

The Dramatic Expansion of University Engagement in Global Health

Implications for U.S. Policy

A Report of the CSIS Global Health Policy Center

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THE DRAMATIC EXPANSION OF UNIVERSITY ENGAGEMENT IN GLOBAL HEALTH: IMPLICATIONS FOR U.S. POLICY

Michael H. Merson and Kimberly Chapman Page¹

The Rise of Global Health on University Campuses

Global health is experiencing an unprecedented and palpable surge of attention and growth on universities campuses across the United States. Curricula, programs, centers, departments, and institutes of global health are being established as either free-standing entities or within schools of medicine and public health at major universities. This fall, Duke University will join the University of California at San Francisco as the first two U.S. institutions to matriculate students in a Master of Science in Global Health degree program, and the University of California is planning to establish the first School of Global Health (Cisneros, 2008). This country-wide growth creates a new constituency and voice for global health in this country and for the new Obama administration.

In direct response to this growth and the need for academic stewardship, the Consortium of Universities for Global Health (CUGH) was formed in 2008 to promote, facilitate and enhance the growth of global health as an academic field of study (see below). As an initial activity, consortium members recently responded to the need for a definition of global health and clarified important differences in philosophy, strategies, and priorities for global health, international health and public health (see appendix A). It agreed that global health be defined as “an area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide. Global health emphasizes transnational health issues, determinants, and solutions; involves many disciplines within and beyond the health sciences and promotes interdisciplinary collaboration; and is a synthesis of population-based prevention with individual-level clinical care” (Koplan et al., 2009). This definition offers an important elaboration on the oft-cited definition of global health initially advanced by the Institute of Medicine (IOM) in its seminal report on the U.S. Commitment to Global Health (Institute of Medicine, 1997) and amended in 2008 (Institute of Medicine, 2008).

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Root Causes of Growth

There are at least three root causes or drivers of the growth of global health on American campuses:

1. Significant changes in American higher education that places greater emphasis on and resources for internationalization, in response to students' greater awareness of the world starting at an early age and facilitated by the global media.
2. Heightened public visibility of the global health agenda, as a matter of U.S. foreign policy, and as part of a larger movement for greater global equity.
3. Expansion of resource flows: U.S. government, foundations, corporate and private philanthropy have generated new opportunities for universities, and potential career paths for students.

This growth of global health at academic institutions is marked by new demand among undergraduate, graduate, and professional students for education and training that will prepare them for a global marketplace, new donors that have opened up unprecedented levels of funding for global health, and areas of research and discovery that have received greater attention in light of globalization and threats of pandemics and bioterrorism.

The majority of college graduates now enter the workforce with some kind of global experience on their resume. The reality of globalization brings greater international connectedness, including ease of communication through innovations in information technology, which has created more opportunities to work overseas. Indeed, the demand for experiences in global health must be understood within the larger context of the internationalization of higher education (Macfarlane et al., 2008a). And although the majority of global health programs are still housed within schools of medicine or public health, free-standing institutes and university-wide centers have expanded the disciplinary framework for global health beyond the health professions to include business, engineering, public policy, divinity, law, and the disciplines of the social sciences.

Separate from, but related to, these forces of globalization are other distinct factors that can account for the recent popularity of global health. Social justice movements have long been a hallmark of university campuses, and student activism has undoubtedly been fueled by events related to the 9/11 response and ongoing conflicts in Afghanistan and Iraq. New York Times columnist David Brooks has observed that “Sept. 11th really did leave a residue—an unconsummated desire for sacrifice and service” (Brooks, 2008). Global health, particularly because it brings to light such gross disparities between low- and high-income countries and populations within countries, is a natural channel for student compassion and action. The popularity of global health among this younger generation may also be attributed to the visibility and pop culture created by celebrities and corporations (e.g., Bono, Live 8 concerts, George Clooney, Oprah Winfrey, the [RED] product campaign) who have championed global health through high-profile campaigns to end poverty and genocide, the growing belief that health must be seen as a basic human right (as exemplified by the call for universal access to antiretroviral treatment), and the billions of dollars committed to global health through foundation

investments, particularly the Bill & Melinda Gates Foundation, which is now the largest foundation in the world (Okie, 2006).

Enlightened Self-Interest

However altruistic student motivations may be, it is undeniable that an enlightened self-interest has also contributed to greater awareness of and support for global health among the American public (IOM, 1997; Kickbush, 2002). The looming threats of another SARS-like outbreak, a pandemic of avian influenza, or the global spread of multi-drug resistant tuberculosis (for example) create a domestic public health imperative for investing in global health. This national interest in “self-protection” is closely tied to the investment in global health as a strategic foreign policy imperative for both political and economic reasons. It has been suggested that investment in global health is a concrete way in which the United States can exercise its “soft power” to reach out to those living in poverty, save lives, and repair the U.S. image abroad (Armitage and Nye, 2007). From an economic perspective, both the theoretical and empirical links between health and economic development have been clearly demonstrated: an unhealthy labor force is physically less able to produce goods and services, and the impact of malnutrition and poor health on cognitive ability is receiving increasing attention as many sectors are dependent on intellectual capital and innovation to generate productivity and growth (National Intelligence Council, 2008).

Spun another way, four metaphors for U.S. global health policy have been suggested: global health as foreign policy (with the goals of protecting trade, alliances, democracy, economic growth, and reputation as well as stabilizing countries); global health as charity (to fight absolute poverty); global health as investment (to maximize economic development); and global health as public health (to maximize the effect of good health) (Stuckler and McKee, 2008). While there might be potential conflicts between some of the above rationales (for example, how we reconcile U.S. trade interests with sound development strategies), defining these imperatives for action in terms of our national interest is critical to engaging broad-based support for global health policy and appropriation of funds.

University Mobilization

From a search of the affiliation of authors in the PubMed database,² the first academic institution to incorporate the term “global health” in its name was the University of California San Francisco in 1999 with its Institute for Global Health (Macfarlane et al., 2008). By 2009 the response to student and faculty interest in global health has resulted in the creation of pan-university institutes centers, and the like in 41 universities in the United States and Canada and the establishment of global health programs within existing departments and divisions in another 11 universities (see tables 1 and 2; a

² The PubMed database can be found at <http://www.pubmed.gov>. It is a service of the U.S. National Library of Medicine and the National Institutes of Health.

Table 1. Characteristics of University Global Health Activities (n= 52)

	Yes	No	Unknown
Interschool ^a	41	9	2
Institutional Investment	26	1	25
Education and research programs	44	6	2
Formal partnerships or exchange of students and research	41	8	3

Note: “Activities” include global health alliances, centers, departments, institutes, initiatives, offices, programs, and schools.

^a “Interschool” means that there is at least one global health collaboration, partnership, or opportunity (funding, research or travel) for students in more than one school within the university.

Table 2. Location of Interschool Global Health Activities (n= 52)

Region	Number
U.S. Northeast	14
U.S. Midwest	8
U.S. South	13
U.S. West	8
Washington, D.C.	3
Canada	6

complete listing appears in appendix B). Initially, these programs were established mostly in universities on the East and West coasts, but have now spread to all regions of the United States.

Essentially all the institutes and centers involve faculty and students from more than one school on campus, carry out both research and educational activities, and have partnerships with one or more institutions in the global “south.” All but one of these universities (Notre Dame) has a medical school on campus, which has had a tradition of carrying out international research, particularly in the area of HIV/AIDS and other infectious diseases. Many have received “hard money” from university budgets toward their activities. A few programs (University of Washington, Emory University, and Duke University) have received as much as \$30 million or more of spend-down or endowment resources over a five-year period. Most of the 11 global health programs undertake both education and research activities through partnerships with institutions abroad and involve more than one school, although this is less likely the case as

compared to the global health institutes or centers. Their budgets tend to be smaller and more tied to resources available from the host school rather than from the university.

Lessons Learned in Establishing Partnerships

In building their activities, universities have found that there are a number of principles essential for forming successful collaborative and sustainable North-South partnerships (Swiss Commission for Research Partnership with Developing Countries 1998; Costello and Zumla, 2000). First and foremost is mutual trust cultivated through a strong, personal, and evolving relationship rather than one imposed by the U.S. collaborating institution (Mayhew et al., 2008). This is achieved through the following: (1) shared decisionmaking on important programmatic and administrative matters; (2) fair financial arrangements that provide adequate compensation to host institutions for their costs incurred in their education and research programs; (3) joint responsibility for monitoring and evaluation of projects and publication of reports and peer review articles, and (4) a commitment by the U.S. partner to provide capacity building in areas where needed, such as data analysis, financial management, and grant proposal writing. When appropriate, efforts should be made to improve care and delivery of services in populations that are included in research or education projects. Certainly, the principle of beneficence must apply at a minimum; the host institution must not be left worse off as a result of the “North-South” collaboration (Crump and Sugarman, 2008).

To support the international activities of faculty and students, universities are finding that they need to strengthen their financial and administrative infrastructure in a number of key areas. For example, they have realized that effective policies, procedures, and resources related to health and safety are a core requirement for effective operations overseas and the protection of individuals. Universities are often establishing agreements with agencies that provide travel-related services, including assistance in securing visas and passports and negotiating best prices on airline tickets and accommodations. For international business operations, they appreciate the need to identify, assess, and prioritize legal, financial, operational, technological, and compliance issues. They have also had to address a wide range of international research issues, including those related to protecting human subjects and intellectual property in countries where their faculty and students are undertaking research. Many universities are establishing a formal risk analysis process by which they determine if they will consider participating in a particular overseas research project.

Universities have also realized that resources are required to provide information technology infrastructure, support, and services such as secure and reliable network connectivity, data security, and software. This includes construction of a Web site that can serve as a central “go to” source of information about international operations. Universities have found that many staff working in such critical areas as human resources and accounts payable have little to no overseas experience and benefit from specially designed training programs and visits to overseas sites where their faculty are heavily engaged. Such opportunities have been found to inspire a cultural

shift among staff in these essential support service areas toward greater awareness and innovation that can bolster and streamline international operations and transactions.

Establishing the Consortium of Universities for Global Health

Representatives from 20 U.S. and Canadian universities met at the University of California at San Francisco (UCSF) in September 2008 to discuss creation of a consortium of universities to allow them to share experiences in the development of their global health academic programs. The meeting was also attended by guests from 8 institutions from the South who have experience collaborating with institutions from the North on global health projects and representatives from the Bill & Melinda Gates Foundation and the Rockefeller Foundation who supported this meeting. The group agreed to create the aforementioned Consortium of Universities for Global Health, or CUGH, to provide a venue for North American universities to promote, facilitate, and enhance the growth of global health as an academic discipline. A steering committee that was formed to organize these meeting has now evolved into a board of directors for this consortium, which is currently seeking status as a 5013c organization. The consortium will have its first meeting on the National Institutes of Health (NIH) campus in September 2009, which will be attended by representatives from more than 50 universities. Five university presidents have accepted invitations to speak at the meeting and address how they plan to support development of global health academic programs at their universities. This development illustrates the great expansion and support for global health at American universities.

Challenges Ahead for Universities

Universities face at least five challenges in creating academically robust global health programs, particularly in light of the current economic crisis in the United States, including universities, all of whom have serious budgetary shortfalls.

1. The first challenge is an academic one. Global health leaders at universities must convince colleagues working in various schools and departments as to the validity and sustainability of global health as an academic field. The fact that global health is interdisciplinary in content and approach readily allows faculty from various disciplines to work in the field and is one of its attractions. There is in fact no single global health program today that cannot be solved without the intellectual input of those working in multiple disciplines. On the other hand, because it is interdisciplinary, faculty working in global health can face difficulties in being promoted within their own disciplinary departments. Provostial leadership that places value in interdisciplinary scholarship is essential to addressing such problems.
2. The second challenge is defining and developing reliable career paths for students. Many students initially engage in the field of global health as undergraduates, where they are exposed to the biological basis of disease, the social, economic, political, and environmental

determinants of health and health disparities, and the components and consequences of globalization. They also take foreign language courses that can give them essential skills for working in their countries of choice. For the most part, students then pursue practice, policy, or research-related careers and enroll in a graduate or professional degree program either immediately after graduation or after working for a few years. This provides them disciplinary training in one or more fields and will help them contribute to interdisciplinary endeavors. Many rightly seek experiences during their training working with underserved populations in low-income areas to gain experience and credibility in the field. Those pursuing careers in global health research often pursue doctorates in one of the natural or social sciences. One area requiring particular attention is the need for training of scholars in how to apply research findings into policy and practice, also referred to as “implementation science” (Madon et al., 2007).

3. A third challenge is making global health a truly global field geographically. Macfarlane (2008b) has rightly raised the point that the term “global health” has become a means to brand the global prestige of an academic institution in the North by strengthening its capacity to work in the South in order to fulfill the expectations of students, offer opportunities to faculty, and attract new and large sources of funding. She found that 87 percent of 434 papers published in the PubMed database as of May 2008 with “global health” and “university” or “institute” or “college” or “school” in their affiliation were from North American institutions (Macfarlane, 2008b). As a result, global health careers are often framed as being for those from developed countries, while their collaborators from low- and middle-income countries are not seen as “working in global health.” Academic institutions in these latter countries should be encouraged to develop global health educational and research programs that address health disparities and train future leaders who are able to tackle health priorities and challenges wherever they exist. The principles of solid North-South partnerships described above will be important in this process. When programs in global health develop in institutions in Asia, Africa, and Latin America, it will be important to consider appropriate career pathways for students and faculty as well.
4. A fourth challenge is determining benchmarks and ways to measure the impact and success of programs. Traditional measures such as the number of students enrolled in various degree programs, external grants received, and papers published in high-impact journals will no doubt be important to university administrators. Global health programs will also likely measure the number of faculty working on projects abroad, the number of countries where they are working, and the number of projects being undertaken. They will also seek to document the career paths of their graduates to help them design their educational programs, find opportunities and mentorship for students and graduates, and raise external resources. However, it will also be important for them to develop a set of indicators that reflect how these programs are “making a difference” to the populations among which they are working. These will require the development of methods and indicators by clinicians and social scientists who are familiar with the cultural norms of these populations. In addition, it may

require the inclusion of a translational research component in grant applications and proposals to ensure that the ultimate goals of the research and its benefit to the community are understood from the beginning of the research process.

5. The fifth, and perhaps most urgent challenge, is maintaining the exciting momentum for global health under the current global economic downturn. A concerted effort by university experts is needed to keep the global health agenda “alive”—for example, by providing analysis and documentation of the consequences of withdrawing investment in this field. The recent IOM report (IOM, 2008) noted that in 2008 the U.S. government funding for health-related foreign assistance was more than \$7.5 billion, an all-time high. Most of this has been driven by new models of assistance, such as the Global Fund to Fight AIDS, TB and Malaria, the President’s Emergency Plan for AID Relief, or PEPFAR, and the President’s Malaria Initiative. So far, the United States and most donor countries claim they will maintain support for global health and development through 2009 and the recent G-20 commitment of \$1.1 trillion for IMF-led programs for emerging market economies and poor countries is promising (G-20 Communiqué, 2009). However, history tells us that, when such an economic crisis occurs, it is the poorest and most vulnerable, particularly women and children, who suffer the most. Recent projections are that there will be another 90 million persons going into poverty by the end of 2010 (Seager, 2009).

The challenge now is preventing the current economic crisis from becoming a social and health crisis and setting back the great gains that have been made in reducing mortality and mortality throughout the world. Good arguments can be made to maintain our level of commitment to global health—from advancing our security interests to strengthening our political influence, to expanding our international markets, to improving our scientific discoveries, and to promoting health as a human right. But if the economic situation continues to deteriorate, the United States and other governments will have a tough time convincing their voters that it is vital to spend money reducing mortality and morbidity and strengthening health systems abroad while domestic unemployment lines lengthen and homelessness escalates (Garrett, 2008; Garrett, 2009).

A substantial decline in global health expenditures by the U.S. government as well as by industry (facing decreasing profits) and foundations (with their decreasing endowments) would no doubt lessen available resources and opportunities for universities. Only the Bill & Melinda Gates Foundation has pledged to maintain its current levels of support, but its funding is directed to specific program areas (e.g., HIV/AIDS, tuberculosis, malaria, childhood illnesses) and not toward chronic diseases or the strengthening of health systems critically needed to deliver effective interventions (Gates, 2009).

Policy Implications

There is now an emerging new constituency for global health centered in these proliferating university programs. It has drawn support from different directions—students, university

leaderships, foundations, the U.S. government; created new overseas partnerships with counterparts on every continent; and brought about a new generation with skills and knowledge in global health seeking employment in many sectors of the field. The question is how to build upon these gains, sustain them, and make use of this “university” voice to benefit the future development of U.S. policy approaches to global health. The U.S. Congress and the Obama administration face a myriad of economic and budgetary challenges at home. The election of President Obama has, however, raised expectations throughout the world that the United States will now give greater support to the world’s impoverished populations. As noted above, there are strategic, political, scientific, and humanitarian reasons for doing so. Soft power diplomacy through global health can help raise our country’s stature and reputation abroad, and universities can play a critical role in making this happen (Armitage and Nye, 2007).

We propose here four means by which global health centers in universities could be supported to participate in this process in the areas of research, education and training, and service.

1. Universities require more resources to undertake global health research and research training programs. The NIH budget has been essentially flat since 2003 (McCarthy, 2007). The American Recovery and Reinvestment Act committed \$10 billion of stimulus funds to the National Institutes of Health, \$8.2 billion of which is to be directed toward scientific research priorities. Of the latter amount, \$7.4 billion will go to institutes, centers, and to a common fund used to promote cross-cutting initiatives (i.e., pan-NIH). Another \$800 million will be directed to the Office of Director to support science-related activities. The NIH budget for FY 2009 increased funding for NIH by 3.9 percent (National Institutes of Health, 2009). A portion of these stimulus and FY 2009 budgeted funds should be directed toward supporting global health projects. One way to do this would be to allocate a substantial amount of funds to the Fogarty International Center, whose mission is to strengthen cooperation between U.S. universities and those in low- and middle-income countries. Its Global Health Framework Program, which has helped to create administrative frameworks that bring together multiple schools at universities to develop multidisciplinary curricula and other related programs in the field of global health, has been underfunded and unable to provide universities anywhere near the support they need in this critical area.³ Funds could also be allocated to programs in specific NIH Institutes that would support research in new global health priority areas such as cardiovascular diseases, diabetes, and stroke. In addition, the American Recovery and Reinvestment Act committed \$3 billion to the National Science Foundation. A portion of these funds could be designated for support of programs that have bearing on global health.
2. Universities could play a more substantial role in federally supported global health programs at country level in such areas as health manpower development to strengthen health systems, monitoring and evaluation, and operations research. On July 30, 2008, H.R. 5501, the Tom Lantos and Henry J. Hyde *United States Global Leadership against HIV/AIDS, Tuberculosis,*

³ For more information, see http://www.fic.nih.gov/programs/training_grants/framework/.

and Malaria Reauthorization Act of 2008 was signed into law. This legislation expanded the U.S. government commitment to its largest global health programs for five additional years (from 2009 through 2013) by authorizing up to \$48 billion as follows: \$39 billion for PEPFAR bilateral HIV/AIDS programs and U.S. contributions to the Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria, \$5 billion to the President’s Malaria Initiative, and \$4 billion for bilateral programs to fight tuberculosis, which is the leading killer of Africans living with HIV. It is not known at this time how much funding will be appropriated for this program. However, the moral and ethical imperative of providing antiretroviral therapy for the 2 million persons who are currently receiving treatment through this program would require that a substantial of the authorized funds be appropriated.

3. Following the recommendations of a 2005 IOM report (IOM, 2005), Senator William Frist and four other senators introduced legislation to establish the Global Health Corps. Its premise is based on that of the Peace Corps—namely, sending young physicians, nurses, public health specialists, biomedical engineers, and other allied health personnel abroad to serve side by side with workers in partner countries to help fill critical, short-term gaps in health manpower while building long-term capacity. The legislation has never been considered though support for this idea remains strong. There are several alternative approaches, many of which could actively involve universities—for example, the creation of new networks that link American universities with overseas partners and have as their prime objective the building of capacity to train local staff in key areas where the United States is making its largest investments in global health.
4. The U.S. Department of Education’s Title VI and the Fulbright-Hays programs funded under the Higher Education Act of 1965 form a comprehensive approach to providing international education and form the infrastructure of the federal government’s investment in an international service pipeline (U.S. Department of Education, 2008).⁴ Increased support could be provided to these two programs specifically in the area of global health. The former primarily provides domestic-based foreign language and area studies training, research, and outreach while the latter supports on-site opportunities abroad to develop these skills. Title VI currently supports 10 programs, including National Resource Centers (NRCs), which form the backbone of the language and area expertise on campuses. Fulbright-Hays supports four programs, including the Doctoral Dissertation Research Abroad (DDRA) program, which allows doctoral students to conduct overseas research in modern foreign languages and area studies for periods of 6 to 12 months, and the Faculty Research Abroad (FRA) programs, which allow scholars who have already acquired a level of expertise in an area or language to deepen and expand this knowledge by conducting research abroad for 3 to 12 months (U.S. Department of Education, 2005). Congressional report language could instruct the

⁴ For more information, see http://www.ncccs.cc.nc.us/Resource_Development/docs/TITLEVIofthehigher.pdf.

Department of Education to make support for global health activities a priority activity for NRCs and specify global health as an allowable research topic under the DDRA and FRA programs.

Summary

Historically, networks of American universities have advanced U.S. interests significantly in key focal areas—e.g., development in the 1950s and 1960s—and generated major gains with partner institutions in developing nations while consolidating a broad constituency across the United States. We have documented here the growth of global health at U.S. universities and outlined how they are uniquely positioned to be major players in shaping the emerging field of global health, solving some of the most pressing health issues facing humanity today, while advancing the goals and interests of the United States. As it stands, we are not on target to meet any of the Millennium Development Goals in Sub-Saharan Africa by 2015 (Beaglehole and Bonita, 2008), and new strategies are needed to address growing disparities that are exacerbated by the current economic crisis. By enlisting multiple disciplines to unravel the complex determinants of health, by harnessing the passion and energy of students who benefit from formative global health education and service opportunities, and by being on the forefront of scientific discovery and health care delivery, universities are poised to change the landscape of global health and ultimately improve the human condition. To this end, the U.S. Congress and the administration have an opportunity to reshape the global health landscape and invest in universities as major players in global health.

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Appendix A. Differences between Global, International, and Public Health

Global Health	International Health	Public Health
Focuses on issues that directly or indirectly impact health but can transcend national boundaries	Focuses on health issues of <i>other</i> countries other than one's own, especially those of low and middle income	Focuses on issues that impact the health of the <i>population</i> of a particular community or nation
Development and implementation of solutions often requires global cooperation	Development and implementation of solutions usually involves binational cooperation	Development and implementation of solutions usually does not involve global cooperation
Embraces both prevention in populations and clinical care of individuals	Embraces both prevention in populations and clinical care of individuals	Mainly focused on prevention programs for populations
Health equity among nations and for all people is a major objective	Seeks to help people of other nations	Health equity within a nation or community is a major objective
Highly interdisciplinary and multidisciplinary within and beyond health sciences	Embraces a few disciplines but has not emphasized multidisciplinary	Encourages multidisciplinary approaches, particularly within health sciences and with social sciences

Source: Koplan, J.P., T.C. Bond, and M.H. Merson et al. (2009). "A Definition of Global Health: New Field or New Name?" *Lancet*, in press.

Appendix B. Global Health Activities

University	Global Health Activity Name	Interschool	Institutional Investment	Education and Research Programs	Formal Partnerships or Exchange of Students and Research	U.S. Region
Boston University	Global Health Initiative	Yes	Yes	Yes	Yes	Northeast
Brown University	International Health Institute	Yes	Unknown	Yes	Yes	Northeast
Case Western Reserve	Center for Global Health and Diseases	Yes	Unknown	Yes	Yes	Midwest
Columbia University	Center for Global Health and Economic Development	Yes	Unknown	Yes	Yes	Northeast
Cornell University	Global Health Program	Yes	Yes	Yes	Yes	Northeast
Dartmouth College	Dartmouth Initiative in Global Health and Healthy Development	Yes	Unknown	No	Yes	Northeast
Duke University	Duke Global Health Institute	Yes	Yes	Yes	Yes	South
Emory University	Emory Global Health Institute	Yes	Yes	Yes	Yes	South
George Mason University	Department of Global and Community Health	No	Yes	No	No	South
Georgetown University	Linda and Timothy O'Neill Institute for Global and National Health Law	Yes	Yes	Yes	No	Washington, D.C.
George Washington University	George Washington Center for Global Health	Yes	Unknown	Yes	No	Washington, D.C.
Harvard University	Harvard Initiative for Global Health	Yes	Yes	Yes	Yes	Northeast
Johns Hopkins University	Johns Hopkins Center for Global Health	Yes	Yes	Yes	Yes	Northeast

University	Global Health Activity Name	Interschool	Institutional Investment	Education and Research Programs	Formal Partnerships or Exchange of Students and Research	U.S. Region
Loma Linda University	Department of Global Health	No	Yes	No	Yes	West
McGill University	Global Health Programs of McGill University's Faculty of Medicine	Yes	Unknown	Yes	Yes	Montreal, Canada
Mount Sinai	Global Health Center	Yes	Unknown	Yes	Yes	Northeast
New York University	New York University Master's Program in Global Health	Yes	Unknown	Yes	Yes	Northeast
Northwestern University	Feinberg School of Medicine Global Health Program	No	Yes	Yes	Yes	Midwest
Ohio State University	Office of Global Health Education at Ohio State	No	Unknown	Yes	Yes	Midwest
Princeton University	Center for Health and Wellbeing	Yes	Yes	Yes	Yes	Northeast
Simon Fraser University	Graduate Program in Global Health	Yes	Yes	Yes	No	British Columbia, Canada
Stanford University	International Health at Stanford Initiative	Yes	Unknown	Yes	Yes	West
Tulane University	Center for Evidence-Based Global Health	Yes	Unknown	Yes	Yes	South
University of Alabama, Birmingham	Sparkman Center for Global Health	Yes	Yes	Yes	Yes	South
University of Alberta	Global Health Initiative	No	Unknown	No	No	Alberta, Canada
University of British Columbia	Center for International Health	Yes	Unknown	Yes	Yes	British Columbia, Canada

University	Global Health Activity Name	Interschool	Institutional Investment	Education and Research Programs	Formal Partnerships or Exchange of Students and Research	U.S. Region
University of California, Berkeley	Berkeley Alliance for Global Health	Yes	Yes	Yes	Yes	West
University of California, Los Angeles	UCLA Global Health Training Program	Yes	Unknown	Yes	No	West
University of California, San Francisco	UCSF Global Health Sciences	Yes	Yes	Yes	Yes	West
University of Chicago	University of Chicago Global Health Program	Yes	Yes	Yes	Yes	Midwest
University of Colorado, Denver	University of Colorado Center for Global Health	Yes	Unknown	Yes	Yes	West
University of Maryland	Global Health Resource Center	Yes	Unknown	Yes	Yes	South
University of Michigan	University of Michigan Center for Global Health	Yes	Yes	Yes	Yes	Midwest
University of Minnesota	Center on Global Health and Social Responsibility	Yes	Unknown	Yes	Yes	Midwest
University of North Carolina, Chapel Hill	Institute for Global Health and Infectious Diseases	Yes	Yes	Yes	Yes	South
University of North Florida/ Brooks College of Health	Center for Global Health and Medical Diplomacy	No	Unknown	No	No	South
University of Notre Dame	Eck Family Institute for Global Health and Infectious Diseases	Yes	Unknown	Yes	No	Midwest
University of Ottawa	Center for Global Health	No	Unknown	No	Yes	Ontario, Canada

University	Global Health Activity Name	Interschool	Institutional Investment	Education and Research Programs	Formal Partnerships or Exchange of Students and Research	U.S. Region
University of Pennsylvania	The Global Health Programs Office	Yes	Yes	Yes	Yes	Northeast
University of Pittsburgh	Graduate School of Public Health	Yes	Yes	Yes	Yes	Northeast
University of Southern California	USC Institute for Global Health	Unknown	Yes	Unknown	Unknown	West
University of South Florida	Department of Global Health	Yes	Yes	Yes	Yes	South
University of Texas	PAHO/WHO Collaborating Center for Training in International Health	Yes	Unknown	Yes	Yes	South
University of Toronto	Center for International Health	Yes	Unknown	Yes	Yes	Ontario, Canada
University of Virginia	UVA Center for Global Health	Yes	Unknown	Yes	Yes	South
University of Washington, Seattle	Global Health Resource Center/Department of Global Health	Yes	Yes	Yes	Yes	West
University of Wisconsin, Madison	UW Center for Global Health	Yes	Unknown	Yes	Yes	Midwest
Washington State University	School for Global Animal Health	No	Yes	Yes	Yes	Northwest
West Virginia University/School of Medicine	Global Health Program at the Robert C. Byrd Health Sciences Center	No	Unknown	Unknown	Unknown	
Vanderbilt University	Institute for Global Health	Yes	Yes	Yes	Yes	South
Yale University	Global Health Initiatives	No	Unknown	Yes	Yes	Northeast
Yeshiva University	Einstein Global Health Center	Unknown	Yes	Yes	Unknown	Northeast

Note: We would like to acknowledge Tom Quinn and Claudette David from the Johns Hopkins Bloomberg School of Public Health who collected the data presented in this table.