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INTRODUCTION

Every aspect of health is global. Good health positively impacts the world while poor health profoundly limits our present abilities and our future growth. An endowed Institute for Global Health provides an incalculable investment in humanity, sustaining in perpetuity the highest quality patient care, education, and research.
As one of the pillars of Northwestern University’s strategic plan, global health research and education expands the University’s impact at home and around the world.

Our faculty and students recognize health as a fundamental human right, inherent to every human being.

In our increasingly interconnected world, the disparities that exist in healthcare are obvious and compelling. Coupled with advancements in technology and knowledge, this interconnectedness also offers opportunities for lasting solutions focused on quality improvement for health and health systems.
MISSION

The Institute for Global Health will expand Northwestern's role as a preeminent research and education innovator in global health. Our collaborative work will be dedicated to vulnerable patient populations and reducing health disparities, healthcare quality improvement, and health systems strengthening.

STRUCTURE

The Institute for Global Health will consist of ten centers for global health research and education in intersecting disease-specific areas, ehealth, and interdisciplinary innovation. Current and future programs across the University will interface and connect with the work of the institute creating global leaders and sustainable partnerships.
THE TEN CENTERS OF THE INSTITUTE FOR GLOBAL HEALTH

Center for Global Communicable Disease
Centers for Global Health Education
Center for Global Primary Care
Center for Global Surgery
Center for Global Brain and Neurologic Disorders
Center for Global Cancer Care
Center for Global Cardiovascular Health
Center for Global eHealth
Center for Global Health Innovation
Center for Global Rehabilitation
Ten Centers for Research, Education, and Service

The Institute for Global Health at Feinberg School of Medicine will deliver unprecedented interdisciplinary approaches to addressing global health challenges. It will serve as the central organizational and trans-disciplinary hub for the ten centers of the institute.

Below is a summary of proposed center activities.

Center for Global Communicable Disease

**Background**
Communicable diseases such as malaria, tuberculosis, HIV, and pneumonia continue to cause nearly 20 million deaths each year and the countries with the highest burden are located in Africa and Asia.

**Goals**
The main goals of the Center for Global Communicable Disease is to research and investigate pressing communicable disease challenges worldwide, train new physician leaders, and conduct lifesaving research to improve clinical care.

**Method**
The Center for Global Communicable Disease will work in continued partnership with a growing list of academic institutions and nonprofit organizations worldwide, and will continue to attract a high percentage of National Institute of Health (NIH) training and research grants.

Centers for Global Health Education (Weinberg and Feinberg)

**Background**
Global health, as defined by the 2011 Northwestern University strategic plan, is an area of distinction and strength for the University and is a major pillar of the We Will campaign for the University.

**Goal**
The educational Centers for Global Health Education at Weinberg and Feinberg, while independent and distinct, create interdisciplinary thinking for a complex world, with the goal of educating the next generation of global leaders in a wide array of disciplines, including anthropology, public health and medicine.

**Method**
The two centers will work synergistically to create a unique global health educational sphere within the University. Working together, they will connect intersecting leadership and training programs at the undergraduate level with global health educational programs in Feinberg.
Center for Global Primary Care

Background
Primary care is the backbone of all medicine and is deeply rooted in global health efforts. In the global health arena, chronic care issues such as cardiac care, high blood pressure, diabetes, obesity and cancer are now more prevalent than communicable disease.

Goal
The goal of the Center for Global Primary Care is to be the nation's premier thought leader on effective strategies to improve primary care education and practice, both here and around the world.

Method
In studying the social determinants of health to increase access to primary care, the center will promote a healthy and productive citizenry. By supporting primary care clinical rotations in low-resource areas, the center encourages the next generation of compassionate primary care physicians. Establishing primary care models of education, mentorship, training, and scholarship, the center will explore, improve, and implement best practices, use collected data to increase chronic care knowledge, and promote clinical preventive services.

Center for Global Surgery

Background
More than 90% of the world's six million annual deaths from injury occur in low- and middle-income countries, with more than five billion people unable to access needed surgical treatment. The need for global surgery is critical: sustainable human welfare is not possible unless we address the global burden of disability from surgical disorders.

Goal
The goal of the Center for Global Surgery is to effectively reduce the global burden of access to surgery.

Method
The Center for Global Surgery will apply innovative models for trauma intervention and surgical relief where resources are most lacking. The center will promote research and clinical partnerships between our faculty and global peers in low-resource communities, and will actively engage with relevant University programs, as well as philanthropic and governmental stakeholder organizations.
**Center for Global Brain and Neurologic Disorders**

**Background**
Global life years lost to disability from neurological disorders currently exceeds those for most other diseases, and are projected to increase over the next 15 years. In many low- and middle-income countries, few resources exist to support mental health and the quality of care is inconsistent or absent.

**Goal**
The first of its kind in the world, the Center for Global Brain and Neurologic Disorders seek to exponentially increase global access to critical brain health knowledge for the world’s most vulnerable populations.

**Method**
The Center for Global Brain and Neurologic Disorders will develop global standards of care, education, and support for practitioners in resource limited countries by using Northwestern’s strengths in clinical research, including ongoing studies in the areas of women’s and minority mental health, neurodegenerative disease and epilepsy.

**Center for Global Cancer Care**

**Background**
Given the complexity of cancer pathways and treatment, cancer care in the developing world is nearly non-existent.

**Goal**
The goal of the collaborative Center for Global Cancer Care will be to improve the lives of those living with cancer. The center will work to bring cancer education, research and treatment programs to underserved areas around the world.

**Method**
New strategies for cancer education are already being developed in Bolivia, funded in part by the Global Health Initiative Fund, to implement National Comprehensive Cancer Network guidelines using a stratified resource platform. The Center for Global Cancer Care, as part of both the Robert H. Lurie Comprehensive Cancer Center of Northwestern University and the Institute for Global Health, will secure necessary screening equipment and supplies for enhanced diagnosis, and work with local and international partner institutions.
Center for Global Cardiovascular Health

Background
Heart diseases and stroke cause 18 million deaths every year, which represents 1 out of every 3 global deaths. Many of these deaths are premature and preventable. High-income countries like the United States have experienced major reductions in the cardiovascular disease death rate over the past 50 years through reductions in tobacco use, blood pressure, and cholesterol levels coupled with better treatment of acute and chronic cardiovascular conditions. However, low- and middle-income countries have not experienced similar gains, and population growth and aging worsen this problem.

Goal
The goal of the Center for Global Cardiovascular Health is to improve global cardiovascular health across the spectrum of prevention and to promote health systems that reach every person on the planet.

Method
The Center for Global Cardiovascular Health inform and influence policy that will improve treatment for both acute and chronic cardiovascular conditions, as well as strengthen health systems that can aid in the prevention of such conditions.

Center for Global eHealth

Background
Bringing the vast knowledge and resources of Northwestern to the world, our Center for Global eHealth is unique among top academic institutions in the country.

Goal
The center will create distance learning opportunities for research, education and clinical care, with an aim to reduce suffering and health disparities across the globe.

Method
The center will provide a broad range of informative and practical education for healthcare providers worldwide, and will use state-of-the-art technology to deliver training opportunities and enhance clinical global healthcare. The center will partner with expert faculty in the field to develop and adopt new eHealth standards,
Center for Global Health Innovation

Background
Innovation is necessary to meet emerging challenges in dynamic global health environments.

Goal
The Center for Global Health Innovation will focus on driving new ideas from creation to realization, working with our local, national, and international partners. The mission of the center is to improve population health, study the social determinants of health, and ensure planetary health through multi- and interdisciplinary innovation.

Method
The center will act as a think tank and accelerator, operating between and across the other nine centers of the Institute for Global Health, translating talent and healthcare innovation into positive change worldwide.

Center for Global Rehabilitation

Background
Disability is a death sentence in many low-resource areas.

Goal
The goal of the Center for Global Rehabilitation is to create a more inclusive world for disabled individuals through improved access to healthcare, enhanced medical interventions to prevent disability, and advanced training and education in physical medicine and rehabilitation worldwide.

Method
By combining the strength of our faculty in physical therapy, orthopedics, neurology, geriatrics, trauma, and occupational therapy, we will set a course to relieve pain and disability, and enhance life around the globe.
ABOUT

NORTHWESTERN UNIVERSITY
OVERVIEW

• Founded in 1851, Northwestern is ranked 11th in the United States among national universities.

• The University is comprised of 12 schools and colleges.

• In 2017, there were 21,208 total enrolled students, including 12,855 graduate students.

• 3,334 full-time faculty are employed by the University.

• The University has 3 campuses located in Chicago, Evanston, and Doha.

• Northwestern has a $9.8 billion total endowment and $676.5 million annually in sponsored research.

• Global Health is a strategic pillar of the University.

MISSION OF THE UNIVERSITY

Northwestern is committed to excellent teaching, innovative research, and the personal and intellectual growth of its students in a diverse academic community.
Feinberg is Northwestern University’s medical school, located in Chicago, IL, USA.

Feinberg has a medical faculty of 4,000, 2,500 medical and graduate research students, and over 350 fellows in specialty training programs.

Our teaching hospital, Northwestern Memorial Hospital, is ranked 13th best hospital in the country.*

Feinberg is ranked 20 out of all medical research schools in the United States.*

14 Northwestern specialties are ranked among the nation's best.*

*U.S. News and World Report

The Institute for Global Health at Feinberg School of Medicine will serve as the epicenter for medical research, education, and service for the medical school, integrating with University-wide graduate and undergraduate programs.
GLOBAL HEALTH AT WEINBERG
COLLEGE OF ARTS AND SCIENCES

UNDERGRADUATE PROGRAM IN GLOBAL HEALTH STUDIES

- 100% of global health graduates complete a significant international public health experience.

- Global Health students have studied or conducted public health research in 28 different countries.

- Students have graduated from the Program in Global Health in 50 different academic disciplines.

- Approximately 55% of students, when declaring a Global Health major or minor, consider themselves pre-med.

- On campus, Global Health students are in positions of leadership in many student groups, serving as presidents of international student organizations.

- Since the inception of the program, participants have received the following fellowships: Fulbright (16), Princeton in Africa (6), Princeton in Latin America (2), Global Health Corp (4), Clinton India Foundation (2), Peace Corp (7), Projects for Peace (4), and Emerson Hunger Fellows (2).

- In 2018 the program received a IIE Andrew Heiskell Award for Innovation in International Education Honorable Mention.
The Center for Global Health at Northwestern celebrates its 10th anniversary in 2018. Since its establishment, the center has coordinated Northwestern’s efforts in global health research and clinical education both within and outside of Feinberg School of Medicine.

The Center for Global Health ranks 11th in the country for academic sites receiving funding from the National Institutes of Health (NIH) Fogarty International Center. Many of these grants are training grants to support medical curriculum development and research capacity at partner institutions abroad.

Feinberg, through the Center for Global Health, proudly has the number one program in the country supporting global health electives for medical students and residents. With the support of funding from the Global Health Initiative (GHI) and other sources, over 50% of our medical students engage in global health rotations compared with a national average of 27% (American Association of Medical Sciences, 2017). In collaboration with our undergraduate programs we are creating leadership opportunities for all students across a wide spectrum of disciplines.

The envisioned Institute for Global Health is inspired by the faculty and collaborative achievements of the Center for Global Health and will be an expansion on these programs.
THE GLOBAL HEALTH INITIATIVE

In 2008, a single gift of $25,000 from a grateful patient, combined with the efforts of Northwestern faculty leadership, founded the Global Health Initiative (GHI) Fund. The GHI Fund has expanded exponentially over the last decade, raising millions of dollars for global health education and research by Northwestern faculty and students worldwide.

In the last decade nearly 1,000 Northwestern medical students and residents have participated in GHI-funded medical rotations in over 40 different low-resource areas around the world through the Center for Global Health.

SUPPORTING GLOBAL HEALTH EDUCATION FOR 10 YEARS
Over the past three years, in addition to supporting elective rotations for medical students and residents, the GHI Fund has acted as a financial springboard to support faculty research in a wide variety of disease-specific areas.

By building out our various initiatives while continuing to support elective rotations for medical trainees we are now able to envision an endowed Institute for Global Health, the first of its kind in design and scope.

We face the twin challenges of sustainability and well-resourced growth. This growth includes recruitment of additional top level faculty in the field of global health.
THE INSTITUTE FOR GLOBAL HEALTH AND TEN CENTER STRUCTURE
Institute for Global Health

Strategic Partners

Northwestern Partners

Access to Health Project
Buffett Institute for Global Studies
Center for Innovation in Global Health Technologies
Feinberg School of Medicine Center for Global Health
Global Health Initiative Fund
Institute for Public Health and Medicine
International Studies Program
Kellogg School of Management
McCormick School of Engineering
Office of the Vice President for International Relations
Pritzker School of Law
School of Professional Studies Master of Science in Global Health
The Center for Primary Care Innovation
Weinberg College of Arts and Sciences

Business and Nonprofit Partners

Advisor, Legacy Professionals LLP, CPAs
Asociación Civil Impacta Salud y Educación (Lima, Peru)
Athletico
Brother Andre Medical Center (Nairobi, Kenya)
Centro Medico Humberto Parra (Palacios, Bolivia)
Chicago Global Health Alliance
Chicago Half Marathon
Child Family Health International
Clínica de Familia La Romana (La Romana, Dominican Republic)
Cone S/A Real Estate Development (Recife, Brazil)
Convida S/A Real Estate Development (Recife, Brazil)
Diane and David B. Heller Charitable Foundation
Ford Family Foundation
Hillside Health Care International (Eldridgeville, Belize)
Professor Fernando Figueira Integral Medicine Institute (Recife, Brazil)
J. Christopher and Anne N. Reyes Foundation
Kibler Family Foundation
Malkin Family Foundation
Mandell Menkes, LLC
Mr. and Mrs. Russell Mayerfeld Fund
Mullooly Carey Foundation
National Student Leadership Conference
Operation Walk
Patrick G. and Shirley W. Ryan Foundation
Port Capital, LLC
Project CURE
PROMIS-Bolivia (La Paz, Bolivia)
PROMIS Health Organization
Rural Aid Organization (Shirati, Tanzania)
Satter Foundation
Sherman Fairchild Foundation
Warren Barr
World Bicycle Relief

Academic Partners

Charité Universitätsmedizin Berlin (Berlin, Germany)
Consortium of Universities for Global Health
Karolinska Institutet (Stockholm, Sweden)
Keio University (Tokyo, Japan)
Makerere University (Kampala, Uganda)
Nigerian Institute of Medical Research (Lagos, Nigeria)
Notre Dame University Kellogg Institute for International Studies
Peking University (Beijing, China)
Royal College of Surgeons in Ireland (Dublin, Ireland)
Stellenbosch University (Cape Town, South Africa)
Tel Aviv University (Tel Aviv, Israel)
Trinity University (Dublin, Ireland)
Universidad Panamericana (Mexico City, Mexico)
Universidad San Sebastian (Concepcion, Chile)
Université Cheikh Anta Diop (Dakar, Senegal)
Université de Bamako (Bamako, Mali)
Université de Strasbourg (Strasbourg, France)
University of Cape Town (Cape Town, South Africa)
University of Ibadan (Ibadan, Nigeria)
University of Jos (Jos, Nigeria)
University of Lagos (Lagos, Nigeria)
# The Institute for Global Health Endowment Opportunities

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<thead>
<tr>
<th>Institute/Center</th>
<th>Funding</th>
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<tr>
<td>The Institute for Global Health (Hub)</td>
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<td>Center for Global Communicable Disease</td>
<td>$25 million</td>
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<tr>
<td>Centers for Global Health Education (Weinberg and Feinberg)</td>
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<td>Center for Global Rehabilitation</td>
<td>$10 million</td>
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**Total combined funding for the institute and ten centers**

$185 million
ONE GIFT
The naming of the entire Institute for Global Health provides the opportunity for an extraordinary, transformative gift. Through endowment and annual expendable income, this visionary gift will sustain and support a robust interdisciplinary institute and its ten active centers.

COLLABORATIVE GIFTS
There are opportunities per center at various giving levels and an overall naming opportunity for the institute. Our goal is $185 million for the institute and all of its ten centers.

GIVING STRATEGIES
- Cash, stock, or securities
- Inclusion in will or living trust
- Retirement assets
- Life insurance
- Designation to benefit from bank and brokerage accounts
- Charitable gift annuity
- Charitable remainder trust
- Real estate
- Charitable lead trust
- Direct named endowment
Endowed funding is invested and a portion is disbursed yearly (4–5%). Endowment allows for program funding in perpetuity.

Endowment and Expendable Funding

The entire amount of expendable funding is available for programmatic use.
Endowment Funding for Yearly Growth

$25 Million Endowment for Institute Hub

$1.125 million first year of expendable budget for the institute hub supports:

Institute Director Positions
Research Administration
Funding Opportunities
Collaborative Outreach in Education
Internal and External Communications
Finance and Human Resources
Program Development
Research Assistants
Administrative Staff
Expendable Pipeline for Impact
The Global Health Initiative Fund
$1.2 Million Yearly Budget

Global Health Clinical Rotations
Kellogg Student Global Health Experiences Abroad
  Global Health Fellow
  Global Surgery Scholar
Long Term Global Health Scholar
Scholarships for LMIC Partner Students
McGaw Global Health Clinical Scholars Certificate
Faculty Research Catalyzer Awards
Faculty Mentorship Micro Grants
Education Centered Medical Home Sites
Networking and Fundraising Events
Project CURE Shipments of Medical Supplies to Partner Sites

Endowment Plus Expendable Funds Equals Extraordinary Impact in Perpetuity
THE WORK OF AN INSTITUTE

Global Case Studies
Cardiovascular Care in Kerala, India

India has more heart attacks than any other country in the world. Cardiovascular care varies greatly from one place to another and is often suboptimal. Feinberg School of Medicine associate professor Mark Huffman, MD, MPH, has been studying heart attack treatment in the southern state of Kerala, India, in an effort to improve long-term treatment. Since 2010, Dr. Huffman and his team have been working alongside the Kerala chapter of the Cardiological Society of India and the Centre for Chronic Disease Control in Dehli to address the growing challenge of cardiovascular health. The collaborative project set out to describe the problem in detail and find ways to improve the outcomes of patients with heart attacks.

As part of this work, Dr. Huffman and his cardiology research team conducted the largest cardiovascular randomized trial in India. With help from the Global Health Initiative Fund at Feinberg School of Medicine, from 2014 to 2016, the team evaluated the effect of intervening with a cardiovascular prevention playbook and a quality improvement toolkit on heart attack patients. In total, 21,376 patients from 63 hospitals were enrolled in this study.

Global health is an area of strategic focus for Northwestern University. This large trial shows the institution’s commitment to improving the health and healthcare of people in limited resource settings.

–Mark Huffman, MD, MPH
Results of Trial

- The group that received the intervention experienced better treatment overall.
- Improvements were found in several quality measures for heart attack patients.
- Those who received the intervention experienced a 1.1% lower rate of major cardiovascular events in the 30 days following treatment than the usual care group.
- The study used a sophisticated approach that accounted for trends over time. Interestingly, this design revealed that the intervention was actually less effective than previously thought, which is an important finding for setting health policy.
- Overall, the study suggested favorable trends in outcomes for Keralan heart attack patients, and demonstrated the toolkit’s potential for improving quality of care delivered at Indian hospitals.

Return on Investment

- The trial cost $56 per participant—approximately $5,500 less per participant than typical trials.
- Implementing the study influenced the culture of cardiovascular quality and safety in Kerala and India overall, which will result in better treatment and outcomes.
- The study produced high-quality scientific output, which investigators presented at leading international forums.
- The work created a platform for junior researchers and led to obtaining an NIH Fogarty International Center training hub award.
- A proposed second phase of this study will examine the impact of hospital management practices on quality of care and heart attack outcomes, based on research by Fogarty Global Health Fellow and Feinberg medical student Kyle Yoo. The trial also garnered interest to explore the effects of this type of intervention in other states and conditions.
Rehabilitation and Cancer Care in Recife, Brazil

The Global Health Initiative (GHI) Fund has been present in Recife, an industrial port city and capital of the Pernambuco region of Brazil—securing critical partnerships at the core of both the city’s business and health care sectors.
Pernambuco, Brazil

With a population of over nine million people and hardest hit by the economic recession, Pernambuco is the poorest region in all of Brazil. While demand for health services has doubled in the last decade, the number of trained physicians is declining and access to medical supplies is a challenge.

Rehabilitation

Cone Condominio de Negocios, S.A. (Cone) is major real estate developer in Recife that has helped transform the city into an industrial hub, creating 6,000 jobs since its establishment in 2010. But Cone and its president, Marcos Roberto Dubeux, want to revitalize Recife through more than just employment. They envision a Recife Rehabilitation Center on adjacent property to the Cone logistical hub, in collaboration with the Center for Global Health Innovation, part of the Institute for Global Health. Currently, there are no rehabilitation centers in Recife, a city of over 1.5 million people — those suffering from injury and/or disability are left with few resources.

The Institute will assist this project by connecting Cone with Northwestern faculty and strategic nonprofits (including Project CURE), as well as provide donated equipment, supplies, treatment, and education to the region. Collaborating with the local private sector will help increase access to healthcare and improve local, national, and global economies.

Cancer Care

The nonprofit Hospital de Câncer de Pernambuco (HPC) is free to poor patients as part of the Brazilian Health Ministry and treats over 40% of the region’s cancer patients. HPC is renowned for breast cancer surgeries, orthopedic oncology, and neurosurgery, addressing a disease the World Health Organization has declared an epidemic.

By the year 2030 there will be 27 million new cancer cases worldwide.

In light of this, HPC seeks to expand care by 40% with a new construction project, which would allow room for 130 additional hospital beds, 4 new operating rooms, 22 new ICU beds, a new bone marrow transplant unit with 15 beds, and a new oncology emergency ward with 20 beds. A partnership with the Institute for Global Health and the Robert H. Lurie Comprehensive Cancer Center will allow HPC to stay committed to its mission by providing supplies, education, distance learning, and hope to those facing cancer.
A Clinic in Shirati, Tanzania

The Rural Aid Organization (RAO) is a non-profit, non-governmental organization (NGO) located in Shirati, Tanzania. Shirati (population: 50,000) is situated in the northwest Mara region, about a six-hour drive from the nearest major medical center; RAO thus provides critical treatment to the largely underserved region.

Since 1996, RAO has provided myriad medical services to the Mara Region, including adult and pediatric primary care, surgeries (the most common of which are gynecological, thoracic and general abdomen surgeries), and comprehensive reproductive health clinics. The hospital can see up to 30 patients per day and is staffed by 33 medical personnel and 17 general service staff.
Elevating Community Health

The Global Health Initiative (GHI) Fund at Feinberg School of Medicine partnership with RAO began in 2013 and has always been centered on high-quality care. After Leah Makoyo, a nurse who founded RAO with her husband, Dr. Ziki Makoyo, was treated for breast cancer at Northwestern Memorial Hospital, she was determined to bring better cancer education to her local community in Shirati. In partnership with RAO, Northwestern and the GHI have spent the past five years helping elevate the level of care at the clinic. Specifically, the GHI has:

- Funded shipping transport costs for $750,000 worth of donated supplies and equipment used for cancer and primary care needs.
- Sent Northwestern Medical specialists in cancer care to do an assessment of collaboration around cancer education.
- Created and provided breast cancer detection pamphlets.
- Hosted a medical student book drive, which became the base of RAO’s first-ever medical education library.
- Built a working well on site.
- Committed to building a lab to expand primary care treatment services, improve quality of care, and increase care capacity.

As part of Northwestern’s commitment to community-based service, the Feinberg School of Medicine sends medical faculty and trainees to RAO on clinical outreach rotations. For four to six weeks at a time, visiting physicians take on a number of clinical responsibilities, including rounding on surgical and medical inpatient wards, assisting in surgical procedures, traveling to rural communities in the Mara region, and presenting on health-related topics for staff and patient education. The Feinberg School of Medicine, the GHI, and RAO are also in the process of building out a specialized family medicine rotation for primary care and OB/GYN residents.
Medical Spanish in Quito, Ecuador

Though the Center for Global Health, the Global Health Initiative (GHI) Fund, and the NGO Child Family Health International (CFHI), Feinberg medical students have the opportunity to immerse themselves in Ecuadorian culture and build their medical Spanish skills.
During the first two weeks of the program, participants take 40 hours of intensive beginning Spanish and live with host families. Their mornings entail working on a community engagement project with a local nonprofit or public health site in Quito.

In the last two weeks, students put their new Spanish skills to work during clinical rotations at various facilities in Quito and its outskirts. Such sites include clinics serving low-income communities, which provide primary care, prenatal care, vaccinations, and health education; a general government hospital in northeast Quito, which provides low-cost primary, secondary, and tertiary care; and a military hospital and public maternity hospital for high-risk pregnancies. At the hospitals, participants rotate with local medical students in OB/GYN, pediatrics, surgery, and emergency wards and participate in morning rounds and general consults.

The Intensive Beginner Spanish and Healthcare rotation is unique in its holistic view of health and medical education. The program heavily emphasizes public health, cross-cultural communication, the importance of language learning, and community engagement. Medical students working with local healthcare providers have the opportunity to support the health services for underserved communities in Quito, while gaining for themselves a far-reaching perspective on their own roles as medical professionals.

The CFHI program in Ecuador offers four-to-eight-week Spanish immersion rotations in Quito. There, students gain basic, practical medical proficiency through classes, community service, and clinical rotations, and better perspective on social responsibility in the practice of medicine.
Stellenbosch University and Northwestern University’s partnership is unique in that it offers programming for students from the Feinberg School of Medicine, the Weinberg College of Arts and Sciences, the Medill School of Journalism and the McCormick School of Engineering. By reaching across disciplines, the program nurtures interconnectedness and exchange of ideas by Northwestern students and faculty of all specialties and levels of expertise.
Programs Across the University

Stellenbosch University, founded in 1881, is the oldest university in South Africa, as well as one of the country’s top research universities. Northwestern University, through the Center for Global Health and the office of Undergraduate Learning Abroad, coordinates three Stellenbosch University programs:

- During spring quarter, undergraduate students can enroll in a specially designed program focusing on public health issues, development policies, and political reform in contemporary South Africa. The Northwestern program has a set curriculum, and students can take classes on a range of topics relating to global health, including South African identity issues and languages, the public health system in the Western Cape, and contemporary South African politics, economics, and policy. Studying abroad is a requirement for undergraduate Global Health Studies majors.

- In winter quarter, undergraduate engineering students have the opportunity to enroll in the Global Healthcare Technologies program. Here, students get hands-on experience in developing medical devices to improve health outcomes in impoverished areas. Classes cover topics including health technology planning and principles and medical device design for the developing world. Additionally, students are exposed to the social and economic health context in South Africa.

- Fourth-year Feinberg medical students can also visit Stellenbosch. Students partake in four-to-six-week rotations at Tygerberg Hospital, the Cape Town teaching hospital affiliated with Stellenbosch University. Rotations are available in Infectious Disease, Pediatrics, Internal Medicine, and Dermatology. Additionally, a Hope/Kid Cru rotation allows participants to visit local township clinics. Participants work at midwife outpatient centers in the townships and see patients with gestational diabetes, HIV, tuberculosis, and other conditions.
A university always remains a work in progress.

Morton Schapiro
President and Professor
Northwestern University
The "We Will" Campaign for Northwestern is a University-wide fundraising effort to realize the bold ambitions set forth in Northwestern's strategic plan. Pillars of the campaign include shaping innovative solutions to global issues and developing new forms of creative expression; making a Northwestern education more accessible to the very best students and providing the academic and real-world learning experiences that prepare students to become the leaders and problem-solvers the world needs; building a vibrant, diverse, and inclusive community on our campuses; and bringing Northwestern to the world and the world to Northwestern.

The Campaign for the Institute for Global Health is a top priority for both the University and the medical school as part of the "We Will" Campaign.
Leveraging Northwestern's ongoing INVESTMENT in INNOVATION the Institute for Global Health at Feinberg School of Medicine will catalyze GROWTH in global health research, education, clinical care, community service, and advocacy.
INVESTMENT

INNOVATION

GROWTH
Northwestern University has experienced 27% growth in sponsored research since 2011, including nearly $650 million in 2016.

38 faculty members elected to the American Academy of Arts and Sciences and the National Academies of Medicine, Engineering, Sciences, and Education since 2011.

Increase in undergraduate research funding from $500,000 in 2012 to $2 million in 2016.

The $25 million Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative promotes multi-university collaboration using big data.

The $10 million Simpson Querrey Center for Epigenetics supports study of the impact of environmental factors on gene activation and expression, which ultimately affect diseases and treatment.
Existing University Initiatives

Access to Health Project
Legal-medical-business approach to capacity building

Buffett Institute for Global Studies
Collaboration on global issues

Center for Community Health
Community and academic engagement

Center for Innovation in Global Health Technologies
Context-appropriate health solutions

Center for Synthetic Biology
DNA reprogramming through engineering and computer science

Chicago Cancer Health Equity Collaborative
Cancer research for local underserved communities

Institute for Policy Research
Research focus area on social disparities and health

Institute of Sexual and Gender Minority Health and Wellbeing and the Women’s Health Research Institute
Focusing on equality in research

Kellogg School of Management Data Analytics Pathway Program
Expanding student cohort with business and data analytics knowledge

Kellogg School of Management Trust Project
Connecting scholars and executives

Les Turner ALS Research and Patient Center
Research and treatment of ALS

Master of Science in Global Health
Interdisciplinary degree focusing on capacity building in low-resource settings

Precision Medicine Initiative Cohort Program
Prevention and treatment informed by individual lifestyle, environment, and genetics

Pritzker School of Law Innovation Lab
Legal, business, and technical framework for commercial innovation

Public Interest Center and Bluhm Legal Clinic
Advancement of social justice and ethics of public service

Segal Design Institute
Engineering students tackle real-world design challenges

Your Impact Scholars
Innovative micro-financing for poverty alleviation
• 600,000 square foot Louis A. Simpson and Kimberly K. Querrey Biomedical Research Center to drive new ventures and scientific discovery. Estimated completion in late 2018.
• Kellogg School of Management Global Hub is a state-of-the-art, multi-use space for fostering community and sharing ideas.
• Northwestern Medicine Enterprise Data Warehouse: repository of clinical and research data.
• Enhanced digital learning through the Faculty Distance Learning Workgroup: creation of 13 online courses and 3 specializations.
• Open access digital libraries featuring research and education.
• The Robert H. Lurie Comprehensive Cancer Center launched an eHealth Distance Learning Portal, led by William Gradishar, MD, to share information on cancer education, research lectures, surgery, and more.
Feinberg’s Center for Global Health is consistently one of the top 15 recipients worldwide for National Institutes of Health Fogarty International Center funding.

Global experiences and educational exchanges exist throughout the business, journalism, law, and undergraduate programs. Feinberg leads the country in global rotations among medical schools.

The Health and Society curriculum pillar at Feinberg explores how wellness is promoted in a population, including health disparities and outcomes, as well as the global integration of medicine with societal elements.

Global community health partners in the local Chicago area include Erie Family Health Center, Near North Health Services, and Norwegian American Hospital.
GLOBAL HEALTH RESEARCH AT NORTHWESTERN

• Lurie Cancer Center recently received a $4 million grant from the National Cancer Institute to research hepatocellular carcinoma and cervical cancer in Nigeria. The study is led by Center for Global Health Director and Professor of Infectious Diseases Robert Murphy, MD, and Lifang Hou, MD, PhD, chief of Cancer Epidemiology and Prevention in the Department of Preventive Medicine.

• Mark Huffman, MD, MPH, and co-investigators recently completed the Acute Coronary Syndrome Quality Improvement trial in Kerala, India (ACS QUIK). The study was the largest randomized trial ever completed in the country and was supported in part by the Global Health Initiative (GHI) Fund.

• Fourth-year medical student Kyle Yoo was selected as a Fogarty Global Health Fellow and is currently investigating management practices in ACS QUIK participating hospitals, supported by the GHI Fund.

• Overall, Northwestern has had 5 Fogarty Global Health Fellows (Mark Huffman, MD; Amisha Patel, MD; Ehete Bahiru, MD; Smitha Sarma, MD; and Kyle Yoo).

• Professor of Gynecology Melissa Simon, MD, MPH, received the 2017 Drexel University Marion Spencer Fay Award in recognition of her lifetime achievements in global women’s health, health equity, and policy.

• 23 students in 2016–2017 were awarded Fulbright Fellowships.
FEINBERG
SCHOOL OF
MEDICINE
PARTNERS
IN GLOBAL
HEALTH

Bluhm Cardiovascular Institute
Cardiovascular Research Institute
Clinical and Translational Sciences Institute
Diabetes, Obesity, and Metabolism Institute
Institute for Genes and Environment
Institute for Medical Education
Institute for Public Health and Medicine
Institute for Translational Neuroscience
Mothers and Children’s Institute
Musculoskeletal Institute
Robert H. Lurie Comprehensive Cancer Center of Northwestern University
Transplantation, Tissue Engineering and Regenerative Medicine Institute
We Will Campaign for Northwestern University

- The University's goal is $3.75 billion total.
- Our anticipated 8 year campaign launched in 2014.
- The Feinberg School of Medicine's goal is $1.75 billion.
- As of Spring 2018, the medical school is at 100% of its goal.

Advancing Our Global Footprint

- Build-out of core institutes and creation of new institutes, bringing together Feinberg principles of research, education, clinical care, community service, and advocacy.
- Increase number of endowed professorships.
- Innovation grants for research.
- Scholarships for health professional students.
- Fellowships for exceptional trainees.
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<th>Leadership by faculty</th>
<th>Expanded opportunities for faculty leadership in global health.</th>
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<td>Top enrollment in student programs</td>
<td>Steady or growing participation by medical and other trainees.</td>
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<td>Impact through partnerships and dissemination of research</td>
<td>Increased grant and fellowship funding for faculty and trainees.</td>
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<td>Additional external partnerships and collaboration.</td>
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The newly formed Center for Primary Care Innovation at Feinberg has been awarded $3.75 million during the last 2 years from the Health Resources & Services Administration (HRSA), part of the U.S. Department of Health and Human Services. Between these two existing centers, this is an average of $1.45 million in research funding awarded per year.

Over the last 10 years, the Center for Global Health at FSM has been awarded over $11 million in research funding from the NIH, including $5.3 million in 2017 alone.

Under the envisioned Institute for Global Health and supported by the institute's administrative core we anticipate even greater yearly growth in research funding, such that the initial investment ($10–25 million per center) is matched in new research dollars within 10 years.
“There is an enormous payoff from investing in health.”
(Jamison, Sommers & Alleyne et al, 2013)

“The link between better health and better economic performance is by now well established.”
(Masia, Smerling & Kapfidze et al, 2018)

Good health supports economic development through increased human capital* (e.g., industry is more inclined to educate and train healthy workers, and healthy individuals are more inclined to invest in their own education), increased labor productivity (e.g., less absenteeism, increased skills acquired via investment in human capital) and increased life expectancy (e.g., longer years of productive work gained via those investments), e.g.:

- Numerous studies have demonstrated that early childhood health has a positive effect on productivity during later working years (Bloom, Canning & Fink, 2014).
- An increase in only adult life expectancy (which is gained, by definition, from lessened disease or injury, i.e., better health) contributed 11% of all economic growth in low- and middle-income countries between 1970 and 2000 (Jamison, Lau & Wang, 2005).
-Adding one year of total life expectancy leads to a substantial increase in GDP** of a country (4%; Bloom, Canning & Sevilla, 2004).
But the payoff from good health can be measured not only by increases in economic productivity determined by national income accounts, but also in the financial value that individuals place on their health, a combination called “full income” (Jamison, Sommers & Alleyne et al, 2013). We all value our health. Using full income as a measure of economic gain, about 24% of the full income gain in low- and middle-income countries between 2000-2011 resulted from the value of health to individuals (Jamison, Sommers & Alleyne et al, 2013). Whether within families or national populations, health provides prosperity, contentment, and stability.

**“Human capital” is a widely-used economics term that refers to the education and skills of an individual or population**

**GDP is the gross domestic product, the total value of goods and services produced by a country.**
Can interventions “pay for themselves” in averted health care costs? Newer studies are examining the return on investment (ROI) for specific health interventions and many are cost-saving, e.g.:

- A systematic review of seven workplace health promotion programs found an ROI of $3.48 in lessened healthcare costs for every $1.00 spent (Aldana, 2001); other studies have documented lessened absenteeism (Goetzel & Ozminkowski, 2008).
- The ROI for malaria elimination in the Asia Pacific region is between $5-10 for every dollar spent (Malaria Elimination Initiative, 2017).
- The ROI for diphtheria, pertussis, and tetanus (DPT) vaccination campaigns is at least $12 for every dollar spent (Masia, Smerling, Kapfidze, et al, 2018).
- New technologies and research increasingly offer cost-effective interventions that can be capitalized on to improve health, e.g., human papillomavirus vaccine for prevention of cervical/vulvar/anal/throat cancer, therapy of hepatitis C virus infection to prevent liver cancer and cirrhosis.
With enhanced funding to scale up health technologies and healthcare systems, not only can access to and quality of healthcare services be improved (GBD 2016 Healthcare Access and Quality Collaborators, 2018), but an ROI on full income by 2035 of 9-20 in low- and lower-middle income countries can be realized (Jamison, Sommers & Alleyne et al, 2013), making selected healthcare enhancements a highly attractive investment: better health at lessened cost.

The Institute for Global Health will increase our return on investment in research and education to improve health systems and economies.

References

• Bloom DE, Canning D, Fink G.. Disease and development revisited. JPE, 2014;122(6), 1355-1366.
The great grace is to begin well.
The greater grace is to keep on your path.
The greatest of graces is to never give up.

Dom Hélder Câmara
Archbishop of Recife, Brazil (from 1964–1985)
Improved health means an improved world.

Investing in health is a profound investment in the wellbeing of humanity.

There is no greater calling than saving lives.
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*We would like to thank the Feinberg School of Medicine students whose photos were included in this document.*

*We also credit Patricio Crooker (photo on p. 10) and the following individuals, whose photos were retrieved from Wikimedia Commons: Hans A. Rosbach (p. 25), Shameer Thajudeen (p. 26), Sandro Helmann (p. 28), and Diego Delso (delso.photo, License CC-BY-SA) (p. 32).*