



PURSuing HEALTH EQUITY AROUND THE WORLD

2018-2019 IMPACT REPORT

Duke

GLOBAL HEALTH
INSTITUTE

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FROM THE DIRECTOR

During the past year, as part of DGHI's community-wide process to write a new strategic plan, we asked faculty and staff to articulate the values that unite us as global health scholars. Many of the themes that emerged are not surprising: People from across our broad community, for example, universally embraced diversity and inclusion and identified commitment to real-world impact as a driving force for their work. These values have always been a hallmark of DGHI's success.

But I was also struck by the common language faculty and staff used to describe the way they approach projects and partnerships around the world. Words such as humility, compassion, respect and cultural sensitivity came up again and again. People spoke passionately about the spirit of true collaboration that imbues their work and how they cherish involvement and insight from the communities where we are engaged.



A skeptic might consider this the humble-brag of an elite university. And to be sure, global health experts from privileged countries have not always fulfilled their promises of humility and collaboration. But having seen our faculty, staff and students at work around the world, I assure you it's genuine. It's part of our organizational DNA to listen before we speak and seek to understand the values, needs and priorities of our partners. And it's because of these values that we are able to create such a powerful impact through our research, education and partnership.

As you read this report, you'll see just a few examples of this impact. We are immensely proud of the positive outcomes

these projects are generating for communities around the world. At the same time, we are keenly aware that the credit is not ours alone to take. We share it with gratitude for the many partners who have shaped these stories with their vision and effort—and with the recognition that such results are possible not because we are knowledgeable enough to have the right answers, but because we are humble enough to ask the right questions.

Chris Plowe

Director, Duke Global Health Institute

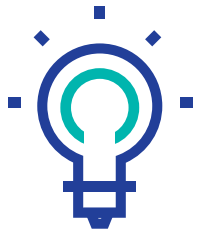


DGHI director Chris Plowe tours a lab at Kilimanjaro Christian Medical Centre in Moshi, Tanzania.

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It's part of
our organizational
DNA to listen
before we speak.

2018-2019 HIGHLIGHTS



8

Duke schools who have faculty with appointments in global health (Arts & Sciences, Divinity, Engineering, Environment, Law, Public Policy, Medicine, Nursing)



45%

Increase in grant funds administered by DGHI in 2018-2019 from the previous year



100%

Master of Science in Global Health students who received financial aid and funding for fieldwork

GLOBAL

105 students performed global health field research in 21 countries in summer 2019, including our first Student Research Training program in Ghana.



217

Global health research projects that received new or renewed grant funding in 2018-2019



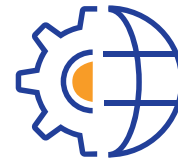
418

Students enrolled in global health programs for undergraduate, master's and doctoral students



\$56 MILLION

Total external funding for global health research during 2018-2019



40+

Countries where DGHI faculty conducted research

LOCAL

In 2019, DGHI launched new student fieldwork partnerships in Durham, N.C., to address health disparities in our local community.

INNOVATIONS WITHOUT BOUNDARIES

UGANDA

Promising Pratt Pouch Ready to Scale Up

In 2008, Duke engineering professor Bob Malkin learned of a vexing failure that was frustrating efforts to prevent transmission of HIV from mothers to their newborns in many parts of the world. Antiretroviral medications—which are essential for newborns to receive in the first hours after birth to protect them from the virus during breastfeeding—were decaying in storage.

That meant trouble in places like Uganda, where most births take place at home and mothers are often given antiretrovirals for their babies at prenatal appointments months before birth. By the time the babies were born, the medications could be degraded.



Similar to a ketchup packet, the Pratt Pouch preserves a single dose of antiretroviral medicine.

Over the next few years, Malkin and his students developed the Pratt Pouch, a small foil pouch similar to a ketchup packet that preserves a single dose of antiretroviral medicine for up to a year. Tested in four countries, the pouch has enormous promise as an effective, easy-to-use and (at a production cost of four cents) inexpensive method of preventing mother-to-child transmission of HIV.

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The hope is to reach
40,000 infants in Uganda
within three years.

Now, the Pratt Pouch team (named after Duke's Pratt School of Engineering) is taking steps toward broad distribution in parts of Africa. In collaboration with the Elizabeth Glaser Pediatric AIDS Foundation, they have built a high-tech facility at Hospice Uganda in Kampala with equipment that fills and seals a pouch in four seconds. Maternova, which sells obstetric and newborn technologies to a broad network of private and government clients, will distribute the pouch. The hope is to reach 40,000 infants in Uganda within three years.

"We're very excited about the potential for this automated filling process to address critical needs in countries with a high HIV burden," says Malkin. "Countries like Uganda, Lesotho and Botswana, where more than 30 percent of women are HIV-positive, need this larger-scale manufacturing."

Predicting a Malaria Outbreak—From Space

PERU

For decades, Peru's efforts to control malaria in its thickly forested Amazon region were driven by reaction: Public health officials followed infection data from local clinics and historical data to figure out where to deploy resources.



William Pan (far right) and Ben Zaitchik talk with government stakeholders in Peru.

Now, with the help of DGHI researchers, they have a new tool, one that can give them up to 12 weeks' notice of where outbreaks are likely to occur.

The innovative forecasting system—the first of its kind in the world—uses satellite data such as temperature, precipitation, land use and land cover to predict when environmental conditions are ripe for malaria to spread. Developed with funding from NASA, it's

giving health officials a head start on the parasite, allowing them to target places to ramp up preventive measures, such as distributing mosquito nets or spraying insecticides.

“One of our primary goals with this system is to enable the Peruvian government to use their malaria control resources more efficiently and effectively,” says Mark Janko, a Duke postdoctoral fellow who designed the system along with William Pan, an associate professor of global environmental health at Duke, and Ben Zaitchik of Johns Hopkins University. “This early warning system will do just that.”

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“This system provides a tool that has the potential to steer the country toward elimination or eradication of malaria within 10 years.”

And not a moment too soon. After declining for much of the past decade, malaria cases have increased more in the Amazon than anywhere in the world.

“The Peruvian government is strongly motivated to control malaria, but they haven't had effective tools to do that,” says Pan. “This system provides a tool that has the potential to steer the country toward elimination or eradication of malaria within 10 years.”

CHINA

Recommendations in a policy memo by DGHI professor Shenglan Tang led China to establish an administrative agency to oversee management of its government health insurance programs.

INDIA

DGHI Team Tests a More Sustainable Toilet

The installation of a new toilet would hardly seem cause for global curiosity. But in the case of a new high-technology system put in place at an Indian textile mill, that toilet is also a test.

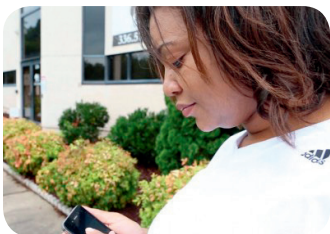
Designed by researchers at Duke's Center for Water, Sanitation, Hygiene and Infectious Disease (WaSH-AID), the experimental facility is one of a handful of projects launched under the "Reinvent the Toilet" challenge, a global effort funded by the Bill & Melinda Gates Foundation to aid the 2.4 billion people who have no access to sanitation systems. This alarming lack of safe waste disposal fuels environmental contamination and the spread of diarrheal diseases that kill more than 500,000 children each year.

The Duke team's answer is a self-contained waste processing system that chemically disinfects waste while recycling water and generating its own solar power. After spending years developing the core technology in the lab, engineers are now getting their first sense of how it works in the real world.

The prototype, which was installed in a women's dormitory at a busy textile mill, pays particular attention to the needs of women, who are disproportionately affected by poor access to sanitation. It includes a discreet hatch for disposal of feminine hygiene products, a small touch that the researchers hope encourages acceptance of the experimental system.

"Our aim is to be gender-transformative, empowering women and girls with the knowledge and choices to enhance their health, education and quality of life," says Brian Stoner, director of WaSH-AID and a professor of electrical engineering and global health.

Duke's project in India is part of the global "Reinvent the Toilet" challenge.



Bringing Global Health Home

1 in 3 DGHI research projects are addressing health disparities in the United States, including several efforts to advance health equity and access for communities in Duke's home city of Durham, N.C.

Helping Teens with HIV Starts with Mental Health

TANZANIA

When Dorothy Dow began working with adolescent HIV patients in Moshi, Tanzania, in 2011, she quickly realized the main obstacle to their health was not access to treatment. Most teens living with HIV had medications, but they often didn't take them.

This reluctance is one reason underlying a frustrating exception to the global progress against HIV. While AIDS-related deaths have declined by 30 percent globally in recent years, among adolescents, mortality has actually risen by 50 percent.

"There really isn't much of an excuse from a medical standpoint for why these youth are dying from HIV," says Dow, an assistant professor of pediatrics and global health at Duke. "So we needed to understand what was preventing them from taking their medicines."

In Tanzania, Dow began studying the reasons for teens' lack of adherence and found many were struggling with mental health issues such as depression and trauma. Because there are few

...

"This intervention was developed to give (adolescents living with HIV) hope for the future, to let them know they can have a normal life."

clinical psychologists in Tanzania to help youth, she developed a novel program to train fellow adolescents to provide counseling and support to their peers living with HIV.

"This intervention was developed to give (adolescents living with HIV) hope for the future, to let them know they can have a normal

life," says Dow. "That was not in their dialogue and that was not what they were hearing from society."

Participants in the support groups have shown increased resilience and reduced viral loads. Based on the success of the trial, Dow and her collaborators have developed a peer-led HIV education



In Tanzania, Dorothy Dow (right) and student Sahar Almarzooqi are testing peer-led education for teens with HIV.

program, which is delivered at a monthly clinical and social gathering in Moshi for several hundred adolescents with HIV.

Blandina Mmbaga, director of the Kilimanjaro Clinical Research Institute, has observed dramatic changes in how engaged adolescents who have participated in the programs are in their care. But she hopes it's just the beginning.

"Given these positive outcomes, I think it's important for us to connect with other stakeholders and scale up this effort—first within the Kilimanjaro region and eventually to more sites within our country," she says.

PARTNERING FOR CHANGE

SRI LANKA

DGHI Team Responds in a Public Health Emergency

In April 2018, doctors at the main hospital in Galle, Sri Lanka, were alarmed by a mysterious spike in serious respiratory illnesses among children. They suspected an influenza outbreak, but whatever was making the children sick was deadly. More than half of the infected children died, many of them under two years old.

As similar cases emerged across the southern region of the country, Sri Lanka mobilized its health experts, including a team of DGHI researchers who have been collaborating on infectious disease research in the country since 2007. Among them was Gayani Tillekeratne, an assistant professor of infectious disease and global health who had recently launched a study with researchers at the University of Ruhuna in Galle to test advanced diagnostics for lower respiratory infections. Because that study was already in the field, Tillekeratne says “we were able to allocate personnel toward the outbreak response.”

Led by Sky Vandenburg, an internal medicine resident in the Duke Global Health Pathway program, the team began coordinating surveillance efforts and performing diagnostic tests. They also



Sri Lankan researchers train on PCR equipment provided by Duke collaborators.

arranged for molecular diagnostics equipment to be set up at the University of Ruhuna in Galle, significantly reducing the response time for diagnostic tests.

With the benefit of faster testing, researchers were able to peg adenovirus and influenza A as the main culprits in the most severe illnesses, confirming national tests and enabling health officials to focus their response efforts.

“The response to the outbreak has been a real team effort,” says Ajith Nagahawatte, professor of microbiology at Ruhuna. “Thanks to all those who helped, the mission was a success, and it gave a lot of credibility to the University of Ruhuna-Duke collaboration.”

DGHI’s longstanding partnerships with Kenya’s Moi University and Webuye County Hospital have birthed a PEARL. The Partnership for Education and Academic Research Laboratory, opened in January 2019 in Webuye, houses state-of-the-art microscopy and will serve as a training facility for technicians and clinicians across the country.

KENYA

Fixing a Birth Defect That Shouldn't Be Fatal

UGANDA

When little Nathaniel was born at Mbarara Regional Hospital in western Uganda, everyone was sure he was going to die. Nathaniel had a condition called gastroschisis, where a baby is born with its intestines, and sometimes other organs, outside of its body. Of all the babies born with gastroschisis at Mbarara then, none had survived.

But surgical resident Anne Shikanda Wesonga believed she could change that. Wesonga, who was participating in a pediatric surgery training program developed by DGHI and international



Born with gastroschisis, baby Nathaniel was one of the first in Uganda to survive the rare birth defect.

partners, knew that in high-income countries such as the United States, newborns with gastroschisis receive a fairly simple surgical correction, and almost fully recover. For a year before

Nathaniel arrived, she had been working with Tamara Fitzgerald, an assistant professor of surgery at DGHI, to find ways to improve the chances for babies born with the condition in Uganda.

“There are kids dying, and we have a solution for it,” says Fitzgerald.

In the U.S., gastroschisis is typically spotted in prenatal ultrasounds, and at birth, babies are whisked into neonatal intensive care, where they are fed an intravenous solution and their organs are protected until they are ready for surgery. In Uganda, however, prenatal screenings are not as common, and by the time babies with gastroschisis arrive at major health centers, they are often dehydrated and their organs damaged. Even then, most Ugandan hospitals do not have the special solution or equipment to protect the babies’ organs.

...

“There are kids dying,
and we have a solution for it.”

Wesonga and Fitzgerald have tried several avenues, including different ways to nourish babies and improvising a shield from surgical gloves to protect their organs. Their creativity paid off: Nathaniel survived and surgeons were able to repair his organs, fueling hope that gastroschisis in Uganda does not have to be a death sentence. Of the next 17 babies born in Mbarara with gastroschisis, 10 survived.

“Since then, it’s just changed everything,” Wesonga says. “Now if a baby with gastroschisis comes in, everyone tries to do something. There’s really hope.”

Fighting Drug-Resistant Malaria with Diplomacy

The jungly, swampy countries in the Mekong River region have a nasty history of birthing new forms of malaria that defy treatment. In the past few years, studies have shown parasites in the region are growing increasingly resistant to artemisinin, the most effective drug against malaria, igniting fears that the disease may be gearing up for a comeback in Southeast Asia.



Myaing Myaing Nyunt examines mosquito larvae at a teak plantation in Myanmar's Mandalay Region.

Myaing Myaing Nyunt, an associate professor at DGHI, is leading an effort to keep that from happening. A native of Myanmar, she has been working in the country since 2010 to identify and track the spread of drug-resistant parasites and develop more sensitive diagnostic tools to help health workers in the field spot

troublesome cases before they spread. But the team's work is also notable for its emphasis on building common ground among disparate and often contentious factions within Myanmar, where a legacy of military rule and ethnic conflict have often prevented collaboration.

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“If we are going to eliminate malaria, we have to have an impact on policy right away.”

In 2015, Nyunt helped organize a meeting of more than a dozen of the country's political and military leaders—including representatives of ethnic groups that were engaged in armed conflict with the government—to hammer out a common agenda for malaria eradication. Nyunt has since crisscrossed Myanmar to knit together a complex web of government agencies, community groups and non-government organizations who now collaborate on their research.

“We brought these groups together to work under one protocol, and that had never happened before in Myanmar.”

Such cooperation is essential, Nyunt says, to sustain progress toward Myanmar's goal of eliminating malaria from its borders—and thus reducing the risk of dangerous strains spreading worldwide.

“There is an urgency to this work,” she says. “If we are going to eliminate malaria, we have to have an impact on policy right away.”

Bringing Fistula Interventions to the Field

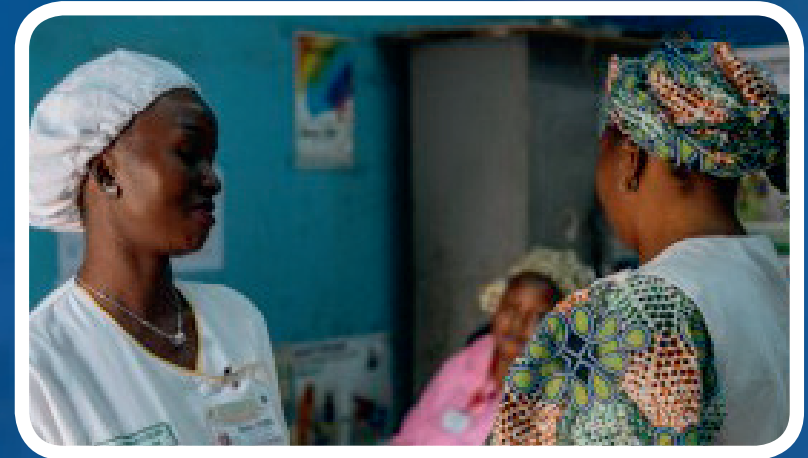
MALI

Like most global health researchers, Melissa Watt wants her work to have the broadest possible impact. So when an opportunity arose with IntraHealth International to put her research on obstetric fistula into practice, she seized it.

Obstetric fistula, a hole that forms in a woman's vagina after prolonged or complicated labor, most commonly occurs among women in low-resource settings who don't have access to emergency obstetric care. Its physical effects, including uncontrollable leakage of urine or feces, nerve damage and infections, often carry a devastating emotional toll, yet until a few years ago, no evidence-based mental health intervention existed for women with fistula.

Watt, an associate professor at DGHI, was among the first to address this gap. In a pilot study in Tanzania, she designed and tested a mental health intervention delivered by nurses, with positive results.

Shortly after that study ended, Joy Noel Baumgartner, director of the DGHI Evidence Lab, saw a potential connection with an IntraHealth project in Mali, which is seeking to increase awareness of fistula and access to repair and treatment services. Together, the teams created a survey to assess signs of mental distress and developed a referral and support system for women with fistula.



*A nurse-midwife counsels a client on fistula repair in Mali.
Photo by IntraHealth International/Nana Kofi Acquah*

“Not surprisingly, we identified high levels of mental distress and other negative fistula-related experiences,” says Watt. “The data make a strong case for providing psychosocial support to fistula patients in Mali.”

Based on the study, the Malian government has now incorporated assessing mental health into its strategic plan for elimination of fistula, calling it a “remarkable innovative strategy.”



Workshop Fosters New Collaborations in Africa

17 researchers from across East and South Africa came together for DGHI's second partnership workshop, held in March 2019 in Nairobi, Kenya. Organized to stimulate new research collaborations among our partner institutions, the workshop sparked three research proposals that will receive pilot funding from DGHI.

TRAINING GLOBAL HEALTH LEADERS

EMILY
NAGLER
AB'19

Pursuing Health Equity at Home and Abroad

Global health often attracts students who feel the draw of faraway places. Emily Nagler was no different. In her global health courses as an undergraduate student at Duke, she was immediately absorbed by the feminist narratives that spoke to international challenges in reproductive health, human rights and gender equity.

Her first taste of field experience came the summer after her sophomore year. She took off for an eight-week project in Quito, Ecuador, where she interned at a reproductive health nonprofit. She trained health promoters in a peer-based sexual health education program for adolescents and helped them lead

workshops on safe sex practices and contraceptive use. Nagler also completed a small evaluation project to help the nonprofit improve program implementation.

When Nagler returned to North Carolina, she realized she did not have to leave global health work behind. As the focus of her honors thesis, she interviewed migrant and seasonal farm workers in eastern North Carolina about their experiences during Hurricane Matthew, which caused significant flooding and damage in the region in October 2016.

She found that many migrant workers missed out on evacuation notices and transportation services because the government could not locate or contact them. Based on her research, she wrote policy recommendations for improving disaster outcomes and the recovery process for future hurricanes, which she shared with policymakers and employees at the state and local levels.

And Nagler found a way to bring her passion for global health even closer to home: to the Duke community. She served as president of Peer Advocacy for Sexual Health, an on-campus group that works to empower students with the knowledge they need to engage in healthy sexual interactions and encourage non-judgmental discourse about sexual health.

After graduating, Nagler received a Princeton in Latin America fellowship, which will allow her to work with Women's Justice Initiative. The organization promotes female empowerment through legal services, education and gender-based violence prevention efforts. Nagler will contribute her expertise to its development and communication efforts, sharing the narratives about gender and global health that she continues to find so compelling.



Emily Nagler outside a reproductive health clinic in Quito, Ecuador.

Students Design App to Mine Health Data

Among the things you can learn digging into global data on reproductive health is this disturbing fact: One third of women who start a modern method of contraception abandon it within a year, even if they still want to avoid pregnancy. But what researchers and program officers really need to know is why.

Over the past year, a group of Duke students has been trying to make it easier to seek answers to that question in the world's biggest trove of data on contraceptive use. As part of a project called Big Data for Reproductive Health, the team developed a suite of tools and an app that help researchers visualize data from USAID's Demographic Health Survey, which amasses data on health behaviors from more than 80 countries. They aim to provide a better tool to reveal patterns that lead to improved family planning interventions.

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“When you visualize data, it’s much meatier than just looking at numbers and tables.”

“When you visualize data, it’s much meatier than just looking at numbers and tables,” says Saumya Sao, a global health and gender studies major who began working on the project in summer 2018. “It can show you what’s really happening.”

Sao and fellow student Melanie Lai Wai began coding the data visualization tools as a summer project, which eventually

expanded to involve 12 students in fields from public policy to statistics. Under the leadership of DGHI research scholar Amy Finnegan and Megan Huchko, director of DGHI’s Center for Global Reproductive Health, the team refined the tools, which give users unprecedented ability to isolate specific aspects in the data.



The Big Data for Reproductive Health Team

One feature, called “See the Switch,” allows users to see what contraceptive methods women used first, what they switched to and why.

“I do hope that it translates into actionable information for people,” says Finnegan. “We see ourselves as that conduit.”

Gaining the Skills to Make a Difference

Assumpta Nantume was a pharmacy student in Uganda when a summer experience changed her trajectory. She was part of a group of college students that conducted field research in a village a few hours away, where women wanted to protect themselves against HIV but their partners were not getting tested. Through education and communications strategies, the team managed to influence the men's behavior and boost their demand for HIV testing by about 30 percent.

Nantume was hooked. But she wasn't sure global health research could be a career. She began collecting experiences that would broaden her understanding of the field—and her place in it. While completing her clinical pharmacy training, she helped lead a study into the traditional medicines people in southwestern Uganda were using to prevent malaria. Later, she took a fellowship in Washington, D.C., to work on global health communications and advocacy.

Then, Nantume got the opportunity to draw her various experiences together. She was awarded a von der Heyden Family Global Health Fellowship to pursue a master's degree at DGHI, where she could focus on global health issues that she had seen firsthand and find creative ways to address them.

She connected with Steve Taylor, an associate professor of medicine and global health, who involved her with a clinical trial he was running in Homa Bay, Kenya. Taylor was studying the use of the anti-cancer drug hydroxyurea to prevent malaria among children with sickle cell anemia, so Nantume's knowledge

of pharmaceuticals made her a natural fit. She thrived as part of an academic lab, developing skills in different technologies such as DNA extraction and analysis and gaining data management experience.

Nantume was especially thrilled that Taylor involved her throughout the planning and execution of the trial. "He included me in calls with partners months before I went into the field, so I understood the timeline of the project, its various challenges and how to effectively navigate and coordinate a study of that scale," she says. "It really helped prepare me for my career."

Now, Nantume knows that global health research is the right place for her. She recently started a position as a research coordinator at Neopenda, a medical device company that is working to improve newborn health services in Uganda. The company is piloting a device that has lifesaving potential for vulnerable babies in low and middle-income countries, where conventional monitors are often too costly, impractical and unsustainable to implement.

"Global health resources are so meager, so we need to make the most of what we have," Nantume says. "Luckily, our field has a wonderful track record of working with very little to achieve a lot."



82%

of M.S. in global health graduates who have pursued careers are working in jobs directly related to global health.

Alumna's Startup Empowers Indian Women

In the slums of Mumbai, India, there are some things you can't talk about. For generations, women's menstruation has been one of them. Women here are made to feel ashamed about their bodies, making a trip to buy sanitary napkins from a male shopkeeper almost unthinkable. Instead, they use old rags, often hiding them in dark, damp places where they become infected by bacteria and unsafe to use.

At least, that was the case before Suhani Jalota began brazenly busting through the taboos surrounding menstrual hygiene. Jalota, who studied economics and global health as an undergraduate at Duke, is the founder and CEO of Myna Mahila, a social enterprise that empowers women to improve their health and socioeconomic standing. It was founded on the simple premise that women needed better access to sanitary napkins—and would benefit economically from being the ones to produce and sell them.

Jalota had the idea for the inventive enterprise at Duke, where she received a Melissa and Doug Entrepreneurship Fellowship to help launch it. At first, Myna Mahila hired women from Mumbai to produce sanitary napkins and distribute them door-to-door in the community, but producing pads was just an entry point for Jalota's true vision. Myna Mahila soon began offering its employees training in English, life skills and health education, part of a comprehensive approach to empowering women through employment, health and education. The effort has produced more than 500,000 pads and reaches 10,000 women per month.

Today, Myna Mahila trains women in the program to provide one-on-one mentoring to girls in slum communities about menstrual hygiene management and other topics. It recently introduced a biannual health camp, where more than 300 patients received free medication, healthy food and gynecological help. It is also engaging government and private-sector stakeholders to raise the profile of women's menstrual health issues globally.

As for Jalota, she's pursuing a PhD in health economics as Myna Mahila continues in the capable hands of her staff—including her mom. And another female fan is helping the social enterprise gain even broader recognition: Meghan Markle was so impressed after visiting Myna Mahila that she named it among the seven charities to support in lieu of gifts for her royal wedding.

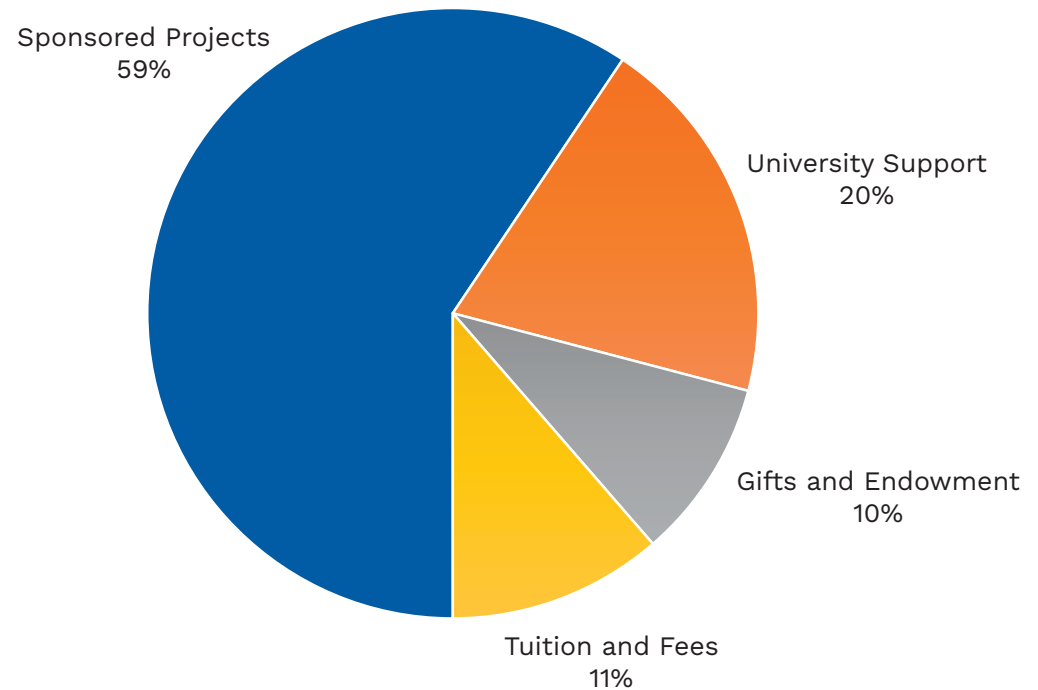


Suhani Jalota at a Myna Mahila health camp for residents of Mumbai's slums.

FINANCES

Funding Sources

Category	2018-2019 funding
Sponsored Projects	\$18,371,172
University Support	6,095,565
Gifts/Endowment	2,951,374
Tuition and Fees	3,515,657
Total	\$30,933,768



What Gift Funds Support

Professorships

Endowed professorships and chairs are key to DGHI's ability to recruit and retain the most talented faculty. Having the best teachers and scholars on global health issues enables us to produce groundbreaking research to address health disparities and inspire students to make an impact. Donors currently support three endowed professorships related to global health at Duke.

Scholarships

For many students, graduate education is a significant investment—especially for those from low- or middle-income communities. Scholarships enable DGHI to remove financial obstacles for bright, passionate students who want to make a difference in global health. We are particularly proud of our donor-supported scholarships for international students, which help DGHI attract geographically and culturally diverse student classes that bring perspectives from all over the world. Currently, DGHI has four graduate fellowships, which will award more than \$120,000 to graduate students in the coming academic year.

Who Funds Our Research?

U.S. Government Agencies

66% of extramural funding

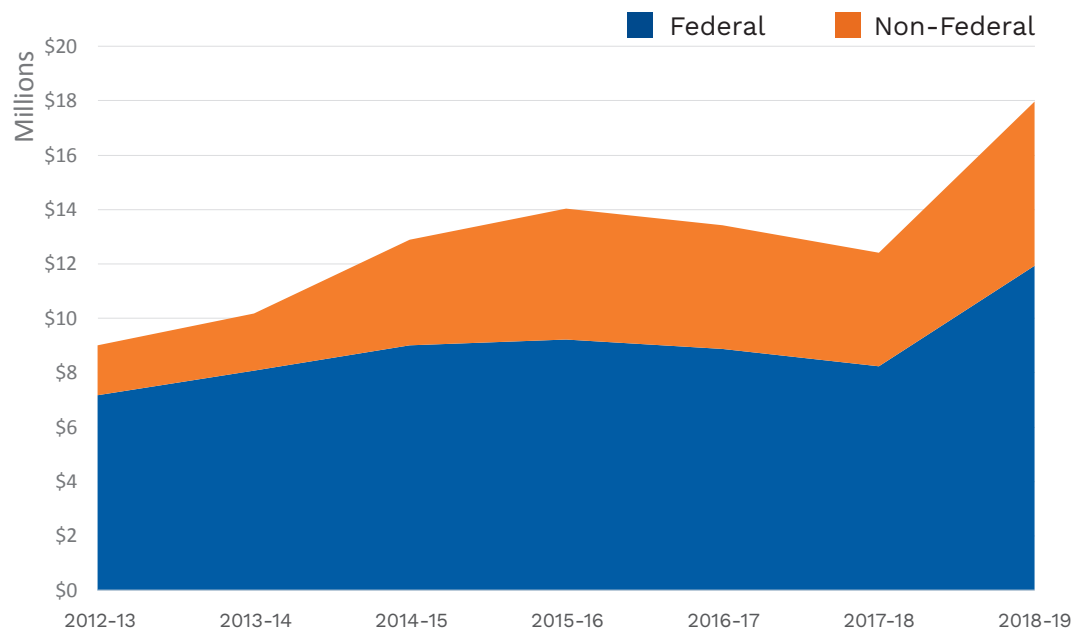
45 proposals submitted
25 grants awarded
\$11.9 million in funding in 2018-2019

NGOs, foundations and non-U.S. government

34% of extramural funding

29 proposals submitted
16 grants awarded
\$6.0 million in funding in 2018-2019

Research Funding by Year



...

Learn how you can make an impact with a gift to DGHI by visiting globalhealth.duke.edu/make-gift.

Field Experiences

Working in the field is transformational for our students, giving them an unparalleled opportunity to collaborate with DGHI partners around the world on original research, interact with community members and stakeholders, and witness firsthand how they are confronting global health challenges. DGHI has made a commitment to fully fund these important educational experiences for all master's students, a hallmark of DGHI's program that would not be possible without the support of donors.

Partnerships

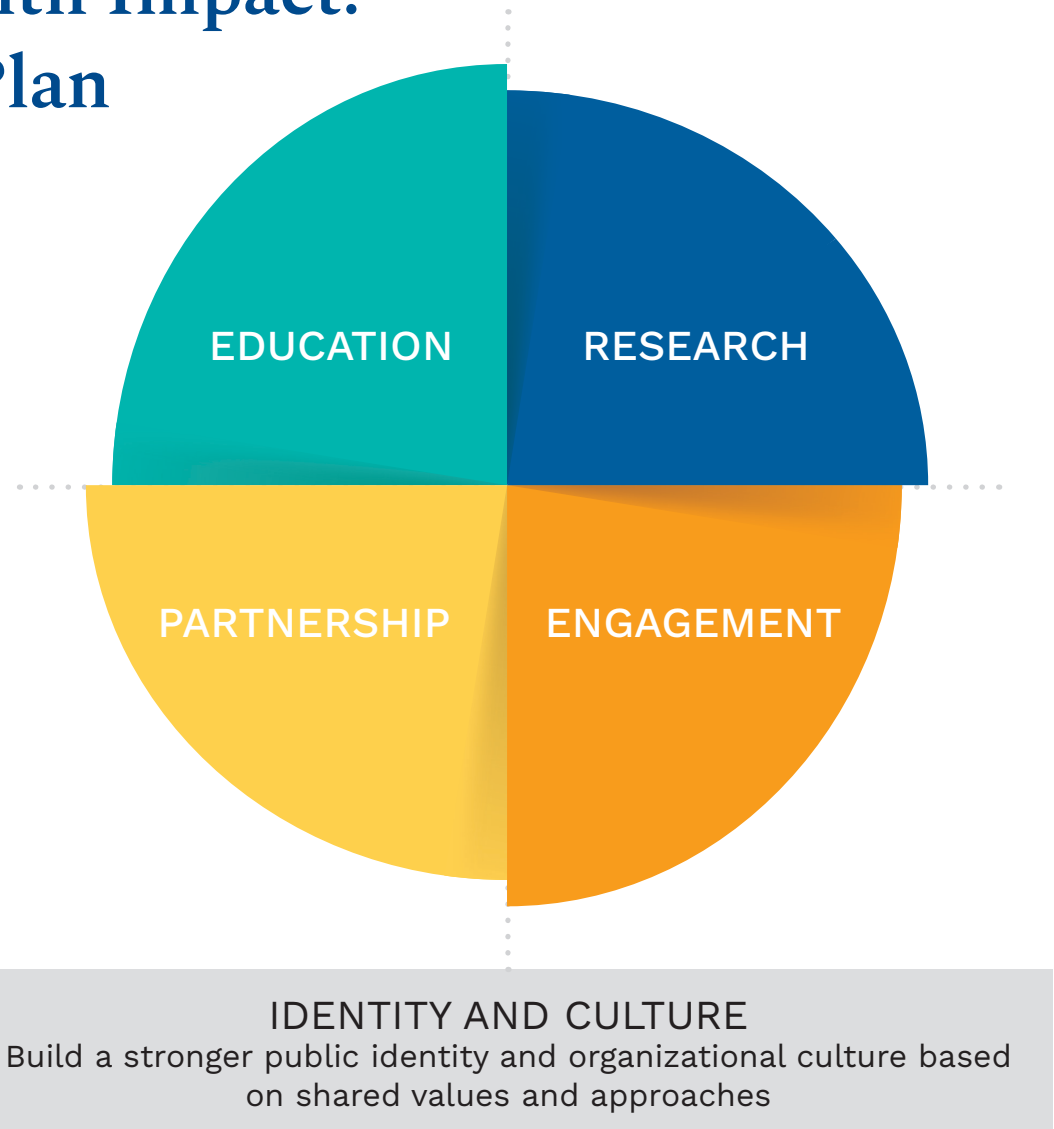
Donor support is critical for DGHI to sustain and deepen its flourishing partnerships with organizations and institutions who are doing seminal global health work around the world. These flexible funds allow DGHI to support organizational activities at partner locations and pursue emerging opportunities, which often lead to eventual grant funding. Philanthropic support also enriches the experience of students at partnership locations by enabling the sites to provide access to the materials and resources grant funding cannot.

Maximizing Global Health Impact: DGHI's New Strategic Plan

DGHI's origins trace to Duke University's 2006 strategic plan, which stated that "Duke's Global Health Institute will address one of the most important problems of our time: the health disparities both in our local community and worldwide." After a decade of remarkable growth, the institute in 2018-2019 identified new strategic priorities that are designed to build on its core strengths and enhance its standing as a leader in global health education, research, partnership and engagement.

As a whole, the new strategic plan defines actions and investments that will position faculty, staff and students to realize the greatest possible impact through their global health scholarship. The plan's five overarching goals and the high-level actions prescribed to meet each goal are described on these pages.

To read more about specific actions envisioned as part of the plan, visit globalhealth.duke.edu/strategic-plan.



EDUCATION

GOAL

Focus DGHI's educational programs on preparing students at every level to make an impact on global health.

ACTIONS

- Build on the current success of the global health major for continued growth and improvement to maximize excellence in undergraduate learning.
- Expand pathways for students in the Master of Science in Global Health looking for professional practice-based careers in global health.
- Enhance opportunities for doctoral training in global health in partnership with other Duke doctoral programs.
- Create a broad, graduate-level certificate program accessible to all Duke graduate and professional students to enhance academic engagement and relationships across Duke schools and programs.
- Enhance career and professional development programming for global health students, trainees and graduates.

ENGAGEMENT

GOAL

Deepen DGHI's commitment to informing and shaping global health policy and implementation of global health innovations.

ACTIONS

- Translate DGHI research into policy and practice for maximal high impact, via an Evidence-to-Impact initiative.
- Position faculty to take a larger role as public thought leaders and in advocating for global health ideas and practices.
- Enhance interdisciplinary approaches to innovation to accelerate application of new solutions to meet global health challenges.
- Encourage greater engagement among DGHI alumni and Duke alumni working in global health.

RESEARCH

GOAL

Bolster key interdisciplinary research themes that align with Duke and DGHI's strengths and create the most opportunity for impact.

ACTIONS

- Make strategic investments to build and strengthen research programs in three cross-cutting areas where Duke and DGHI are poised to have impact.
 - » Respond to the rising burden of non-communicable diseases, including mental illness and injury, in low-resource communities around the world.
 - » Exploit the opportunity to permanently rid countries and regions of both communicable and non-communicable diseases such as malaria, HIV and cervical cancer, by supporting advances in innovation, policy, science and technology in service of disease elimination and eradication.
 - » Understand and mitigate the health impacts of global environmental change, including climate change, air and water pollution, land use, impacts of urbanization and migration.
- Provide all faculty state-of-the-art tools, mentoring and support to compete in changing funding environments and translate research and policy work to impact.

PARTNERSHIP

GOAL

Take greater advantage of DGHI's highly effective international and domestic partnerships to deepen collaboration and learning opportunities.

ACTIONS

- Bring more coordination and focus to global health projects and approaches in Durham and the U.S. South.
- Expand global health-focused collaborations with Priority Partnership Locations (PPL) and other partners.
- Ensure PPLs are incorporated and leveraged in Duke's wider global strategies.

MILESTONES



Mercy Asiedu, a Ph.D. student in biomedical engineering and DGHI doctoral scholar, received the CUGH/Wasserheit Young Leader Award from the Consortium of Universities for Global Health. She was also chosen as a Schmidt Science Fellow, a program that places recent doctoral graduates at leading laboratories to conduct scientific research.



Muhammad Pate, adjunct professor of global health and former minister of state for health in Nigeria, was appointed as the global director for health, nutrition and population by the World Bank.



Geraldine Dawson, William Cleland Professor of Psychiatry and Behavioral Sciences and a DGHI affiliate, has been named director of the Duke Institute for Brain Sciences. She will continue on in her role as director of the Duke Center for Autism and Brain Development.



Chris Plowe, director of DGHI and professor of medicine, was inducted into the Association of American Physicians (AAP) alongside three other School of Medicine faculty members. Membership in AAP is a distinction recognizing excellence and outstanding achievement.



Beth Eanelli, MS'19, a global health master's student, was one of two winners of the Untold Global Health Stories of 2019, sponsored by Consortium of Universities for Global Health, Global Health NOW and NPR Goats and Soda. She was recognized for her work on the impact of light on the quality of health care in The Gambia.



Svati Shah, associate professor of medicine, nursing and global health, has been named director of the Duke Precision Genomics Collaboratory, a new effort to coordinate genetics and genomics research across the Duke School of Medicine.



Mike Merson, Wolfgang Joklik Professor of Global Health and former founding director of DGHI, was named the founding director of the SingHealth Duke-NUS Global Health Institute, which was formed by Duke-NUS Medical School and SingHealth to study health disparities in Singapore and South Asia.



Debara Tucci, professor of surgery, director of the Duke Cochlear Implant Program and a DGHI affiliate, was named the director of the National Institute on Deafness and Other Communication Disorders, where she will lead the institute's research and training programs in hearing, balance, taste, smell, voice, speech and language.



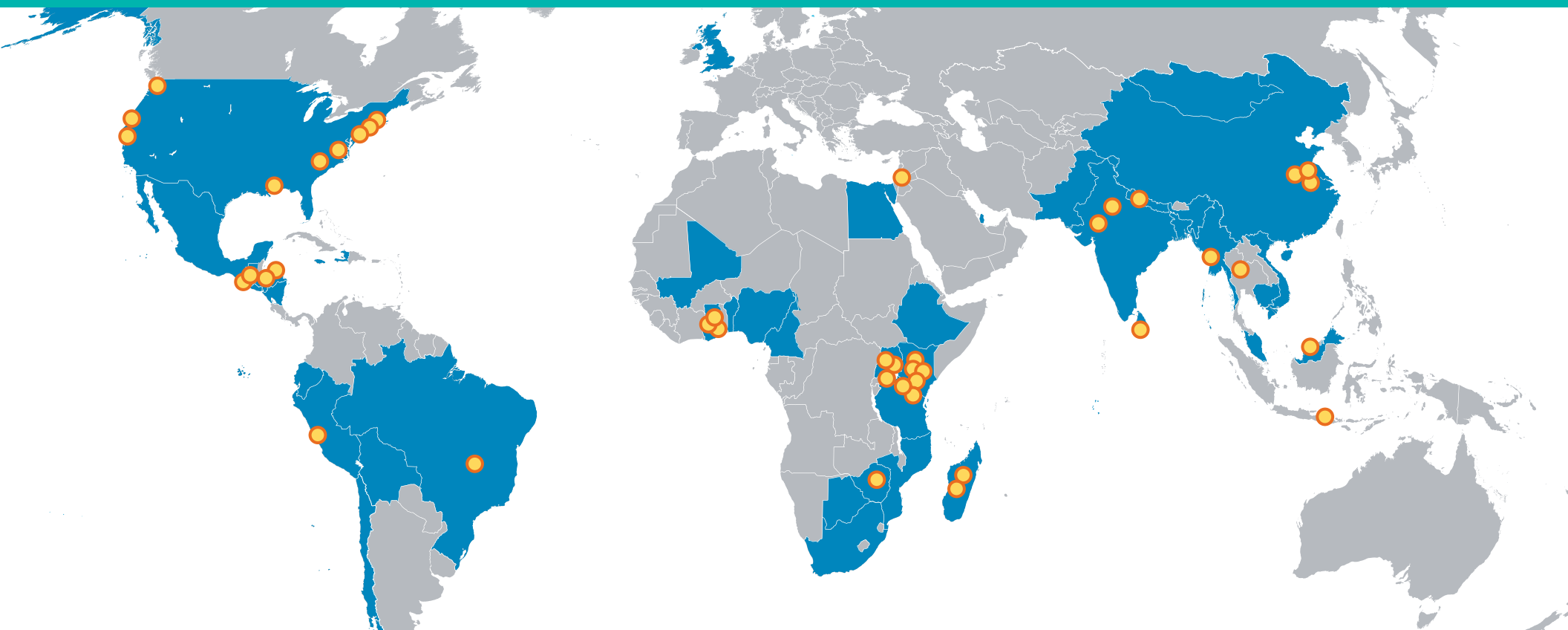
Wendy O'Meara, associate professor of medicine and global health, received the 2018 Bailey K. Ashford Medal from the American Society of Tropical Medicine and Hygiene. O'Meara was nominated for her research on malaria, including studies of antimalarial drug use and the feasibility of malaria elimination in parts of Africa.



Blake Wilson, professor of biomedical engineering and global health, has been appointed to lead the new Lancet Commission on global hearing loss. The group will study and propose innovative solutions to reduce the burden of global hearing loss.

WHERE WE WORK

DGHI faculty, staff and students collaborate with organizations and communities across the globe to train, conduct research and pursue global health solutions. This map shows where Duke scholars worked in 2018-19.



RESEARCH PROJECTS

Bangladesh
Benin
Bolivia
Botswana
Brazil
Cambodia
Cameroon
Chile
China
Ecuador
El Salvador

Egypt
Ethiopia
Ghana
Guatemala
Haiti
Honduras
India
Jamaica
Kenya
Madagascar
Malaysia

Mali
Mexico
Mongolia
Mozambique
Myanmar
Nepal
Nicaragua
Nigeria
Pakistan
Peru
Qatar

Singapore
South Africa
Sri Lanka
Tanzania
Uganda
United Kingdom
United States
Vietnam
Zimbabwe



STUDENT FIELDWORK LOCATIONS

Brazil
China
Ghana
Guatemala
Honduras
India
Indonesia

Jordan
Kenya
Madagascar
Malaysia
Myanmar
Nepal
Peru

Rwanda
Sri Lanka
Tanzania
Thailand
Uganda
USA
Zimbabwe

Our Work, Our Passion

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globalhealth.duke.edu

On the cover: Residents return from church services in Moshi, Tanzania, where several DGHl students and faculty are working with local organizations to improve diagnosis and treatment of infectious diseases.