



By Karen Leggett

**IT WAS ONLY THE SECOND WEEK** of Meredith Dixon's clinical rotation at the Albert Schweitzer Hospital in Lambaréné, Gabon. She saw a four-year-old girl dying of AIDS for whom no treatment was available because the hospital had medication only for HIV positive pregnant women. Dixon felt compelled to stay a full year beyond her three-month fellowship to investigate the feasibility of a pediatric HIV treatment program. At least one child began treatment before Dixon returned to the University of Pittsburgh in April.

"Treating children with medications for HIV seemed obvious," explains Dixon, "but given the lack of personnel, the work load and time constraints, costs of important tests, missing and/or broken equipment, and the differences in patient population, the idea is not simple at all. I'll never back down from my view that it is unethical to

# Teaching Medicine Without

Medical schools are  
incorporating international  
experiences for future doctors.



Tanyaporn Wansom, student at University of Michigan Medical School and Gerald R. Ford School of Public Policy, here in Bangkok in March at an International Women's Day March. She is holding a sign advocating for antiretroviral medications to be covered under national health insurance for HIV+ patients.

**EDITOR'S NOTE:**  
*This article is the final installment in an occasional feature series on internationalizing graduate programs. The first article was "Educating for Global Business" on the internationalization of M.B.A. programs in the September/October 2007 issue; the second was "Making a World of Difference" on the internationalization of graduate social work programs in the March/April 2008 issue; the third was "Planning Tomorrow's Urban World" in the July/August 2008 issue; the fourth was "Nursing Goes Global" in the November/December issue; and the fifth was "Legal Minds" on the internationalization of law school curricula in the January/February 2009 issue.*

not treat these HIV+ children with antiretroviral medications, but I do see the problem in more complex terms than when I came charging in here, demanding their treatment."

After his third year of medical school, Joe Donroe

became a Fogarty Scholar in Peru, studying the risk factors for road traffic injuries in children in Lima—and he met his wife, also a Fogarty Scholar. (The Fogarty International Clinical Research Scholars Program is for U.S. and developing country advanced degree students in the health sciences; the program offers one year of mentored clinical research training at a site in the developing

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world.) The experience confirmed Donroe's interest in international work: "Can I live that far away from a comfortable life in the U.S.? The answer is 'yes,' and fortunately, I found a wife for whom the answer is 'yes' as well."

Cholpon Imanalieva was already a practicing pediatrician in her native Kyrgyzstan when she came

to Johns Hopkins University as a Humphrey Fellow. (The Hubert H. Humphrey Fellowship Program, sponsored by the U.S. Department of State, brings experienced professionals from designated countries throughout the to the United States for one year for professional development opportunities). She wanted to learn strategies to improve the health system in

BACKGROUND: ISTOCKPHOTO



# Teaching Medicine Without Borders

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her country; she returned to Kyrgyzstan to become a health and nutrition specialist for UNICEF, with a “new feeling of responsibility on a global level. ... Now countries for me are not just territories on a map, but real people, real friends.”

The impact of the rapid internationalization of medical education is felt personally and globally. In 1984 approximately 6 percent of U.S. medical students participated in overseas clinical activities, growing to 15 percent in 1989 and 39 percent in 2002, according to the Association of American Medical Colleges (AAMC). By 2007, 96 of the 126 members of the Association offered elective international rotations.

## Global Health on the Agenda

Concern about international health began with the worldwide cholera epidemics of the mid-nineteenth century. In 1902 collaboration to deal with yellow fever led to the precursor for the Pan American Health Organization. In 1951 a conference of medical students in Europe turned into the International Federation of Medical Students' Associations, which now records some 8,000 student exchanges in 85 countries every year.

The current era of accelerated growth in global medical education is rooted both in the “flat world” phenomenon characterized by Thomas Friedman but also in this generation of medical students. “Global health captures the imagination of young people today as civil rights did in the 1960s and 70s,” says Pierce Gardner, M.D., consultant to the International Clinical Research Training Programs, Fogarty International Center, National Institutes of Health. “If you are looking for a place to focus your idealism, the health disparities before us every night are a moral issue for young idealistic people and they feel they can make a difference.” Gardner also credits the funding and attention to global health brought by the Bill and Melinda Gates Foundation, popular stars like Bono, and the well-publicized work of Paul Farmer in Haiti.

The push to expand overseas opportunities and global health courses often starts with students. When the AAMC was ready to publish a directory of international programs online, the Universities of Michigan and Massachusetts were initially reluctant to participate because they were already inundated with requests from interested students. Tanyaporn Wansom chairs the Global Health Action Committee for the American Medical Students Association, overseeing six national coordinators with their own

programming initiatives, online courses developed by students for students, advocacy training, and leadership institutes. Soon after speaking with *International Educator*, Wansom was off to South Africa as part of a collaborative effort between the University of Michigan and the University of Cape Town. She was to participate in a workshop on data analysis for South African ministry officials and also to speak to the South African Medical Students Association.

The explosion of overseas opportunities for medical students also reflects both the growing synergy between medicine and public health as well as the distinction made between “global” and “international” health, as described by the Global Health Education Consortium (GHEC):

*‘Global Health’ relates to health issues and concerns that transcend national borders, class, race, ethnicity, and culture.*

*‘International Health’ relates more to health practices, policies, and systems in countries other than one’s own and stresses more the differences between countries than their commonalities.*

GHEC is itself a sign of the acceleration of global health education: a consortium of health care educators in the United States, Canada, Central America, and the Caribbean dedicated to improved education and training of the global health workforce. The GHEC Web site is a vast repository of resources, including teaching modules on everything from tuberculosis and microbicides to planning a global health elective and social marketing in Central Asia, guidebooks on developing global health curricula and choosing a residency overseas, and—soon to come—a global health education wiki to promote online collaboration. An active GHEC member, Thomas Norris, M.D., at the University of Washington School of Medicine, says GHEC is working on standards that would require medical schools to improve the quality of their global health offerings.

Norris says the University of Washington created its own Department of Global Health as a natural outgrowth of the extensive research interests in the Seattle area, especially in vaccines, malaria, and HIV. Medical students may now spend the summer after their first year in an overseas teaching hospital followed by a 6–12 week elective block during their fourth year. Nelson says the impact of even a short stay can be life-changing. One student who had planned an academic career returned from Africa determined to focus on international epidemiology.

## Hallmark Is Variability

The array of international choices for medical students is daunting. “The hallmark of international medical education is variability,” says John Norcini, Ph.D., president of the Foundation for the Advancement of International Medical Education (FAIMER). The options range from cultural awareness programs that last a few weeks, to health brigades providing treatment and screening in remote villages, to independent and collaborative research projects lasting several months or more. Students may choose to be affiliated with their own medical school; an honorary fellowship program like Fogarty, Albert Schweitzer, or Humphrey; or a nonprofit organization. “There are more schools offering programs and more programs in each school,” says AAMC’s Senior Director M. Brownell Anderson.

Child Family Health International (CFHI) places health science students in health projects designed by local communities in India, Latin America, and Africa. A record 800 students were involved in CFHI projects in 2008. CFHI works with local doctors and nurses who are committed to improving health care in their own countries. Executive Director Steve Schmidbauer recalls being taken to a women’s prison in La Paz, Bolivia, where children under the age of six routinely stayed in the jail with their mothers. The children were receiving no education, no extra food, and no health care. Virtually all had parasites or other infections. CFHI obtained a grant to provide health care and social workers have helped to identify extended family members with whom some of the children could live. The local CFHI Medical Director, Cecilia Uribe de Chavez, M.D., wrote online that “the major impact of the project has been to raise consciousness in the community by letting people know that these kids actually exist!”

U.S. students of medicine, nursing, public health, osteopathy, and other health sciences apply to specific CFHI programs like the La Paz Community Health Initiative at various levels in their medical education. Schmidbauer says he looks for students who are able to reflect on why they are seeking an overseas experience and aren’t just padding a resume or checking off the next thing on their list. “We have to be careful about students who may have no idea or no motivation to work in a resource-poor setting ... This is

about learning a level of respect and the ability to interact with people of all different backgrounds.”

Schmidbauer says CFHI is also trying to address a resurgence of the “ugly American traveling abroad.” Student Jacqui Shaw wrote an article for the CFHI journal leading with the fact that “unprofessional behavior is the most common problem CFHI experiences with participants in overseas electives,” including ignoring rules set by host families, not attending or being late to clinic, or showing up for a clinic in shorts or sandals just because the village happens to be on a beach. Shaw reminded readers that “your presence, your attitudes, and acts may continue to be remembered and remarked upon in your host country, for better or for worse, long after you leave.”

CFHI projects focus on primary care. The Fogarty International Clinical Research Scholars Program (FICRS) seeks to harness the potential of outstanding graduate students as global health researchers. Initiated in 2003, the first cohorts of scholars have included 128 Americans from 54 universities and six health science fields as well as 123 foreign scholars from the foreign site. Each American is paired with a foreign scholar to help build capacity at the local site. Each site has a menu of research, mostly funded by the National Institutes of Health, such as delivering AIDS care in Haiti or treating cholera and diarrhea in Bangladesh. Students assume leadership for a portion of the research and may be able to publish some of their work. “It’s a spectacular credential for residency applications,” says Gardner.



PHOTO COURTESY OF TANYAPORN WANSOM

**Tanyaporn Wansom, student at University of Michigan Medical School and Gerald R.Ford School of Public Policy, with nurses at Planned Parenthood in Chiang Mai, Thailand, where she was a volunteer.**



# Teaching Medicine Without Borders

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Simon Luzige knew he wanted to be a doctor when he was a 13-year old boy in Uganda. As a post-graduate student in internal medicine at Makerere University in Kampala, he became a Fogarty Scholar and learned he could both see patients and conduct research. “My clinical interest is in respiratory diseases and my research interest is in tuberculosis...I intend to equip myself with more skills to study these diseases in Uganda.” Luzige is active in a Uganda Fogarty Alumni Association that encourages networking and supports post-training activities, including community service.

Evelyn Hseih, an American medical student at Tufts University, had become interested in migration and marginalized populations while volunteering one summer at Bellevue Hospital in New York. Hseih, whose parents were raised in Taiwan, translated Mandarin Chinese for immigrants interacting with the New York health care system. Soon she was taking a year off from medical school to earn a master’s in public health. She wanted to put those public health concepts into practice with an overseas program that balanced “adventure plus structured learning experiences.” Hseih became a Fogarty Scholar in Peru studying migrant sex workers from Ecuador. She was able to present a paper at a conference in France and feels she was able to raise awareness in local clinics about migrant worker issues. Hseih met another Fogarty Scholar in Peru—Joe Donroe—who would later become her husband. “We have both concluded that we would like to spend some time abroad.”

FICRS is looking for scholars with “qualities predictive of success in clinical research—the ability to stick with something to the end and analyze something,” according to Gardner, who also looks for candidates’ coping skills. Donroe noted that some students head overseas with expectations that aren’t realistic for the developing world. “Students end up in a lab in remote Africa where supplies and mentoring are limited. Their experience wasn’t so good because they were focused on research and less willing to take up the whole experience.”

The University of Massachusetts Medical School (UMMS) has one of the largest global medicine programs, offering options in clinical rotations, language/cultural immersion, and research. The UMMS Web site provides a very thorough handbook, including a self-assessment to help students clarify their goals. As everywhere, the number of interested students has

grown dramatically, says Michael Godkin, director of the International Medical Education Program. Originally, this state university was interested in training doctors to be more culturally aware when treating Massachusetts’ diverse population, and the state still provides stipends for selected students.

The UMMS began its formal international program in 1995. Now 30 clinical students go abroad each year, 30 pre-clinical students engage in language training or community service projects, and 30 foreign medical students come to UMMS for two months of clinical rotations. Medical students might join a brigade in Guatemala or the Dominican Republic, where one project treats Haitian migrant workers and one student developed a medical record-keeping system. UMMS also offers a Summer Research Fellowship Program in which student projects have focused on the natural healing practices of the Masai medicine man in Tanzania and the health of Albanian refugees in southern Italy.

The University of Cincinnati offers a four-week international health elective to fourth-year students that includes two weeks of classroom work and two weeks on a medical brigade in a remote community, usually in Honduras or Tanzania. “We are training the adaptable physician,” says International Health Program Director Doug Smucker, M.D., “who will be comfortable in a suburban practice or a clinic in Honduras or an Indian clinic in Arizona.” In Honduras, UC works with Shoulder to Shoulder, a nonprofit organization, which started in Cincinnati and now includes a grassroots mirror organization in Honduras called Hombro a Hombro. There might be 30–40 people in a single brigade, including medical residents as well as students in medicine, nursing, pharmacy, and even anthropology. In addition to working at a clinic overseen by local primary care physicians, students visit remote elementary schools to screen children for anemia, malnourishment, and other conditions. Although UC sends a brigade only twice a year, there is some university sending a brigade every month so service is continuous.

## Twins and Partners

Some U.S. medical schools work directly with a medical school overseas, often called twinning. In 1989 Indiana University (IU) established a partnership with Moi University in Kenya when the Kenyan school was brand new and had only four faculty members. “We go

into this profession believing we can change the world,” says Associate Dean Robert Einterz, M.D., “We do that by changing institutions.” IU developed curriculum for Moi University and is now helping to develop its postgraduate medical education. In 2000 the two universities created AMPATH, the Academic Model for Providing Access to Health care, which now treats more than 70,000 HIV+ patients at 18 sites in urban and rural Kenya. AMPATH is building its own partnerships now, with the Purdue School of Pharmacy and George Washington School of Public Health.

IU medical students may go to Moi after their first year of medical school or for a two-month clinical rotation after their third year. There are six to eight IU students at MOI at any time. “I want students who will be more compassionate and altruistic and more aware of the social determinants of disease,” says Einterz. He seeks students who are flexible, willing to question their own assumptions and tolerate uncertainty.

Kenyan medical students come to IU for two-month rotations and IU hosts postgraduate students for four- to six-month rotations in pediatrics and other specialties. Echoing colleagues at other institutions, Einterz says it’s important to offer postgraduate education in a manner that does not encourage brain drain—the Kenyan

students are required to return to Moi and do not receive academic credit for their work in the United States.

Weill Cornell Medical College has created a branch of itself in Qatar. With funding from a private foundation organized by the Emir of Qatar, Cornell President David Skorton proudly announced that the “Weill Cornell Medical College became the first U.S. medical school to offer an M.D. degree overseas.” One of a group of U.S. universities with branches at Education City in Doha, Qatar, Weill Cornell Medical College–Qatar (WCMC-Q) graduated 15 students from seven countries in 2008. All but two have residencies in the United States, but Dean Daniel Alonso, M.D., says “We are going to do everything possible to bring them back to Qatar after postgraduate training.” The school’s literature promotes itself as “pioneering the education of Qatar’s first home-grown physicians” and also pioneering university-level coeducation. The Qatar Foundation is now building a teaching hospital that will one day host U.S. students for regular rotations.

Weill Cornell has taken a risk with its Qatar venture, but a very calculated one in the eyes of Medical College Dean Antonio Gotto: “One of our criteria in going into the program was that Qatar had to accept the principles of freedom and open admission and Weill

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Cornell would make the academic decisions.” Gotto insists that the education in Qatar is “equivalent in every sense in terms of the quality of education,” but WCMC-Q is not accredited. The AAMC sees that as a major challenge, but Gotto says “we have been encouraging the Liaison Committee on Medical Education (cosponsored by the AAMC and the American Medical Association) to accredit an overseas institution if they are a branch of the U.S. institution....We have had to monitor quality in Qatar just as in the U.S., where we are already required to establish quality in multiple teaching hospitals.”

## Foreign Students in the United States

Foreign doctors also have a chance to study in the United States later in their careers through the Hu-

bert H. Humphrey Fellowship Program. Started in 1978, there are now 3,700 alumni fellows in 156 countries. Mid-career professionals come to 15 major U.S. universities to work and study for a year. Johns Hopkins Schools of Medicine and Public Health originally opened its doors to Humphrey Fellows to train leaders in fighting drug abuse. After the first 10 years, says Program Coordinator Wallace Mandell, 75 percent of the alumni were sitting on national councils dealing with drug abuse. Now the Johns Hopkins program focuses on building leadership generally, seeking candidates who have “demonstrated they can win the confidence of colleagues and superiors as they provide a bridge to the knowledge they have acquired.” Hameed Khedhra, a Bahraini nurse and 2007 Humphrey Fellow at Johns Hopkins, appreciated the “opportunities for cultural exchange and

# The Donkey & the Candle

**U**NIVERSITY OF MASSACHUSETTS Medical School alumna Kristin Lynch wrote a compelling online vignette of her clinical rotation in a small, remote village in Ecuador in 1998:

“Three of us hiked the half hour up the mountain to arrive at our destination, a one-room mud brick house, with a thatched roof and not a single window... I asked for a lamp or a light and was brought a candle. I noted that the boy was covered in places with a green salve and the leaves from a certain plant.

I informed the family that the boy was gravely ill and needed to go to Quito to have emergency surgery; they had a fear of modern hospitals that was unshakable, because, in their experience, everyone who went to the hospital died. After a more detailed explanation of the boy’s condition, the family consented to turn him over to my care.

The issue then became one of transportation. Their neighbors had a fine surefooted donkey. I was delighted

when the boy returned to us the following week to complete his convalescence under my care.

When my work was finished, I felt for the first time in my medical career that I had truly done something deserving of my title “Doctor.” In the ultimate example of continuity of care, I was sent back to remove his stitches at home, by the same candle light I first examined him under.”

Kristin Lynch is now a pediatrician in northern Utah, where she has just become Medical Director for the Women and Newborn Center of Intermountain Medical Center. “In my experiences in India, Ecuador, and Guatemala,” Lynch writes now, “I noted that parents would come to the outpatient

clinic of the local hospital, wait patiently in line with all the other mothers, none of whom had appointments, and eventually get their turn with the physician ... So it is not a stretch to understand that they try to access the American medical system in the manner in which they are accustomed in their home countries ... Overall, my international experience was invaluable to me in that it has certainly increased my ability to provide more empathic and ultimately effective care to my patients from minority backgrounds.”





# Teaching Medicine Without Borders

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dialogue not only with the people of the U.S. but also with people from other nations.” Khedra also praised the program’s “flexibility to accommodate each Fellow’s personal and country objectives.”

Egyptian research pediatrician Manal Koura was a 2004 Humphrey Fellow at Tulane University and is now developing a new master’s program in health care management at King Faisal University in Saudi Arabia. She is actively implementing some of the teaching methods she learned, “especially group projects and peer evaluation.” Koura enjoyed the chance to live and learn away from the cultural norms of her native Egypt, although she noted with some skepticism that the “United States government and citizens always feel they have a responsibility for the whole world.”

That sense of responsibility can easily become hubris, leading Doug Smucker to caution his University of Cincinnati students before they head overseas: “Don’t assume you have all the answers. Go with a sense of humility. Expect adventure. Leave pity at the door, and open your eyes to what you can learn.”

Tanyaporn Wansom, a Thai-American medical student, says she saw local physicians in Thailand depending on their own lab work and clinical exams rather than all the medical testing typically used in the United States. Wansom’s parents—a physician and a nurse—emigrated to the United States where Wansom was raised; now she wants to “reverse the brain drain and go back to live in Thailand. We do have an obligation to serve globally. I’ve had a lot of privileges and I’d like to give something back.”

## Where to Start

Many university programs in international medicine emanate from a desire to give something back. N. Lynn Eckhart, M.D. wrote in the *Annals of Family Medicine* in 2006 that “We are moving from a travel experience to one for which students are prepared, goals are set, objectives are written, and evaluations are designed.” Weill Cornell’s Dean Gotto enthusiastically proclaims that “the best exports the U.S. can make to the world are education and medicine,” but entering the field demands careful consideration.

Interested faculty and mobilized students can help win administrative support. “If students say it’s important it will happen,” says Michael Godkin at the University of Massachusetts Medical School. “These experiences are vital to recruitment in medical school.

We are getting students who turn down Ivy League schools because of our international program.”

Rather than trying to create entirely new programs overseas, John Norcini of FAIMER, urges medical colleges to consider partnerships with medical schools overseas. FAIMER plans to encourage that by increasing the amount of online data about medical schools around the world as well as their various accrediting processes. AAMC’s M. Brownell Anderson notes that such partnerships require “recognizing universality and also appreciating cultural differences.” Recalling her own experience coordinating a master’s program at the Arabian Gulf University, she said, “Getting faculty to change the curriculum was just as difficult with Arab faculty and parking was a huge issue.”

“Don’t do the easiest thing,” cautions Doug Smucker at the University of Cincinnati, “by taking Western medicine overseas for a few days. Organize medical brigades to supplement ongoing local programs.” Bob Einterz at Indiana University concurs. “Commit to sustainability over time. Lead with care and service which can ultimately lead to systems that host training and research.”

Steven Schmidbauer at Child Family Health International takes a step back to ask, “What is your goal for these students? They will see a different health care system function and gain the richness of being in a different culture. These experiences benefit students greatly, but it is incumbent on us to make sure there is also a real good benefit to local communities.”

When Weill Cornell Dean Gotto was a student in England in the 1950s, he said, “we felt pretty isolated from the U.S.—you could get *Time* magazine but no instant connectivity.” Now Gotto says international medicine is at the top of the list for students coming into medical school. Young people socialize and collaborate internationally online. Johns Hopkins School of Public Health now “gives away its knowledge online,” says Wallace Mandell, offering online courses taken by nearly 1,500 students. AAMC’s Brownell Anderson sees international medical education as a source of hope as well as collaboration, with Steven Schmidbauer predicting that “in the future, medical professionals who have had these broader experiences are going to be able to come up with the answers to problems that span the globe.” **IE**

**KAREN LEGGETT** is a freelance writer in Washington, D.C. Her last article for *IE* was “Making a Difference” on the internationalization of social work programs in the March/April 2008 issue.