULTY

813 STAFF

UW Kenya:

85

HAI:

136

I-TECH:

376

USA:

216

Cote d'Ivoire:

64

Mozambique:

42

Timor-Leste:

30

KUDOS TO STAFF AND FACULTY

Magaly Blas won the "Women in Science" award from Peru's Concytec, Unesco, and L'Oreal Peru for her commitment and contribution to the advancement of scientific research in Peru.

Aleta Elliott received the Global Health Outstanding Staff Award at the 2016 School of Public Health Excellence Awards.

Patricia Garcia, former Dean of the School of Public Health in Cayetano Heredia University, Peru, received the 2016 Exceptional Merit Award for Women for Outstanding Professional Performance from the President of Peru and Minister for Women. Soon after, she was named Minister of Health for Peru and sworn in on July 28.

King Holmes was inducted into the Smith Infectious Diseases Foundation "Hall of Fame."

Rafael Lozano received the 2015 Carlos Slim Health Award for Lifetime Achievement in Research that recognizes individuals and institutions committed to health improvement of the Latin American population.

Lisa Manhart was appointed to the Clinical Research and Field Studies of Infectious Diseases Study Section in the National Institutes of Health's Center for Scientific Review.

Robert Martin received the Hologic Joseph Public Health Award at the 2016 American Society of Microbiology conference.

Paul Nevin (MPH '15) was awarded first place prize for feature photography for the Society of Professional Journalists (SPJ) Mark of Excellence Awards in Region 10 for his photography that documents maternal health issues in Kenya.

Sally Weatherford accepted a new job as Administrator of School of Pharmacy at UW after nine years as Director of Finance and Administration for DGH.

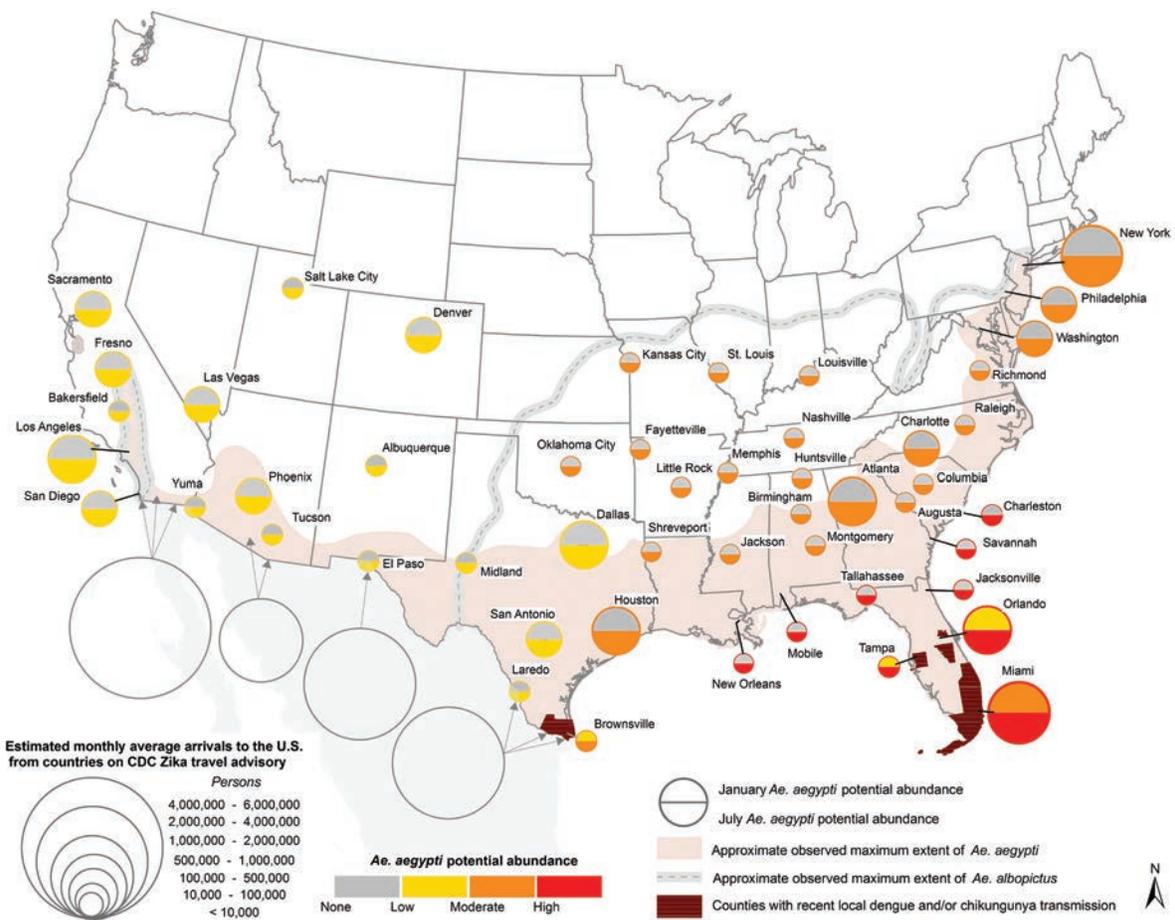
PHOTO ABOVE: HEALTHCARE WORKERS IN NAIVASHA, KENYA ARE TRAINED HOW TO USE A VENTILATOR, AS PART OF A PILOT TRAINING ON RESPONDING TO TRAUMA AND MASS CASUALTIES. CREDIT: ERIN STOY, GO HEALTH FELLOW



NATIONAL RECOGNITION FOR DGH FACULTY

The Program on Global Mental Health explores innovative approaches to increase access to and improve the effectiveness of care for millions of people affected by mental illness around the world. Co-Director Deepa Rao, a national expert on HIV stigma, presented her research at the White House.

PHOTO LEFT: DEEPA RAO, RIGHT, DGH ASSOCIATE PROFESSOR, IN WASHINGTON, D.C.



ZIKA VIRUS TRANSMISSION RISK MAPS

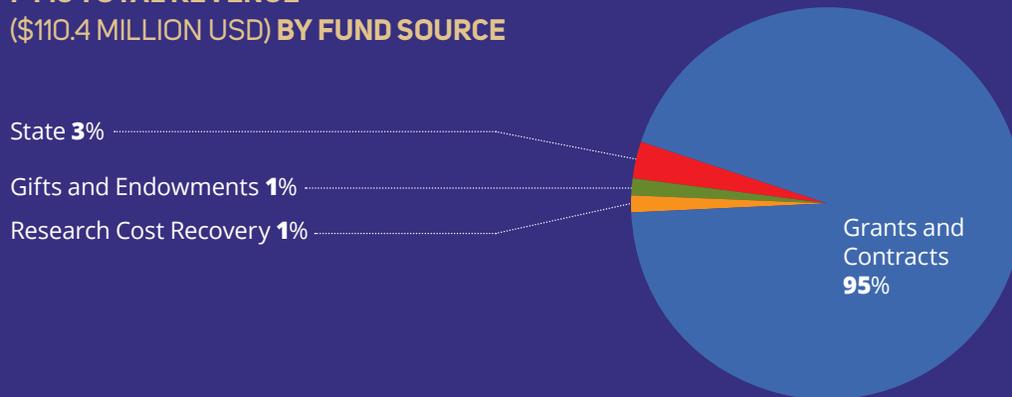
Among our newest faculty members, Cory Morin, Acting Assistant Professor, created a model that was used to generate Zika virus transmission risk maps, which identified Texas and Florida as high risk areas months before infection occurred. Dr. Morin's work garnered national interest, with maps of current and future environmental determinants of the mosquitoes that carry dengue fever, Zika virus, and other diseases.

ABOVE: PREDICTIVE MAP OF AEDES AEGYPTI MOSQUITO PREVALENCE IN THE US CREDIT: PLOS CURRENTS OUTBREAKS

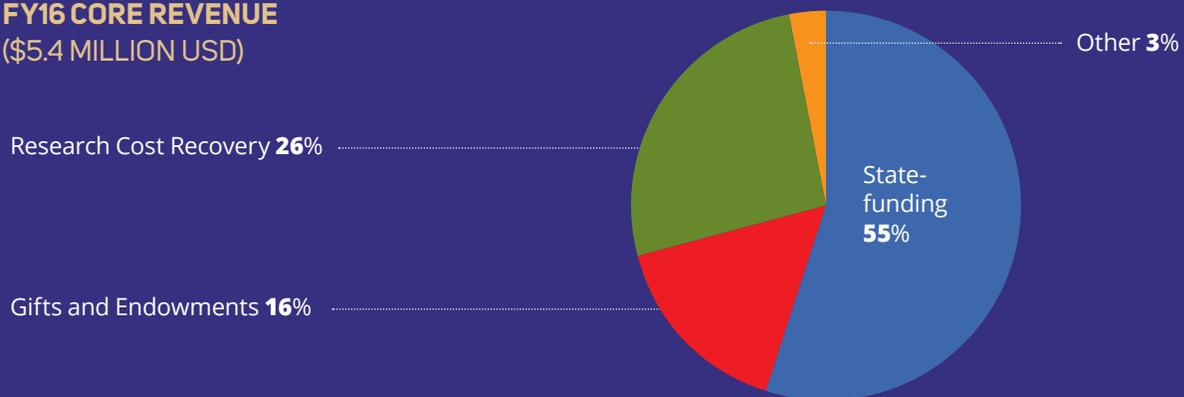
FINANCES: SUPPORTING OUR MISSION TO IMPROVE HEALTH FOR ALL

Core revenue and expenditures are the funding sources and costs associated with running the Department, including academic programs and excluding grant and contract-related work and the work of our Centers, Programs, and Initiatives.

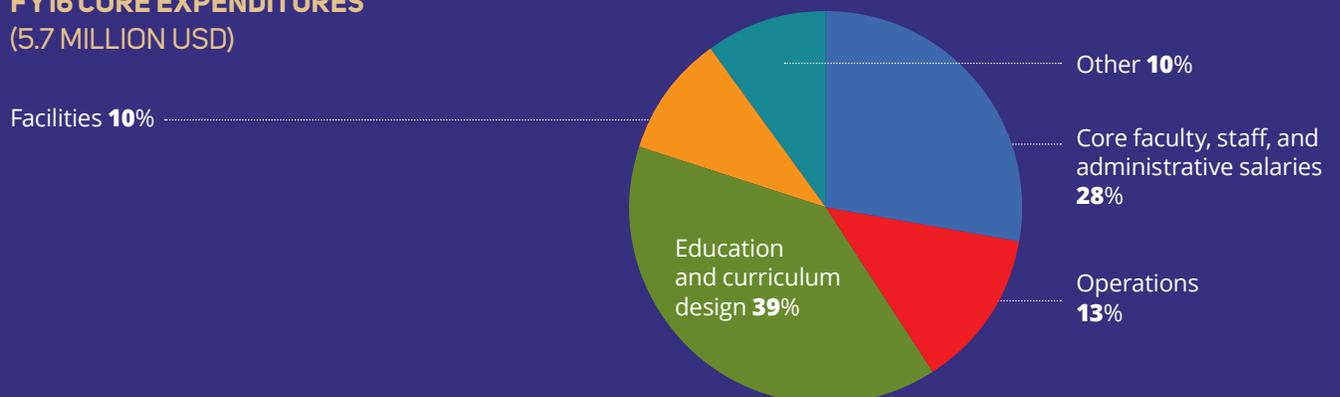
FY16 TOTAL REVENUE (\$110.4 MILLION USD) BY FUND SOURCE



FY16 CORE REVENUE (\$5.4 MILLION USD)



FY16 CORE EXPENDITURES (5.7 MILLION USD)





GLOBAL HEALTH CERTIFICATE STUDENT JORGE 'COCO' ALARCON IN A FLOATING SLUM IN IQUITOS, PERU

UNIVERSITY OF WASHINGTON: PASSION NEVER RESTS

#1 most innovative public university in the world according to *Reuters*

#7 nationally by *Washington Monthly*

#15 globally by the Academic Ranking of World Universities

The UW receives more federal research dollars than any other public university in the nation — in FY15, the UW received

#3 of 59 universities in a student-led report in its approach to global equity and biomedical research

#11 globally by *U.S. News & World Report*

\$1.3 billion in total research awards.

DEPARTMENT OF GLOBAL HEALTH

DEPARTMENT LEADERSHIP:

Judith Wasserheit, MD, MPH *William H. Foegen Endowed Chair*

Jared Baeten, MD, PhD *Vice Chair*

Carey Farquhar, MD, MPH *Associate Chair of Academic Programs*

King Holmes, MD, PhD *Director of Research & Faculty Development*

John Sutherland, *Interim Director of Finance and Administration*

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