Global Health at Yale
Annual Review 2015-2016
Global Health at Yale

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of Non-Communicable Diseases
INTRODUCTION

With its research capacity and culture of collaboration, Yale has the opportunity to train the next generation with leadership skills in global health to dramatically accelerate both scientific breakthroughs and their impact on the health of people around the world.

Global Health at Yale aims to increase our collective commitment to improving health across the globe through education and research. Supporting Global Health at Yale, the Global Health Leadership Institute (GHLI) serves as both a catalyst for multidisciplinary projects and a nexus for exchange, collaboration, and leadership development. Since its launch in 2009, GHLI has worked with faculty from across campus on a variety of issues including mental health, early childhood health and development, non-communicable diseases, and human resources for health. In addition, an interdisciplinary Global Health Faculty Advisory Committee provides advice and guidance on potential research in global health and fosters relationships across campus to catalyze interdisciplinary research and education at Yale. This annual review of Global Health at Yale illustrates the University’s commitment to improving health around the globe through education, discovery, and impact.

GLOBAL HEALTH FACULTY ADVISORY COMMITTEE 2015–2016

- Elizabeth H. Bradley (Chair), Professor of Public Health; Faculty Director, Global Health Leadership Institute; Brady-Johnson Professor of Grand Strategy
- Nicholas Christakis, Sol Goldman Family Professor of Social and Natural Science
- Jane Edwards, Dean of International and Professional Experience; Senior Associate Dean, Yale College
- Amy Kapczynski, Professor of Law and Faculty Director, Global Health Justice Partnership
- Ann Kurth, Dean and the Linda Koch Lorimer Professor of Nursing, Yale School of Nursing
- Catherine Pancer-Briick, Professor of Anthropology, Health, and Global Affairs
- Rafael Perez-Escamilla, Professor of Epidemiology (Chronic Diseases); Director, Office of Public Health Practice; Director, Global Health Concentration
- Asghar Rastegar, Professor of Medicine; Director, Office of Global Health; Chief, Fitkin Firm, YNHH
- Mark Saltzman, Goizueta Foundation Professor of Biomedical Engineering, Chemical & Environmental Engineering & Physiology
- Stephen Stearns, Edward P. Bass Professor of Ecology and Evolutionary Biology
- Christopher R. Udry, Henry Heinz II Professor of Economics
- John Wargo, Tweedy Ordway Professor of Environmental Health and Politics
Education

Yale has shaped the field of global health education by bringing the University’s unique strengths together to develop a premier global health curriculum. Global health education helps prepare Yale students to understand the dynamics of health in an interconnected world.

Global Health Studies and Global Health Scholars Program

The Global Health Studies Program at Yale is designed for undergraduate students interested in understanding and addressing pressing global health challenges. The program offers courses through an integrated framework that brings together the natural sciences, the social sciences, and the humanities.

Students desiring greater depth in the field are encouraged to apply to be a Global Health Scholar. Scholars are generally selected in the fall of their sophomore year and complete an interdisciplinary course of study that includes required and elective courses, field work, and an independent capstone project with faculty guidance. In the summer after junior year, scholars conduct their own independent global health fieldwork, for which they receive support in the form of coursework, designated funding, and mentorship from global health faculty advisors. During their senior year, scholars are expected to synthesize their fieldwork and classroom experiences into a robust written product. These students continue to contribute energy and passion to the program as they pursue their unique interests in global health.

In May 2016, Business Insider featured Global Health Scholars, Rehab Abdelwahab and Adam Beckman, as two of their 13 most impressive scholars at Yale. Rehab has worked with the Regional Ethiopian Red Cross Society to design and implement health education curriculum in Mekelle, Ethiopia. She is also the co-president of Recovered Medical Equipment for the Developing World. During this past summer, Rehab worked with Results for Development, a global non-profit organization based in Washington, DC.

As a Global Health Scholar, Adam’s focus has been on the quality of healthcare within the U.S. He is co-founder of Student Partnerships for Global Health at Yale. Funded by the Yale Collaborative Action Project (Y-CAP) and in collaboration with a multidisciplinary student team, he conducted research in Manglaralto, Ecuador to better understand HIV stigma, knowledge, perceived risk, and risk behaviors. More recently, he has worked with the Center for Outcomes Research and Evaluation to investigate financial barriers to healthcare services. Adam has been invited to present his project entitled ‘Sex Differences in Financial Barriers and the Relationship to Recovery after Acute Myocardial Infarction’ at the Quality of Care and Outcomes Research Conference in Phoenix, AZ.

In 2015-16, a faculty committee chose 20 Global Health Scholars from 41 applicants. Since 2010-11, the program has enrolled 103 students in the program.
Global Health Education in the Health Professional Schools

Global Health Concentration, Yale School of Public Health
The Yale School of Public Health (YSPH) is a leader in the University’s commitment to improve health across the globe through research, education, and community engagement. As part of that commitment, YSPH offers the Global Health Concentration (GHC), a unique program that is available to students across all departments at the school. In the 2015-2016 academic year, YSPH enrolled their largest GHC class to date, with forty students completing the requirements for the concentration. This cohort had representation from each department at the school and included 30 Master of Public Health students, one Advanced Professional Master of Public Health student, and nine students in the five-year joint degree program.

Certificate in Global Medicine, Yale School of Medicine
The Certificate in Global Medicine is available to medical students who demonstrate a deep level of commitment and expertise in global health. In 2016, the certificate was awarded to four graduating medical students, including recipients entering residency in the fields of psychiatry, primary care, obstetrics and gynecology, and plastic surgery. Since the program’s inception in 2013, a total of 18 students have successfully completed the certificate.

Global Mental Health Program, Yale School of Medicine
The Global Mental Health Program (GMHP) aims to promote awareness of issues of global mental health, develop practice tools to address these issues, promote access to mental health care for underserved populations, expand the knowledge of cross cultural psychiatry, and develop a network of individuals with common interests in global mental health. The GMHP supplements and supports the existing didactic and clinical curriculum of the residency program. Residents and fellows interested in doing GMH-related education can do so during elective times and during selective experiences.

Global Health Concentration, Yale School of Nursing
The Global Health Concentration at the School of Nursing included eight students from a variety of specialties in the 2015-16 academic year. Their clinical component included work with global populations in the U.S. and abroad. Students in the concentration also took courses at the Schools of Public Health and Medicine. The newest initiative in the concentration was the development of a clinical site in Appalachia, where nursing students will have the opportunity to learn about health issues in rural communities. The new site will broaden students’ understanding and skills with another segment of the global population and align with the school’s curricular changes, which support a clinical integration period.
Global Health Seminar

The Global Health Seminar is a year-long weekly course intended for students in the health professional schools. The course was a core requirement for students in the Global Health Concentration at the School of Public Health and the Certificate in Global Medicine at the School of Medicine. Students in the course develop an understanding of key aspects of global health research and practice.

Graduate Certificate of Concentration in Global Health

The Graduate Certificate of Concentration in Global Health is offered through the Jackson Institute for Global Affairs. The certificate gives Yale graduate and professional students the opportunity to develop expertise and demonstrate competence in global health and recognizes that a student has completed interdisciplinary study and integrative research to address fundamental and applied economic, political, social, cultural, and scientific issues relevant to global health. In 2015-16, Anna Batarina, MA, successfully completed the certificate.

Global Health Opportunities and Networking Event

The 2016 Global Health Opportunities and Networking event was held on March 4, 2016. Co-sponsored by Yale’s Office of Career Strategy and the Yale School of Public Health, the event aimed to educate undergraduate, graduate, and postdoctoral students about the diversity of global health careers by providing a forum for listening and learning from practitioners in the field. A panel discussion was held with seven representatives from a variety of global health organizations, including: Partners in Health, Possible, Global Health Strategies, Results for Development, Unite for Sight, and the Yale Global Health Leadership Institute.

During the panel discussion, representatives answered questions related to their organization’s mission, role within global health, and the qualities their organization seeks in employees. A networking reception following the event provided students with an opportunity to speak one-on-one with the panelists and ask more specific questions about their work and possible job openings. More than 40 students attended the event.

Ruchit Nagar, M.P.H. ’16, co-founded Khushi Baby, which is a wearable technology necklace to assist with mobilization and track immunization in the last mile. The team includes Praneeth Sadas, YSM ’18, Preethi Venkat, M.P.H. ’16, and Tyler Petrochko, Yale College ’18 and a growing operations team in India.
Yale offers several types of funding opportunities to students who are interested in working and conducting research in global health. Over the 2015-16 academic year, students received support to participate in a range of international activities dedicated to improving health in communities around the world.

Global Health Field Experience Awards

Global Health Field Experience Awards support scholarly endeavors of undergraduate and graduate students working in the field of global health. The award supports dedicated students as they take steps towards attaining leadership roles in the field. Students selected by the faculty committee to receive these awards propose activities which support their career development by strengthening relevant skills and promoting an increased understanding of how differing players and approaches contribute to improving health worldwide. Candidates for awards propose projects in a variety of areas including research, practice, advocacy, policy, and management.

During the 2015-2016 academic year, 14 students received Global Health Field Experience Awards to pursue a variety of activities in 11 countries. Students studied solutions to antimicrobial resistance with the World Health Organization in Switzerland, investigated the relationship between epidemic arsenic poisoning and birth defects in Bangladesh, and examined psychosocial determinants of health on HIV treatment adherence and outcomes in Peru, among other projects.

Yale-Collaborative Action Project (Y-CAP)

Through the generous support of the Maureen and Antoine Chiquet Fund for Global Health, the Yale-Collaborative Action Project (Y-CAP) Award is available to support scholarly endeavors for teams of Yale students (undergraduates and graduates) working in the field of global health. Y-CAP projects bring together students to address challenging problems affecting the health of disadvantaged populations globally, with a preference for Africa.

Teams of two to four Yale students, preferably representing at least two academic disciplines, identify a health problem of global importance and develop a scholarly
and ethically rigorous proposal to address it. In addition to academic research, the Y-CAP Award is available to support proposals that engage social innovation, social entrepreneurship, advocacy or policy, and management pursuits.

During the 2015-2016 academic year, two Yale students received Y-CAP Awards. Nishant Jain worked with Khushi Baby, a Yale-founded project that has adapted $1 necklaces to serve as data storage chips for maintaining vaccination records of infants in rural Rajasthan, India. Nishant aimed to build an Android application for health workers to access infant records in areas without Internet connectivity in preparation for a clinical field test in 100 villages. Liliane Lindsay interned in Israel with HomeBioGas, a company that is creating a system to convert organic waste into cooking gas to reduce forest degradation and smoke pollution.

**Downs Fellowship**

Since its inception in 1966, the Downs International Health Student Travel Fellowship has sponsored 600 Yale students, allowing them to work and do original research in low- and middle-income countries. This experience helps students to expand their world view and galvanizes their futures as health professionals. In 2016, 10 students from Yale College and the Schools of Medicine, Nursing, and Public Health were awarded the Downs Fellowship to conduct research projects in Mexico, Brazil, South Africa, Tanzania, Uganda, and Peru.

**Early Childhood Health and Development**

For the past two years, the Yale Global Health Leadership Institute has received funding from The Coca-Cola Company to support eight student interns to work with a range of faculty and partner organizations on research, policy analysis, and advocacy efforts related to early childhood health and development around the world. In the summer of 2016, three interns worked on projects with Yale faculty and partners in Rio de Janeiro, Beirut, and New Haven.

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**INTERN SPOTLIGHT**

**Redha Qabazard**, YSPH ’17, interned with the Arab Resource Collective to help evaluate the Mother Child Education Program, an initiative that aims to promote parenting skills amongst mothers and to bolster strategies to support school readiness in three to six year-old children.

**Alex Cruz**, YC ’17, worked with the Federal University of São Paulo in Rio de Janeiro to support the implementation of the Mother Support Program and Teacher Support Program, which aim to provide mothers and teachers with the skills they need to facilitate early childhood development.

**Aaminah b’Hat**, YC ’18, worked with faculty from Yale University and Pakistan University to conduct a comprehensive literature review of two-generational community-based approaches for early childhood development through youth leadership in low- and middle-income countries.
 Forty-five physicians – from Yale, Stanford and four other U.S. medical institutions – participated in the Yale/Stanford Johnson & Johnson Global Health Scholars program at partner sites in Colombia, Indonesia, Rwanda, South Africa, and Uganda.

**DISCOVERY AND IMPACT**

Global health work led by Yale faculty, staff, and students contributes to the improvement of health and health equity for vulnerable populations worldwide. Yale partners with universities, foundations, and other non-profit agencies to conduct research, provide training, and implement programs in countries across the globe.

**Office of International Medical Student Education**

*Yale School of Medicine*

The Yale School of Medicine recognizes that global health is founded on the principles of social justice. For medical students, this includes achieving an understanding of the challenges health systems face in attaining health equity for all, recognizing social, economic, and political determinants of health, providing clinical care to underserved patients, advocating for individual patients and communities, and committing to cultural humility and cross-cultural communication.

The Office of International Medical Student Education (OIMSE) ensures Yale medical students experience a vibrant global health curriculum that reinforces these values throughout the core curriculum. Students can access a variety of elective courses to gain a deeper understanding of these values and work with local underserved populations in New Haven. During their pre-clinical and clinical years, students can work in healthcare delivery systems in low- and middle-income countries and conduct global health research in international settings.

In the fall of 2016, OIMSE hosted its first group of medical students from its partner school, Xiangya School of Medicine in China. The agreement was signed this year to place approximately four to six medical students that are in their final school years in research labs at the Yale School of Medicine. In addition to research skills, these students will gain exposure to how medicine is practiced in the United States.

**Office of Global Health**

*Yale School of Medicine, Department of Internal Medicine*

The mission of the Department of Internal Medicine’s Office of Global Health is to confront the disparities in global health through research, education, and health services in partnership with institutions serving resource-limited communities around the world. In the 2015-16 academic year, the Yale/Stanford Johnson & Johnson Global Health Scholars Program continued to provide opportunities to physicians-in-training (residents) as well as career physicians to work alongside colleagues at the office’s carefully selected and structured international partner sites.
The program offers six-week clinical rotations in a range of locations, including Uganda, South Africa, Rwanda, Indonesia, and Colombia.

The Global Health Scholars Program has become the pillar upon which many other programs have been developed, including human capacity building initiatives. For example, in the 2015-16 academic year, the office brought three physicians from Uganda to Yale for long-term observations as part of a new Global Health Partner Scholar program. The office has also facilitated short-term visits for four Rwandan physicians and one Liberian colleague this year. In addition, as part of a longstanding relationship with colleagues in Uganda, a collaborative effort led by Dr. Asghar Rastegar, Dr. Tracy Rabin, and Dr. Trishul Siddharthan at Yale; along with Dr. Felix Knauf at the University of Erlangen in Germany and Dr. Robert Kalyesubula at Makerere College of Health Sciences in Uganda, led to a grant award from the Else Kroner Fresenius Stiftung in Germany to study chronic disease in Uganda.

The office held the Sixth Annual Global Health Day on March 31, 2016. This event featured Dr. Mary T. Bassett, New York City Commissioner of Health and Mental Hygiene as the keynote speaker. The theme of the day was Global Health: Beyond Geography – Caring for Vulnerable Populations at Home and Abroad.

The Department of Internal Medicine also continues to support the Human Resources for Health Project in Rwanda, recruiting and sending five medical generalists and specialists to Rwanda in 2015-16 to continue the development of medical education curricula and clinical training initiatives to yield a self-sufficient healthcare system and physician training institution.

Center for International Nursing Scholarship and Education

Yale School of Nursing

The Center for International Nursing Scholarship and Education coordinates the School of Nursing’s global health endeavors. The center supports activities which focus on ethically sound and culturally sensitive educational experiences with global citizens, collaborative scholarship and research involving global populations.
and the thoughtful examination by faculty and students of the cross cultural dimensions of our work. The center provides mentorship and financial support for a diverse array of faculty projects to promote leadership skills in the area of global health research, scholarship, and capacity-building programs.

During the 2015-2016 academic year, YSN students and faculty engaged in a range of global health projects. For example, students and faculty participated in capacity-building, research, and educational projects in Australia, Israel, Japan, Laos, Nicaragua, and Uganda. Three additional students received Downs Fellowships to work in Botswana, Bhutan, and Nicaragua and one student worked in Uganda with a Lindsay Fellowship. The student-led Yale International Nursing Group sponsored several talks on global issues, including one by a Yale World Fellow. Finally, YSN has strengthened its relationship with the Universidad Nacional Autónoma de Nicaragua (UNAN) and is beginning to consider an exchange program with YSN and UNAN nurses.

Center for Interdisciplinary Research on AIDS

Yale School of Public Health

The Center for Interdisciplinary Research on AIDS (CIRA) is an NIMH-funded center located at the Yale School of Public Health. CIRA supports innovative, interdisciplinary research that combines behavioral, social, and biomedical approaches to focus on the implementation of HIV prevention and treatment as well as the elimination of HIV disparities. CIRA affiliates include HIV research scientists from multiple disciplines and HIV professionals engaged in delivering HIV prevention and care services. CIRA provides an array of services to promote the wider success and impact of HIV research.

In the past year, CIRA focused on advancing its domestic and international HIV research agenda through a range of initiatives and activities. The International HIV Research Interest Group, consisting of a group of CIRA scientists working in various parts of the world, was formed to bolster research abroad by identifying and implementing solutions to barriers and challenges to initiating and sustaining collaborative HIV research in high impact areas. CIRA also held a Visiting International Fellow Program, a spring series that featured international research on HIV. This program brought to Yale global research partners from diverse parts of the world including Malaysia, Sweden, the Middle East/North Africa region, and Peru to work on collaborative HIV research endeavors with CIRA scientists and meet with HIV research program trainees and faculty to discuss their research and explore new research opportunities.

CIRA hosted 27 visitors from the U.S. and Canada at the Center’s third Criminalization of HIV Non-Disclosure Symposium, held at Yale on April 7-8, 2016. Participants included academic researchers, legal and criminal justice system professionals, ethicists, local and state health department representatives, policy makers, advocates, and students. Over the course of the meeting, the group reviewed the current status of research, policy, advocacy, and laws on HIV non-disclosure in North America, developed priorities for future work with an emphasis on additional research to impact the continuing morass of legal and public health
issues surrounding these laws, and identified opportunities for research and other collaboration.

The New England HIV Implementation Science Network was created by CIRA and the Providence/Boston Center for AIDS Research to stimulate and support research collaborations across New England, with a focus on implementation science in small urban areas with high prevalence of HIV. The third annual Network symposium was held on June 2, 2016, attracting participants from across the region including HIV/AIDS research scientists, advocates, public health departments, HIV service providers, consumers, and pharmaceutical industry representatives.

In the 2015-16 academic year, the Research Education Institute for Diverse Scholars (REIDS) program, based at CIRA, was refunded for a second five-year period with a $1.3 million grant from the National Institute of Mental Health, beginning in 2016. The program aims to promote the HIV research careers of underrepresented scientists. Four new REIDS scholars were enrolled this year and attended a summer institute at CIRA in June. A conference devoted to HIV research and diversity issues was held on July 13, drawing 14 REIDS program alumni who presented their foundational HIV research projects followed by a discussion on the need for, and the roadblocks to, greater diversity in academia.

REIDS Scholars alumni and new students attend a conference on HIV research in 2016.

Climate Change and Health Initiative
Yale School of Public Health

The Yale Climate Change and Health Initiative (CCHI) utilizes Yale’s multidisciplinary expertise and global reach to train future leaders, provide a comprehensive educational program, and catalyze innovative research, all to address one of the greatest public health challenges of the 21st century. CCHI has 28 Affiliated Faculty and includes courses, pre-doctoral fellowships, summer
Internships, a speaker series, a Climate Change Leader in Residence, a Climate Change and Health Leadership Training Workshop, and pilot research grants for faculty.

CCHI’s first “Climate Change Leader in Residence” was Dr. James Hansen, who visited Yale in April. Dr. Hansen’s work has helped raise broad awareness of climate change as a crucial issue for humanity. He has been named one of the 100 most influential people in the world by *Time* magazine and one of the Top 100 Global Thinkers by *Foreign Policy*.

Other highlights from the past year include:

- CCHI selected its first Climate Change and Health Pre-Doctoral Fellow, Alyssa Parpia. Alyssa is interested in mathematical modeling of relationships between climate change and infectious disease risk.
- CCHI provided funding for five summer internships for MPH students.
- CCHI awarded its first pilot research grant to co-Principal Investigators Dr. Virginia Pitzer, Dr. Daniel Weinberger, and Dr. William Boos, Associate Professor, Department of Geology and Geophysics. The title of their project is “Consequences of climate change for risk of enteric infections: investigating links between hydrology and water-borne disease.”

**Conflict, Resilience, and Health Program**

**MacMillan Center**

The Conflict, Resilience and Health Program engages with academics, practitioners, policy-makers, and the Yale student body to promote innovations in science and policy. It hosts interdisciplinary initiatives to build research on resilience, alleviate violence, and promote wellbeing.

This academic year, the program hosted original research to evaluate the efficacy of a humanitarian intervention designed to alleviate profound stress and build resilience in Syrian refugees living in Jordan. The project is a partnership between academics with expertise in social sciences and global health (Panter-Brick, Eggerman, Ager), a Jordanian scientist (Dajani), and Mercy Corps, the humanitarian agency embedded in the local area. The program evaluation is funded by Wellcome Trust and DFID, through the UK partnership on Enhancing Learning and Research for Humanitarian Assistance, which aims to strengthen the evidence base for public health interventions in humanitarian crises.

The Conflict, Resilience, and Health Program hosted a Colloquium on Violence, Agency and Innovation, sponsored by the Women’s Faculty Forum and Kempf funding to Louisa Lombard and Catherine Panter-Brick. This allowed Yale students and faculty to meet key academics whose research is at the forefront of studies on conflict. In particular, Dr. Mlambo-Ngcuka, the Executive Director of United Nations Women, gave a high-profile address about combating violence against women and promoting gender equity. She shared the stage with Dr. Gary Barker, Founder of Promundo, an international organization that has worked globally for two decades.
to engage men in achieving gender equality. Other speakers included Séverine Autesserre (Barnard College) and Patience Kabamba (Utah Valley University) on The Failures of Peacebuilding; Henrik Vigh (University of Copenhagen) and Mike McGovern (University of Michigan) on Bodies and Commodities; Stephen Lubkemann (George Washington University) and Mary Moran (Colgate University) on Social Projects at War; and Sharon Abramowitz (University of Florida) on Afterlives of War and Ebola. Sessions were moderated by Yale professors Jason Lyall and Marcia Inhorn, and co-facilitated by Aalyia Sadruddin.

Over the past year, the program supported student research and built upon global research partnerships. Graduate student affiliates include Kristen McLean (Masculinity and Fatherhood in Sierra Leone), Aalyia Sadruddin (Aging and Caregiving in Rwanda), Amelia Sancilio (Biocultural Research in Global Mental Health), and Kyle Wiley (Intergenerational Consequences of Interpersonal Violence). Semester-long projects were completed by YPSH students Rebecca Wener (Assessing Resilience in Syrian Refugees) and Ecology and Evolutionary Biology student Emma Soreson (Markers of Psychosocial Stress in Syrian Refugees).

The program continued its global partnership with the Early Child Development and Peacebuilding Consortium, which is developing a communication program for its activities across science, practice, and policy, in order to work towards a legacy of sustained peace. In the coming year, the program plans to develop further research on refugee and forced displacement, specifically working on assessing the intergenerational transmission of trauma in Syrian families. It will invite collaborations to foster a sustained conversation on health, resilience, and refugee issues. Visit the website for more information on the program: crh.macmillan.yale.edu.

Equity Research and Innovation Center
Yale School of Medicine

The Equity Research and Innovation Center (ERIC) is the leading resource for health and healthcare equity research, policy, and practice at the Yale School of Medicine. The mission of ERIC is to advance the science of health equity research, to promote novel approaches in addressing health disparities, and to facilitate the translation of research into policy and practice. With the support of extramural funding, ERIC leads a robust research portfolio of domestic and global projects that contributes to the reduction and elimination of health and healthcare inequity for historically vulnerable populations.

The activities of ERIC are organized around three main cores: 1) the Education and Training Core that implements training, internships, and mentoring programs for students, fellows, and junior faculty, 2) the Methods and Consulting Core that offers trainings and project consultations specifically on qualitative and mixed methods research and 3) the Research Core that supports ERIC health equity-related research projects. ERIC has three primary pillars in its Research Core: 1) global health disparities research, 2) patient experiences of care research, and 3) workforce development and diversity activities.
NEW INITIATIVE

In the 2015-16 academic year, the Global Health Justice Partnership (GHJP) launched the Collaboration for Research, Integrity, and Transparency (CRIT), an interdisciplinary initiative that uses research, advocacy, and litigation to ensure that clinical evidence on the safety and effectiveness of pharmaceuticals, medical devices, and other medical products is accurate, comprehensive, accessible, and reliable. CRIT is a joint project of GHJP, the Media Freedom and Information Access Clinic at Yale Law School, and the Yale Open Data Access Project within the Center for Outcomes Research and Evaluation at Yale-New Haven Hospital and the Yale School of Medicine.

ZIKA RESPONSE

GHJP students and faculty collaborated with Brazilian feminist and advocacy organizations to address the health and human rights issues surrounding the Zika epidemic. For example, GHJP submitted an expert's statement in support of its partners' petition to the Brazilian Supreme Court in support of expanded reproductive health and social services for women and families affected by Zika, and authored an article on shortcomings in the Ministry of Health's guidelines.

The Eastern Caribbean Health Outcomes Research Network (ECHORN), funded by NIH/NIMHD, is a research infrastructure that addresses the global epidemic of chronic disease in low- and middle-income settings. ECHORN’s flagship research project—a longitudinal study of non-communicable chronic diseases in Barbados, Puerto Rico, U.S. Virgin Islands, and Trinidad and Tobago—will provide information on the prevalence of known and potential risk factors for heart disease, cancer, and diabetes in the region. In the 2015-16 academic year, the ECHORN Cohort Study completed baseline enrollment and is launching follow-up activities. Six other ancillary research projects were also initiated. ECHORN was awarded the NIH/NIMHD U54 grant for the Yale Transdisciplinary Collaborative Center for Health Disparities Research Focused on Precision Medicine.

ERIC is engaged in creating a standardized patient-reported measurement approach to assess healthcare quality and equity. The NIH/NCI funded Patient-Reported Experiences of Discrimination in Care Tool (PreDict) uses state-of-the-art methodological techniques for item development and advanced psychometric testing for validation. PreDict is being tested in hospitals across the country and is poised for expansion to other care delivery settings.

The Workforce Development and Diversity research pillar aims to implement and evaluate demonstration projects to support diversity in the healthcare workforce. ERIC has developed a new partnership with Gateway Community College and Yale New Haven Hospital to design and test a multi-pronged community interpreter training curriculum for multilingual students to maximize their preparation and readiness for pursuing professional community interpreting certification.

Global Health Justice Partnership

The Global Health Justice Partnership (GHJP), an initiative of the Yale Law School and the Yale School of Public Health, was established in 2012 to promote innovative and effective responses to key problems in global health. It is a transformative collaboration that integrates different fields in order to make critical policy interventions, develop new kinds of cross-cutting research, and provide educational opportunities across a variety of academic disciplines.

Building on Yale's institutional assets, GHJP trains students in law, public health, global affairs, and other fields to undertake collaborative, real-world research and advocacy to promote health justice. It also organizes conferences and events, builds partnerships with non-governmental organizations around the world to move research into action, and nurtures an interdisciplinary brain trust dedicated to effecting social change. Over the past year, GHJP students and faculty have worked on a number of projects that focus on critical health issues.

In 2015-16, GHJP challenged the public health harms and legal violations created by the 2014 quarantines of travelers from Ebola-affected countries, first by collaborating with ACLU to publish a report with the first-ever national accounting of the quarantines, then by partnering with Yale’s Workers and Immigrant Rights...
Clinic to file a civil lawsuit on behalf of several public health students, a family of Liberian immigrants, and community organizations and healthcare workers, to challenge Connecticut’s quarantine policies and practices.

GHJP conducts ongoing research and analysis in collaboration with the Sex Workers’ Project (SWP) towards advocacy and publications assessing the ways in which criminalization impacts the lives of people in the sex trade. In particular, SWP focuses attention to current contradictions of, and lack of an evidence basis for, policy in the U.S. For example, HIV/AIDS has become the main point of entry for public health engagement with sex workers while in law, so-called ‘diversion processes’ are quickly becoming the dominant response. Since 2014, GHJP Practicum students have conducted dozens of interviews with actors in the criminal justice system, public health officials, social activists, and affected individuals, and used their findings to highlight the way that discordant, trend-driven and ‘fact free’ policies continue to limit the health and rights of persons in the sex sector, whether they are there by choice, circumstance or force.

GHJP also focuses on advancing access to medicines in the U.S. and abroad. For example, students drafted a report describing how human rights law can more effectively be used to ensure that intellectual property protections do not impair health. This formed the basis for a 2016 submission to a UN High Level Panel on Access to Medicines, supported by groups including the Treatment Action Campaign, HealthGAP, and the Lawyers Collective (India). GHJP has also developed a substantial portfolio of work intended to facilitate greater access to new, high-cost Hepatitis C medicines. With partners from the access to medicines movement, GHJP authored a report about barriers to Hepatitis C treatments in low- and middle-income countries, convened meetings to identify promising strategies to make Hepatitis C drugs more affordable in the U.S., and published papers in health journals and law journals, as well as op-eds, that have helped to create a progressive platform for drug pricing reform in the U.S. Forthcoming publications will identify the crisis in access to these medicines in prisons, and identify strategies to support access among marginalized populations such as prisoners and Native Americans.

In 2015-16, GHJP organized and co-sponsored more than a dozen campus-wide events on a range of pressing health issues, including drug policy reform, climate change, the linkages between Zika and reproductive rights, healthcare for women in U.S. prisons, and violence against health workers and patients in times of conflict. In addition, through the ongoing Student Fellows Program, GHJP organized a series of intimate, conversation-based lunches with distinguished Yale faculty and researchers, as well as guests from partner institutions worldwide. In 2015-16, guest speakers included Ann Kurth, Dean of the Yale School of Nursing; Dr. Mary Bassett, New York City Commissioner of Health and Mental Hygiene; and Unni Karunakara, former International President of Médecins Sans Frontières.
Global Health Leadership Institute

The Global Health Leadership Institute (GHLI) brings together researchers, practitioners, and policymakers from around the world to define new areas of research and debate critical issues in global health. GHLI coordinates projects among faculty, convenes and builds relationships, and provides other project support. GHLI also develops and evaluates interventions to improve health and health equity in and across complex systems; builds understanding of leadership, management, and governance in diverse contexts; and integrates evidence across sectors and disciplines to improve health and health equity globally.

Early Childhood Health and Development

In fall 2015, GHLI sponsored a course taught by Professor Erika Christakis titled “Child Health and Development in a Global Context.” This course examined the role of complex forces such as poverty, migration, toxic stress, and access to early education and child care on a variety of health and learning outcomes. The course also covered themes in nutrition and food security, family support, socialization and environment, and policy approaches to early childhood development.

GHLI also helped to facilitate the appointment of Dr. Nicholas Alipui, former senior advisor at UNICEF, as a visiting scholar with The Macmillan Center for the 2016-17 academic year. Dr. Alipui will teach a course titled “Child Health and Development in Context of Sustainable Development.” This course will focus on the most critical issues and trends in child health, child survival and development, and efforts to incorporate priorities of children and future generations in the Post 2015 Development Agenda. Sessions will be based on selected topics within the broad context of the 2030 Agenda for Sustainable Development, incorporating aspects of economic development, social progress and environmental sustainability as well as aspirations of peaceful and inclusive societies.

Hecht-Albert Pilot Innovation Award for Junior Faculty

In 2016, GHLI established the Hecht-Albert Pilot Innovation Award for Junior Faculty. This award is granted to junior faculty who engage students to advance new research and educational projects in global health at Yale. The inaugural recipients of the award were Dr. Dena Schulman-Green, research scientist in nursing; Dr. Sunil Parikh, assistant professor of epidemiology and of medicine; Dr. J. Zachary Porterfield, clinical fellow in medicine; Dr. Jeremy Schwartz, assistant professor of medicine; and Dr. Tracy Rabin, assistant professor of medicine.
Recipient projects include advancing palliative care in Israel; optimizing disease prevention measures for newborns with sickle cell anemia in Uganda; improving access to ear, nose, and throat specialists in rural South Africa; exploring disparities in access to essential medicines for people living with non-communicable diseases in East Africa; and understanding how nurses in Uganda are trained to prevent and treat non-communicable diseases.

Human Resources for Health: Rwanda

GHLI and Yale faculty joined universities across the U.S. to support the Rwandan Ministry of Health’s visionary Human Resources for Health (HRH) Program to develop a skilled health care workforce that can meet the country’s health care delivery needs.

In the last year, two health management faculty from Yale University were assigned between the University of Rwanda’s School of Health Sciences, School of Public Health (SPH) and two hospitals in Kigali. Three hospital quality improvement projects are active or were completed at these hospitals in 2015-2016, bringing the total to 120 projects since the start of the HRH program. A Yale faculty member was assigned full time at SPH to support development of a Master’s degree in Health Economics and Finance curriculum.

Yale and the School of Public Health faculty also collaborated to develop and implement an executive-style Master’s degree in Hospital and Healthcare Administration (MHA). Fifteen students completed all their MHA requirements and graduated in July 2016. As testimony to the effectiveness of the MHA principles and approach, eight capstone projects will be featured in a special edition of Emerald Insight’s On the Horizon international journal and three other MHA capstone projects have been accepted in the two international journals. An additional 24 students completed their first year course work and are expected to graduate in 2017.

The Obstetrics and Gynecology specialty, led by faculty from the Yale School of Medicine’s, graduated 14 residents from the original cohort in the past year. Four of these residents were hired to train as faculty in the HRH program. Currently, the department has two full-time gynecologic oncologists in Rwanda as well as one maternal-fetal medicine specialist.

PremieBreathe

In 2015-16, GHLI continued to provide support to PremieBreathe, a start-up created by Yale faculty and students that has developed an affordable infant respirator for
PremieBreathe has refined the device in preparation for clinical testing and achieved several funding milestones. Most recently, PremieBreathe was one of 12 winners selected from more than 650 submissions to Saving Lives at Birth: A Grand Challenge for Development. The grant will help fund preparation of the device for clinical testing, scheduled to begin in Ethiopia in early 2017.

Primary Health Care Transformation Initiative (PTI)
In 2015, the Bill and Melinda Gates Foundation awarded GHLI a grant to revolutionize the management and leadership of primary health care in Ethiopia. With this award, GHLI has led the Primary Health Care Transformation Initiative (PTI), which aims to create an integrated system that enhances the quality and equity of primary care throughout the country. Over a three-year term, PTI will work in 36 districts that address the health needs of more than three million people, advancing Ethiopia’s goal to achieve health outcomes comparable to those of a middle-income country by 2030.

As part of PTI, GHLI opened its first country office in Addis Ababa, Ethiopia and hired a team of local Ethiopian staff to serve as management mentors in the 36 districts in which PTI operates. These management mentors work directly with Regional Health Bureaus, Woreda Administration Offices, primary hospitals, and health facilities to create a shared culture of governance, management, and accountability. Most recently, the PTI management mentors have gathered baseline management data from the selected woredas, which will allow the mentors to track the impact of PTI’s intervention in the woredas.

Project Last Mile
GHLI continues to play a key role as evaluators of Project Last Mile (PLM), a partnership that includes The Coca-Cola Company, The Coca-Cola Africa Foundation, the U.S. Agency for International Development, the Global Fund to Fight AIDS, Tuberculosis and Malaria, and the Bill & Melinda Gates Foundation. This public-private partnership focuses on leveraging Coca-Cola’s logistic, supply chain, and marketing expertise to improve distribution of medicines and medical
supplies to remote communities. Current partnerships exist with South Africa, Mozambique, and Nigeria to improve access to medications for patients with chronic illnesses, optimize medicine distribution networks, develop public sector staff capacity, and increase the availability of vaccines through improved cold chain maintenance. PLM aims to partner with 10 African countries by 2020.

**Syria Human Resources for Health Workshop**
GHILI facilitated a two-day workshop with a diverse group of clinicians and health professionals gathered at Yale to discuss medical education in Syria. As the Syrian conflict enters the fifth year, this group examined strategic approaches to restore and strengthen the quality of pre-clinical and post graduate medical education in order to rebuild Syrian's human resources for health. The workshop was sponsored by the Council on Middle East Studies and The Edward J. and Dorothy Clark Kempf Fund at The MacMillan Center.

**InnovateHealth Yale**
InnovateHealth Yale (IHY) is a home for members of the Yale community interested in creating new solutions to health challenges. Founded and led by Martin Klein, Associate Dean, YSPH, IHY helps train students to become change agents, encourages interdisciplinary entrepreneurial efforts to address national and global health problems, and brings to Yale social innovators as role models and mentors. It focuses on closing the health and access gap in the U.S. and low-resource countries.

IHY completed its third year in partnership with leading innovation and entrepreneurship programs across Yale. Speakers included Jennifer Kerry, head of Seed Global Health, and Narcisa Machienta and Robin Fink of Jungle Mamas. IHY sponsored two mentors in residence, both alumni of Yale: Duncan Maru, co-founder of Possible, an innovative provider of medical services in rural Nepal, and Jordan Goldberg, co-founder of stickK, a leader in the use of behavioral economics to encourage positive health behavior.

IHY continued to support students through its sponsorship of student-led hackathons and summer internships. In partnership with the Yale Entrepreneurial Institute, IHY awarded global social venture creation funding to PremieBreathe, developer of a Humidified High Flow Nasal Cannula system for low-resource countries, and to RxAll to develop a system to prevent the distribution of counterfeit drugs in Africa.

IHY awarded the Thorne Prize, a $25,000 prize for the best student-led venture focused on social innovation in health or education, to Spring and its clinical tool that diagnoses patients with depression and matches patients with the most effective treatment. Earlier winners of the Thorne Prize, Khushi Baby (developer of wearable technology to improve immunization rates in rural India) and Story Time (using text-based messages to encourage low-income families to read to their children) have made considerable progress and continue to grow.
Uganda Initiative for Integrated Management of Non-Communicable Diseases

The Uganda Initiative for Integrated Management of Non-Communicable Diseases (UINCD) is a research partnership that seeks to find better ways to address chronic diseases. This collaboration was formed in 2013 by a delegation of diverse stakeholders from Uganda who attended the GHLI Forum for Change. Together with faculty at the Yale School of Medicine’s Department of Internal Medicine, the delegation developed a work plan to improve health system delivery of care for patients with non-communicable diseases.

This year, three UINCD-affiliated Yale faculty received a grant funded by the Else Kröner-Fresenius-Stiftung in Germany to support research and the development of a Center of Excellence for non-communicable disease (NCD) research, education, and care in rural Uganda. The Center will partner with the UINCD to focus on building capacity in the realms of prevention, care, training, and research to enable the provision of effective and integrated care along the NCD management spectrum. Also in 2016, a dedicated UINCD building was opened on the Mulago Hospital Campus Uganda and a memorandum of understanding was formalized between Yale University and UINCD.