STRENGTH IN COMMUNITY

UNIVERSITY OF WISCONSIN-MADISON
GLOBAL HEALTH INSTITUTE

2018-2019 IMPACT REPORT
MISSION
We embrace a new global health ethic that fosters deeper understanding of the complex determinants of health and disease for people, animals, and ecosystems. In working locally and globally, we uniquely apply research and education both within and across disciplines, advancing health today and ensuring well-being for the future.

VISION
Equitable and sustainable health for people, animals, and ecosystems—across Wisconsin and the world.

IMPACT BY THE NUMBERS

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>Students enrolled in Undergraduate Certificate in Global Health, Fall 2019</td>
</tr>
<tr>
<td>1,900+</td>
<td>Undergraduate Certificates in Global Health awarded, 2012-2019</td>
</tr>
<tr>
<td>120</td>
<td>Grants to faculty, staff, graduate students, and visiting scholars, 2011-2019</td>
</tr>
<tr>
<td>132</td>
<td>Graduate, professional and capstone students participated in international experiences, 2018-2019</td>
</tr>
<tr>
<td>218</td>
<td>Graduate • Professional • Capstone Certificates in Global Health awarded, 2007-2019</td>
</tr>
<tr>
<td>70</td>
<td>Rural Wisconsin students and teachers attended the 2018 High School Global Health Day</td>
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<tr>
<td>284</td>
<td>Undergraduates participated in field experiences, 2018-2019</td>
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<tr>
<td>288</td>
<td>Students worked with Green County in the 2018-2019 UniverCity Year</td>
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<tr>
<td>450</td>
<td>Participants attended the public sessions of 2019 4W Summit</td>
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<tr>
<td>30</td>
<td>Advisory Committee members represent 12 schools/colleges</td>
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<tr>
<td>100</td>
<td>Mandela Washington fellows visited UW-Madison 2016-2019; GHI hosts YALI Global Health seminars</td>
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<tr>
<td>250+</td>
<td>Participants attended the 2019 Global Health Symposium</td>
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FROM THE DIRECTOR
As we close out our 2018-2019 academic year, I want to thank all of you for being part of the Global Health Institute (GHI) at the University of Wisconsin-Madison. Together, with partners in Wisconsin and across the planet, we are working toward a more just, sustainable, and healthy world.

Together, we make inroads against widening health disparities, emerging diseases, gender inequities, a changing climate, and land, water and air pollution that threaten all life. In this report, we celebrate how all of us are advancing health for people, animals, and the planet.

Jonathan Patz, M.D., MPH
Director, Global Health Institute
John P. Holton Chair in Health and the Environment
GHI has been key to global health education at UW-Madison since establishing the Graduate/Professional and Capstone Certificates in Global Health with the School of Medicine and Public Health (SMPH) and collaborating with the College of Agriculture and Life Sciences (CALS) to begin the Undergraduate Certificate. In addition, hundreds of students participate in international global health field experiences, including field courses and clerkships.

IMPACT 2018-2019

- More than 300 earned the Undergraduate Certificate in Global Health
- 16 earned the Graduate • Professional • Capstone Certificates in Global Health
- 274 undergraduates participated in field courses in Wisconsin and the world; 152 graduate, professional, and capstone students participated in international experiences
- 288 students worked with UniverCity Year to address Green County’s opioid epidemic, 911 system, and more
- 70 students and teachers attended High School Global Health Day

WHAT’S NEXT?

- An Undergraduate Major in Global Health. GHI is working closely with CALS to establish curriculum and competencies for the new major. Approvals are in process with an expected launch in Fall 2020.
- Online Graduate • Professional • Capstone Certificates in Global Health. The online program will make the certificate programs more widely accessible to graduate, health professional and community students, says Christopher Olsen, program director. Approvals are underway with an expected launch in 2020-2021.

STUDENTS IN ACTION

UniverCity Year brings students, faculty and members of the Pepin County community together to address economic development and environmental sustainability in 2019-2020. “We hope we will have some solutions that lead to positive outcomes, cleaner water, and ways to protect groundwater that people believe in, trust, and implement,” said Pepin County’s Maria Nelson.

“Impact 2020-2021

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“SMPH has a long history of leadership in global health ... This helps clarify and organize our activities with SMPH while maintaining our ties to cross-campus global health efforts.”—James Conway, GHI associate director and director, SMPH Office of Global Health, on the new office to manage the graduate certificate program and other international opportunities for health sciences students.
GRANTS

Each year GHI grants and awards support innovative global health projects across campus that lead to further funding, scholarly papers, research, and action. This year, GHI awarded:

- 9 Seed Grants
  - 3 Clinical Research Grants
  - 6 Graduate Student Research Awards
  - 1 Henry Anderson III Graduate Student Award
  - 3 Visiting Scholar Awards
  - 9 Faculty & Staff Travel Awards

RESULTS

- Emerging viruses are a serious public health burden worldwide, and Yoshi Kawaoka, a professor of pathobiological sciences who received a 2017 GHI Seed Grant, says continuous surveillance is important to controlling them. Kawaoka’s team tested 2,067 residents of Freetown, Sierra Leone, to find chikungunya and Zika viruses are highly prevalent and should be monitored closely. The next step: A country-wide survey and identifying novel viruses in animal and insect populations.

- Antibiotic-resistant infections are increasing across the world, and Nasia Safdar, a professor of infectious disease, used her 2017 GHI Seed Grant to develop a protocol to diagnose and treat ventilator-associated pneumonia and optimize antibiotic use at Amrita Institute of Medical Sciences in Kerala, India. Inappropriate use of antibiotics decreased by almost 17 percent in five months, and the team identified challenges and strategies to implement antibiotic stewardship protocols across India.

“This could be a really powerful way for us to teach kids about mosquito control and have them be agents of social justice and public service as they help take care of their communities.” — Lyric Bartholomay, co-director of the Midwest Center of Excellence for Vector-Borne Diseases, who received a 2019 Seed Grant to continue developing Mosquitos Y Yo, a program that teaches students about mosquitoes by encouraging them to experiment and ask questions.
GLOBAL HEALTH SPANS THE spectrum from people to planet, and ongoing research shows how the health of animals affects the health of humans and vice versa.

SWARM TO TABLE
Most Americans think of insects as pests, carriers of disease, or perhaps pollinators. But for millions of people across the globe, insects are a nutrient-dense, environmentally friendly, and important food source. Valerie Stull, a GHI postdoctoral researcher, is making the case for edible insects. Her work has shown that eating crickets supports beneficial gut bacteria, and she has examined next steps to encourage insect farming and consumption. She also organized Swarm to Table, a three-day celebration of eating insects with lectures, demonstrations and meals. Stull and Entomology Chair Susan Paskewitz, a GHI Advisory Committee member, are principal investigators on “Six-legged Livestock—Potential for Farmed Insects to Improve Health and Security” which received a $100,000 Contemporary Social Problems Initiative grant.

SAVING NATIVE MUSSELS
GHI Associate Director Tony Goldberg is part of the Mussel Mortality Response team that includes scientists from UW-Madison, the U.S. Fish and Wildlife Service in Wisconsin and Virginia, and the U.S. Geological Survey in Wisconsin with the USGS National Wildlife Health Center. In a research first, they’re looking at whether infections might be responsible for massive mussel die-offs. (These are not the invasive mussels clogging the Great Lakes.) “Freshwater mussels are among the most biodiverse, beautiful, and ecologically important animals in the U.S., yet few people even realize they exist,” Goldberg says. They’re critical for purifying water, stabilizing river bottoms and providing food for other animals.

HEALTH IS EVERYTHING
“Entomophagy—the practice of eating insects—is common around the globe, though it may seem strange to the average American. But there is good reason to eat insects. They provide high quality nutrition with fewer environmental consequences than traditional livestock. Edible insects are also culturally important and may support livelihoods, food security, and food sovereignty.”—Valerie Stull, GHI postdoctoral research associate

Right: An edible cricket for sale in a Zambian market.
GHI’s **Quality Improvement (QI) Leadership Institute** (2012-2018) continues to fuel a new Science and Art of Change initiative that spans boundaries from rural development to mental health to pediatrics.

- Malawian leader Zikani Kaunda, a QI graduate, is working with Nancy Kendall, a professor of Education Policy Studies, and GHI Associate Director Lori DiPrete Brown to establish Circle of Care, an organization dedicated to breaking the cycle of social, educational, and economic deprivation for 900 orphans, their caregivers, and villages.

- Fred Coleman and Sebastian Sejempijja, graduates of the QI Institute, are working with Sadat Ibiri, DiPrete Brown, and Linda Oakley, professor in the School of Nursing, to develop a local-to-global working group on quality mental health care in underserved settings. They are engaging with communities in Madison, Milwaukee, Nigeria, Uganda, and Somaliland.

- GHI Board of Visitors member and pediatrician Ann Behrmann, who has been a QI Institute mentor, is bringing the quality improvement curriculum to an international network of pediatricians through the International Academy of Pediatrics. Her first workshop was in Panama.

- Sweta Shrestha, outreach specialist for the Population Health Institute, continues to lead quality improvement work in Nepal with DiPrete Brown. They work with QI Institute graduates to train Nepali fellows on fundamentals and help develop projects related to the treatment and prevention of cardiovascular disease. They are also collaborating to develop a Center of Excellence for QI in Health Care at Dhulikhel Hospital.

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**SCIENCE & ART OF CHANGE**

“Science and the art of change is the essence of global health practice. We need to be creative, evidence-based, and inclusive. These values lead effective action in all facets of our GHI programs—from healthcare to gender equity to environmental sustainability in our cities and beyond.”—GHI Associate Director **Lori DiPrete Brown**

Right: Zikani Kaunda, Malawi, and Nancy Kendall, UW-Madison, are working to make lives better for orphans and their caregivers.
EVENTS

Connecting faculty, staff, students, and communities to learn and share information is one of GHI’s strengths. Events allow the GHI community to explore the challenges of ensuring health for all.

More than 250 people attended the annual Global Health Symposium, “Health in the Balance: Acting Now for a Healthy Tomorrow,” presented with support from the Evjue Foundation. Keynote speaker Mary Wilson, a world expert on infectious disease and global health, showed the stark consequences of antibiotic resistance; a panel on “Planetary Health: Recognizing Earth’s Limits to Advance Health for All,” considered challenges to people and the planet. More than 50 poster and podium presentations showcased the UW community’s work.

17 Global Health Tuesday and special seminars covered topics from the human right to health to global surgery. 14 Mandela Washington fellows, from the Young African Leadership Initiative (right), presented seminars on topics from ensuring women’s and mental health to providing quality care.

GHI organized two satellite sessions at the March Consortium of Universities for Global Health Conference in Chicago, drawing more than 250 participants to discuss planetary health and global emergency care. GHI Associate Director Janis Tupsis and Advisory Committee member Girma Tefera joined a plenary session on emergency care development; GHI Director Jonathan Patz was on a plenary panel about global environmental health. Associate Director Lori DiPrete Brown was a panelist in a satellite session on global health leadership.

“...It is clear that both sets of strengths—scientific and ethical—are needed for us to solve the environmentl and climate crisis.”—Dekila Chungyalpa, director of the Loka Initiative, a partnership including GHI that hosted a two-day symposium to explore the intersection of environment, health, psychology, and faith.
ADVOCATING FOR HEALTH: FROM RESEARCH TO POLICY

“Climate change is real. It’s here. It’s today. Most importantly, it’s affecting us and our health. There are so many pathways through which climate impacts our health. ... I view this as the largest environmental public health crisis of our times.”—GHI Director Jonathan Patz to Wisconsin Public Radio. Patz delivered his climate and health message in four countries and nine states plus Washington, D.C. He also co-edited PLOS Medicine’s collection on climate change and health.

“What we really want to make sure people understand is, vaccines are designed to prevent severe disease, and if they completely prevent all disease, that’s a bonus.”—GHI Associate Director James Conway, who works with the American Academy of Pediatrics, Centers for Disease Control and Prevention, State of Wisconsin, and American Board of Pediatrics to improve immunization systems in Wisconsin and across the world.

“It means a lot to have the ability to help move the agenda of emergency care forward in a global setting and to focus on how education plays a role in health systems development.”—GHI Associate Director Janis Tupesis, who advances emergency care and education through the American College of Emergency Physicians, the World Bank, and the World Health Organization.

WHO IS GHI?

We are physicians and veterinarians. Engineers and economists. Pharmacists, nurses, political scientists, and historians. We are teachers, researchers, and students. Leaders in law, public health, agriculture, ecology and many other professions—working to nurture sustainable, equitable global health for today and tomorrow.

ADVISORY COMMITTEE

Araceli Alonso, Gender & Women’s Studies
Lyric Bartholomay, Upper Midwestern Center of Excellence for Vector-Borne Diseases, Pathobiological Sciences
Paul Block, Civil & Environmental Engineering
Gilles Bousquet, French & Italian
Sabrina M. Butteris, Pediatrics
Maureen Durkin, Population Health Sciences
Daniel Gold, International Academic Programs
Sundaram Gunasekaran, Materials Science & Engineering; Biological Systems Engineering
Tracey Holloway, Atmospheric and Oceanic Sciences, Nelson Institute for Environmental Studies
Yoshihiro Kawaoka, Pathobiological Sciences
Richard Keller, International Division, History & Bio Ethics
Nancy Kendall, Educational Policy Studies

Heinz Klug, Law
Neil Kodesh, History
Laurel Legenza, Pharmacy
Gregory Nemet, La Follete School of Public Affairs
Susan Paskewitz, Entomology; Upper Midwestern Center of Excellence for Vector-Borne Diseases
Keith Poulsen, Wisconsin Veterinary Diagnostic Laboratory
James Schauer, Wisconsin State Laboratory of Hygiene, Civil & Environmental Engineering
Ajay Sethi, Population Health Sciences
Kurt Sladky, Surgical Sciences
Karen Solheim, Nursing
Sherry Tanumihardjo, Nutritional Sciences
Girma Tefera, Surgery
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MAKE A GIFT

Your gift to GHI will help support projects and educational initiatives leading toward a more just, sustainable, and healthy world. To learn about giving opportunities, email globalhealth@ghi.wisc.edu or call (608) 265-9299.

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