Medical Narrative

Resources

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Virtual Mentor

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FROM THE EDITOR
Global Health Ethics at Home and Abroad

Americans are confronted with images and discussion of international issues on a
daily basis, leading to an increased awareness of global health challenges. The media
deliver news of AIDS in Africa, disasters and earthquakes in Asia and the Atlantic,
and epidemics like H1N1 influenza and SARS (severe acute respiratory syndrome)
to our living rooms and inboxes daily. The ubiquity of these stories and global nature
of today's business, trade, and travel emphasize that "international" conditions are
not as far away as they may at first appear. Moreover, U.S. society has expanded to
include diverse cultures, values, and languages, exposing health care professionals to
patients from diverse backgrounds and cultures in their own communities and
highlighting the importance of understanding health in a global context.

Not surprisingly, student and clinician interest in global health experiences is
blossoming as medical professionals strive to better understand the international
dimensions of health. Although a desire to help those in need around the world is
certainly laudable, and global health experiences have unquestionable value for the
health care student and professional, the ethical implications and cultural impact of
serving vulnerable populations both at home and globally warrant close examination.
This issue of *Virtual Mentor* explores many of the ethical dilemmas that arise in the
context of global health service.

A contemporary concept of global health goes beyond a narrow focus on disease
diagnosis and treatment to explore the social, political, and cultural contributors to
well-being, defined as more than merely the absence of physical disease. In its quest
to support universal human rights, the campaign for global health embraces human
diversity in all settings and encompasses an inquiry into the forces that separate
privileged, empowered populations from disadvantaged, disenfranchised
populations. From this perspective, discrimination, inequality, displacement, poverty,
environmental dynamics, education, and health care rights all surface as factors that
shape personal well-being.

Reflecting this philosophy, one important motivator for students and clinicians who
pursue global health experiences is a "duty to care," explored by Claire L. Wendland
in *VM*'s medicine and society section. But Jane Philpott points out in her medical
narrative that people who engage in global health experiences have varied
motivations, not all of them admirable. And as one of this issue's case commentaries
explains, students motivated by a duty to care among other factors are commonly
confronted by shocking health inequalities. Audrey M. Provenzano and Kaveh
Khoshnood discuss the challenges posed in resource-limited settings and the

difficulty of dealing with all the aspects of a patient's well-being and care. Drawing from this case, this month's clinical pearl by Carrie L. Kovarik and me outlines the WHO Clinical Staging System for HIV/AIDS, a tool that can facilitate diagnosis and care in areas with limited technological and laboratory resources.

All individuals engaged in service learning—students, mentors, and program administrators—have an ethical duty to ensure that global health programs are responsive to local needs, conducted in a way that upholds professional standards, and carried out with safeguards to prevent harm to both patients and participants. Student enthusiasm and commitment to serve must be tempered by the limitations of their clinical knowledge and relative inexperience, which leave both students and patients vulnerable. There is a common misperception that underserved and impoverished populations will benefit from any medical care, irrespective of quality or the experience level of the provider. As Mosepele Mosepele points out in his case commentary, this is but one of the numerous causes of concern in global health electives, and it emphasizes the need for effective leadership that is responsive to the host community as well as student needs and concerns. Sarah Lyon and C. Jessica Dine expand on this idea, discussing characteristics of international medical student rotations that can help ensure that students benefit educationally while also striving to meet the needs of the host community. In their op-ed piece, Kym Ahrens, F. Bruder Stapleton, and Maneesh Batra draw on their experience with the global health pathway at the University of Washington's Pediatric Residency Program to provide principles for guiding ethical conduct of international health electives that involve resident physicians.

As many of this issue's authors mention, developing sustainable and responsive partnerships between academic medical centers in the developed world and organizations in resource-limited settings is fundamental to building long-term partnerships that benefit both parties. Jennifer Cohn and Harvey M. Friedman describe the challenges in building these ties, sharing the lessons learned through their involvement with the University of Pennsylvania School of Medicine's programs in Botswana. Similarly, Jane Philpott explores ways in which lessons learned from international research ethics—ensuring informed consent, evaluating the risks and benefits, avoidance of exploitation, application of a standard of care/education, and following of codes and guidelines—can be applied to international academic educational partnerships. Research ethics also come into play when physician-scientists engaged in research work in resource-limited settings face the challenge of striving to uphold the principles of beneficence and justice while reconciling their many potential roles as investigator, clinician, and educator. Hana Askelrod examines this ethical struggle in her discussion of a recent article from *Clinical Infectious Diseases*.

While much need exists internationally, unmet health challenges and culturally diverse experiences lie in our own backyards, and one must assess the duty to think globally but serve locally. In the health law section, Alison Johnson, Jacqueline Darrah, and Lisa Benrud discuss federal and state liability protections for physicians

who volunteer and work with indigent populations—and the limitations to those protections. In response to a case that asks whether medical schools should dictate where student service takes place, Cynthia Haq and Heather Lukolyo suggest that institutions should encourage and support service learning and global health opportunities both in the local community and internationally, without dictating where the experience must take place. Lauren K. Graber, Mei Elansary, Kaveh Khoshnood, and Asghar Rastegar comment further on the obligation medical schools have to educate students about local needs, appropriate conduct, and professional standards and to prepare those planning service electives for the ethical and clinical challenges of working in resource-limited settings both in the U.S. and abroad. They argue that, while both local and international opportunities must be approached with proper preparation and care, they are crucial components of medical training and foster the values of humanitarianism, altruism, and social service.

In his discussion of Shah and Wu's 2008 article in the *Journal of Medical Ethics*, Sujal Parikh elaborates on the obligation of medical schools and other institutions to promote principled and professional frameworks for students to approach service and medicine, regardless of setting.

In the history of medicine section, Phil Perry and Fred Donini-Lenhoff look at how stigma and xenophobia have complicated the treatment of infectious disease over the course of history. On an even larger scale, Josh Ruxin discusses the ways in which increasing regional and global trade impact health, from policies dictating which foods and medications countries can produce and use to market forces that drain medical professionals from areas where they are most needed.

The authors for this issue, many of whom have lived and worked overseas, bring perspectives from both domestic and international experiences—helping us to consider all sides of the issues. The new paradigm for serving resource-limited, multicultural populations both in the U.S. and abroad focuses on developing and supporting attributes such as cultural competence, understanding the community context of medicine, and humanistic self-awareness. This issue of *Virtual Mentor* explores the similarities and differences in "global health" in the United States (or other developed countries) and internationally (especially in resource-poor nations) in an effort to highlight the interrelationship between an individual's well-being, health care beliefs, and behaviors and the social, cultural, political and economic contexts in which they exist.

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Virtual Mentor

CLINICAL CASE
With So Much Need, Where Do I Serve?
Commentary by Cynthia Haq, MD, Heather Lukolyo, MHS, Lauren K. Graber, Mei Elansary, MPhil, Kaveh Khoshnood, PhD, and Asghar Rastegar, MD

State Medical University is working to design and implement an updated version of its curriculum. As part of this new curriculum, the university would like to establish a policy for student engagement in the community. The dean, Dr. Grant, suggests that students need to be active in serving the larger community in which they live and study during their medical training. He emphasizes that this would be an excellent learning experience for the students, inasmuch as he views the urban community where the university is located as a different world from that which the majority of the medical students have previously experienced. Several other faculty members agree with Dr. Grant's opinion.

Ramona, the medical student representative to the committee, agrees that that many of her classmates entered medical school wanting to make a difference and improve the lives of others. She suggests to the committee that both local and international experiences could enhance the new curriculum and students' education. She is intrigued by the opportunity to visit a foreign country for an elective. She suggests to the committee that prospective students look for global health experiences when choosing a medical school. She stresses that she believes that experiences in developing nations provide unique educational opportunities that students cannot get in their local surroundings.

Several of the faculty members express concern over the idea of the university's devoting resources to international electives. They suggest implementing a policy which would not permit students to go on international rotations for academic credit, preferring that they work to address the local need that surrounds them.

Commentary 1
by Cynthia Haq, MD, and Heather Lukolyo, MHS
Suffering, loss, and death are part of the human condition, but physicians today have more knowledge and capacity to address suffering than ever before in history. Accelerated travel and instant access to information make the world feel smaller. Images and stories of the billions of people living in poverty in low-resource settings reveal stark evidence of health and economic disparities. While human suffering has always been present, today we are constantly reminded of the gaps between what we know and what we do. Physicians and health professionals are called to respond to the needs of millions at home and abroad who lack access to basic health care.

The duty to serve those in need despite their economic circumstances and to practice beneficence are foundational principles of medical ethics, but health care needs will always exceed an individual physician's resources. Therefore physicians are challenged to weigh external needs against available resources and their own life circumstances in deciding when and where to serve.

Since medical students are engaged in an intensive education program, their time for elective service is limited, even though working with disadvantaged populations, whether domestic or international, can be an important part of medical education. Through such experience, students can confirm their motivations and build confidence and skills that will be used throughout their careers. Medical students who feel called to serve those in need, however, may be overwhelmed, intimidated, and confused about where and when to begin. How does a student discern the best opportunity for service to the disadvantaged among so many options?

There are many reasons to pursue local service to disadvantaged populations, including proximity, familiarity, and social accountability. Medical schools are best prepared to help local communities due to their proximity, their familiarity with the culture and local conditions, and access to local and regional resources and networks. Medical schools and academic health centers receive numerous benefits from local and regional communities, including income and a steady supply of patients and employees. Without patients from local communities, medical schools would not be able to perform their essential functions—patient care, research, and education. Moreover, medical institutions that are genuinely concerned about societal health cannot ignore problems in their own backyards. Working with local disadvantaged populations helps fulfill a university's ethical obligation to the community in which it resides [1, 2], while promoting a spirit of service, furthering students' skills and confidence in their ability to work with underserved populations, and often sparking interest in additional service both at home and abroad.

The individual student may also have compelling reasons for choosing a local over an international rotation. Students with budget restraints or family needs may find it impossible to study abroad. Residency programs may or may not provide opportunities for global health experience. Local opportunities are more efficient for students, due to low travel time, affordable cost, and easy access throughout the course of their medical training. They are often more closely supervised by faculty and more likely to be sustained and evaluated to assess impact. If we understand that global health concepts transcend borders, and that determinants of health are frequently rooted in socioeconomic conditions, students can gain global health skills by working with medically underserved populations in our own nation.

Given the need in local disadvantaged populations and the advantages for students of volunteering at home, why should U.S. medical students or faculty consider service abroad?

Increases in international travel, trade, and immigration have resulted in more than 1

billion people crossing international borders annually and have enhanced global interdependence for health. Concurrently, U.S. society has become a mosaic of diverse cultures, languages, and health values. Never has it been more important for future health care professionals to understand and experience health in a global context. These factors have contributed to the growing interests of U.S. medical students in global health; the number of U.S. medical students participating in overseas electives increased from 6.4 percent in 1984 to 29.9 percent in 2009 [3]. Restrictive university policies toward international experiences could deter a certain subset of students from enrolling; such policies also send an implicit message that the university does not value or place importance on global health. Many U.S. medical schools are now scrambling to address students' increased interests in service opportunities, grappling with how to prepare students and evaluate these experiences and determining how to balance local and global needs in the context of finite resources.

Research on the impact of global health experience demonstrates numerous benefits, including increased knowledge, changes in attitudes, and enhanced medical skills. Despite the ubiquity of electronic and printed information, there is no substitute for living and working in low-resource settings. There is no replacement for hearing the cries of a mother who has lost her child from a preventable illness or for being present at the bedside of a person who has died in pain. Such experiences leave indelible impressions on the psyches of physicians-in-training that can inspire a lifetime of service. These experiences often have lasting effects on the attitudes and career choices of participants, regardless of whether they plan to work in the U.S. or abroad. Participants recognize that skills in cultural understanding, community health outreach, patient education, illness prevention, interdisciplinary teamwork, and communication are necessary for the practice of medicine in any location [4, 5].

While students may gain these skills through global health experiences, however, they can also be acquired in culturally diverse and impoverished urban or rural regions of the U.S. Therefore, students should be permitted to go on international rotations for academic credit *and* should be encouraged or required to engage in local service learning opportunities. Serving populations abroad, if not balanced with local service, signals a lack of accountability to local populations. Conversely, exclusive service to local populations indicates parochialism and diminishes our ability to address extreme health disparities abroad. These experiences are mutually reinforcing, provide opportunities for sustained services to medically underserved populations, and reflect the social accountability of the institution to address local needs. Service, whether local or global, is based on the principles of equity and access to health care as a fundamental human right; both are manifestations of compassion and concern for the worth and dignity of all.

University policies that are explicitly or implicitly restrictive of service opportunities will limit students' exposure to working with underserved populations, as well as their ability to discover the value and rewards of such work. Commitment to the medically underserved is a driving force in some students' decision to apply to

medical school. Official university endorsement of service learning will help these students feel at home, may encourage them to further their service experience—perhaps taking on leadership roles—and may protect them from the disillusionment many altruistic students experience after entering medical school. U.S. medical school faculty need to respond to the call for increased global health education, being mindful of resource constraints while also serving local health care needs. Cross-cultural and global health training opportunities should be designed and evaluated to ensure that they meet educational goals and are available to all students in U.S. medical schools.

Although early exposure is necessary, it is not sufficient to attract and retain adequate numbers of health professionals to work in medically underserved areas. There are severe current and projected shortages of health professionals willing to serve disadvantaged populations in the U.S. and abroad [6]. Recruitment, good working conditions, and support to retain these physicians and their families will be necessary to ensure sufficient numbers of health professionals distributed according to the needs of populations. Addressing global health needs will require advocacy, training, recruitment, appropriate distribution, and solidarity among a global workforce of health professionals [7].

Wherever it occurs, experience with low-resource, cross-cultural settings can change the course of a physician's career. The lessons that can be learned from caring for disadvantaged patients and communities in domestic and foreign locations are too valuable to be missed. There will be countless opportunities for medical students and physicians to serve disadvantaged communities throughout the course of their careers, but they must be sufficiently experienced, prepared and willing to take them. Socially accountable medical schools should support opportunities for students' learning and service in low-resource settings both at home and abroad.

References

1. Woollard RF. Caring for a common future: medical schools' social accountability. *Med Educ*. 2006;40(4):301-313.
2. Boelen C, Heck J. Defining and measuring the social accountability of medical schools. Geneva: World Health Organization; 1995. (Unpublished document WHO/HRH/95.7.)
3. Association of American Medical Colleges. 2009 GQ medical school graduation questionnaire: all schools summary report. Washington, DC: Association of American Medical Colleges; 2009. http://www.aamc.org/data/gq/allschoolsreports/gqfinalreport_2009.pdf. Accessed on January 25, 2010.
4. Haq C, Rothenberg D, Gjerde C, et al. New world views: preparing physicians in training for global health work. *Fam Med.* 2000;32(8):566-572.
5. Ramsey A, Haq C, Gjerde C, Rothenberg D. Career influence of an international health experience during medical school. *Fam Med*. 2004;36(6):412-416.
6. Joint Learning Initiative. *Human Resources for Health: Overcoming the Crisis.* Cambridge, MA: President and Fellows of Harvard College; 2004.

7. World Health Organization. Global Health Workforce Alliance: About the Alliance. Geneva: http://www.who.int/workforcealliance/about/en/. Accessed January 25, 2010.

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Heather Lukolyo, MHS, is a first-year medical student at the University of Wisconsin School of Medicine and Public Health in Madison. She holds a graduate degree in public health and has worked extensively in Uganda as well as with underserved populations in Baltimore and Minneapolis and with American Indian populations in rural Wisconsin.

Commentary 2
by Lauren K. Graber, Mei Elansary, MPhil, Kaveh Khoshnood, PhD, and Asghar Rastegar, MD

Like Ramona, many students enter medical school with the desire to make a difference, relieve suffering, and improve quality of life for others. Many argue that the qualities of altruism, idealism, and service are essential in physicians. Students must be taught these qualities to meet the needs of their patients [1-3]. Medical students also commonly yearn for more clinical responsibility and ways to use their new knowledge. Academic centers often pair their university's resources and eager medical students with communities in need [3, 4] in the hopes of both engaging students and caring for underserved communities—not only within our inner cities, but also within our medical school neighborhoods and around the world.

In this case, the faculty at State Medical University suggest implementing a policy that would not permit students to go on international rotations for academic credit, preferring that they work to address local health care needs. The impact of globalization, however, has expanded the roles and responsibilities of health professionals, and future physicians will have the responsibility to address inequities in health throughout the world. Thus, medical training cannot be biased toward domestic problems to the exclusion of international experiences but should incorporate a global perspective. Medical schools that have the requisite faculty expertise, resources, and well-established partnerships should offer such training.

"Global health" as a concept emphasizes the notion that the most pressing health issues facing humankind are not bound by international borders and are best addressed from a global (and not from the U.S. or any individual country) perspective. It is distinct from the disciplines of public health and international health in that it not only emphasizes the prevention of illness, underserved communities, and the health of populations, but also "refers to the scope of the problems, not their

locations… global health can focus on domestic health disparities as well as cross-border issues" [5]. Moreover, the global health perspective prioritizes partnership, cooperation, and solidarity among nations in tackling health disparities and needs. These experiences, either local or international, are necessary in medical training, and medical schools must provide thoughtful curricular opportunities to foster the values of altruism, humanitarianism, and social service. In this paper, the term "global health" is used to refer to both local and international experiences undertaken within this larger framework. The term "international" is used to designate activities outside of the United States [5]. International health experiences, when applied within the context of a larger global health framework, provide students with perspectives and skills not otherwise obtained in medical school.

Benefits of Global Health Programs
As discussed in the case, significant health disparities can be found near academic medical centers, presenting important opportunities for learning and service. Students who work in local student-run clinics or homeless shelters "gain firsthand experience about the impact of poverty and homelessness on one's health and well-being" [4]. Prior research has shown that these local community experiences also influence students' perceptions of community health [6], residency program selection, and professional responsibility [7]. As further explained by Buchanan:

> The extreme poverty and need students are likely to encounter in this setting and the opportunity for meaningful interaction with the community make the SRC [student-run clinic] an ideal place to role-model ethical behavior and professionalism, including altruism and respect for all patients [3].

Indeed, the perspectives and skills learned working within local communities are core competencies of medical education.

International health experiences further promote compassion, volunteerism, and dedication to the underserved in low-resource settings [2, 8, 9]. As the world becomes increasingly interconnected, familiarity with different cultures, fluency in different languages, and international health experiences become increasingly constructive. As Shaywitz and Ausiello suggest:

> [S]ince one of the most essential qualities of being a doctor is an interest in helping those who are in greatest need, teaching physicians about the medical problems faced by people in LMICs [low and middle income countries] should be a priority of medical education" [1].

International health experiences increase student awareness of the social, economic, and political determinants of health and interdisciplinary models of health care [2, 8, 10]. One study found that physicians who had an international health experience during medical school were more likely than their physician colleagues to practice primary care, to obtain public health degrees, to work with underserved populations, and to participate in community health activities [11]. A study comparing residents who participated in an international health elective to those who did not found that, after residency, elective participants were significantly more likely to work with

immigrant patients and patients receiving public assistance [12]. International health experiences not only teach medical students more about medicine in another culture, but also show them how to be advocates for different communities in need.

Unlike low-resource settings in the U.S., international health sites often lack basic infrastructure, including access to clean water, sanitation, food, transportation, and routine health services. These settings present unique challenges not otherwise seen by students, including barriers to care, a high prevalence of tropical diseases, and advanced disease states. Without the ability to rely on diagnostic tests, students gain the opportunity to strengthen their clinical and physical examination skills [9].

International experiences further spur activism and outreach within local communities when students return home, encompassing the values of a global health perspective. Clinical models or research learned internationally can inform program development or research in other geographic settings [13]. As the faculty who designed UCSF's Global Health Sciences initiative have written,

> Taking the global health perspective, we are able to draw on similar transnational experiences elsewhere in the world to design and implement studies locally, while intending that what we learn in California will contribute to global thinking on this issue of increasing global importance [14].

Program Development
As there is growing interest in programs with both international and local experiences, medical schools can expect that curricula that incorporate a global health perspective and that value community outreach will attract students with similar goals. When developing such curricula, however, medical schools must establish thoughtful and cohesive partnerships for local and international collaborations. Community perspectives are frequently overlooked in program and research development, but true collaborations provide underserved patients and organizations a way to inform health care initiatives to reflect the needs of their community. Partnerships between U.S.-based universities and collaborating international institutions should be responsive to the competing needs and interests of multiple parties, including students and faculty from both institutions and the larger communities that the institutions serve. Further, the institutions and hospitals that host rotating students often bear a heavy burden in orienting students and attending to their day to day needs, including the time investment of clinical tutors, language translation, housing, and travel arrangements. Appropriate compensation for these efforts is essential to ensure that the partnerships are equitable and remain sustainable [18-19]. Although student rotations per se do not have a significant impact on the care of patients, the institutional partnerships that share the goals of mutual education, training, and capacity building can produce thoughtful programming that benefits both the larger host community and the students on rotation. In addition such partnerships can lead to other mutually beneficial inter-institutional activities such as research collaboration and program development. Continuity of these partnerships enables long-term sustainability and provides

mutually beneficial global health experiences for students and the larger community [18-20].

Students must be prepared for the ethical and clinical challenges specific to working in low-resource settings both in the U.S. and abroad. Because many global health electives are unstructured and poorly supervised, students struggle to determine what role and level of responsibility they should assume. Much of the learning on such rotations occurs through experience rather than self-directed or guided learning [21]. Medical students commonly face ethical challenges when on international rotations, but institutional partnerships can help anticipate and mitigate these conflicts. Students selected to participate in the activities should demonstrate a commitment to careers working with the underserved, and be prepared to undertake the necessary pre-departure training to make such experiences meaningful and mutually beneficial for all parties involved.

Medical school curricula that foster and promote humanitarian and social services within the framework of global health, either locally or internationally, create physicians that share these values. Moreover, student interest in international health experiences is especially encouraging and needed to prepare physicians for careers that address the gross inequities in health care and resources in an increasingly interconnected world.

References
1. Shaywitz DA, Ausiello DA. Global health: A chance for Western physicians to give-and receive. *Am J Med*. 2002;113(4):354-357.
2. Smith JK, Weaver DB. Capturing medical students' idealism. *Ann Fam Med*. 2006;4 Suppl 1:S32-S37.
3. Buchanan D, Witlen R. Balancing service and education: ethical management of student-run clinics. *J Health Care Poor Underserved*. 2006;17(3):477-485.
4. National Health Care for the Homeless Council (NHCHC), Community-Campus Partnerships for Health. A guide to community-campus partnerships for the health of people experiencing homelessness. http://depts.washington.edu/ccph/pdf_files/HCHCampusStudyf.pdf. Accessed January 10, 2010.
5. Koplan JP, Bond TC, Merson MH, et al. Towards a common definition of global health. *Lancet*. 2009;373(9679):1993-1995.
6. Rose MA, Lyons KJ, Swenson Miller K, Cornman-Levy D. The effect of an interdisciplinary community health project on student attitudes toward community health, people who are indigent and homeless, and team leadership skill development. *J Allied Health*. 2003;32(2):122-125.
7. O'Toole TP, Gibbon J, Harvey J, Switzer G. Students' attitudes toward indigent patients. *Acad Med*. 2002;77(6):586.
8. Thompson MJ, Huntington MK, Hunt DD, et al. Educational effects of international health electives on U.S. and Canadian medical students and residents: a literature review. *Acad Med*. 2003;78(8):342-347.
9. Drain PK, Primack A, Hunt DD, et al. Global health in medical education: a

call for more training and opportunities. *Acad Med*. 2007;82(3):226-230.

10. Haq C, Rothenberg D, Gjerde C, et al. New world views: preparing physicians in training for global health work. *Fam Med*. 2000;32(8):566-572.

11. Ramsey A, Haq C, Gjerde C, Rothenberg D. Career influence of an international health experience during medical school. *Fam Med*. 2004;36(6):412-416.

12. Gupta AR, Wells CK, Horwitz RI, et al. The International Health Program: the fifteen-year experience with Yale University's Internal Medicine Residency Program. *Am J Trop Med Hyg*. 1999;61(6):1019-1023.

13. Kanter SL. Global health is more important in a smaller world. *Acad Med*. 2008;83(2):115-116.

14. Macfarlane SB, Agabian N, Novotny TE, et al. Think globally, act locally, and collaborate internationally: global health sciences at the University of California, San Francisco. *Acad Med*. 2008;83(2):173-179.

15. Association of American Medical Colleges. 2009 GQ medical school graduation questionnaire: all schools summary report. Washington, DC: Association of American Medical Colleges; 2009. http://www.aamc.org/data/gq/allschoolsreports/gqfinalreport_2009.pdf. Accessed on February 16, 2010.

16. Crump JA, Sugarman J. Ethical considerations for short-term experiences by trainees in global health. *JAMA*. 2008;300(12):1456-1458.

17. Drain PK, Holmes KK, Skeff KM, et al. Global health training and international clinical rotations during residency: current status, needs, and opportunities. *Acad Med*. 2009;84(3):320-325.

18. Elansary M, Graber LK, Provenzano AM, Barry M, Khoshnood K, Rastegar A. Ethical dilemmas in global clinical electives. Submitted for publication. 2010.

19. Provenzano AM, Graber LK, Elansary M, Khoshnood K, Rastegar A, Barry M. Ethical concerns in short-term international research among U.S.-based medical students. Submitted for publication. 2010.

20. Dowell J, Merrylees N. Electives: isn't it time for a change? *Med Educ*. 2009;43(2):121-126.

21. Niemantsverdriet S, van der Vleuten CP, Majoor GD, Scherpbier AJ. The learning processes of international students through the eyes of foreign supervisors. *Med Teach*. 2006;28(4):e104-e111.

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CLINICAL CASE
Mutually Beneficial Global Health Electives
Commentary by Mosepele Mosepele, MD, and Sarah Lyon, MD, and
C. Jessica Dine, MD, MSHPR

Adina and Jessica are third-year medical students on the same team during their medicine rotation. One day at lunch, Jessica begins to tell Adina about her plans to do a global health elective over their summer break. After a year of clerkships, she is excited to travel to Thailand to see the way medicine works in a developing nation. She thinks going abroad will strengthen her residency application and give her an opportunity to practice clinical procedures and skills that she rarely gets a chance to use in the United States.

Adina, who was born and grew up in Ethiopia, questions Jessica's decision to spend her summer visiting hospitals abroad. Adina deplored the programs that sent medical trainees into her home village when she was younger. She explains that many local people felt that the foreign students who came to their village for short periods of time actually placed a burden on the health care system rather than contributing to improving care. She tells Jessica about how her uncle, a pediatrician, met several students who rotated through his hospital. They came into the community, lived in a group apart from the people, and barely interacted at all with the local clinicians. When they were in the hospital, they frequently needed a lot of translating assistance to communicate with patients and figure out what resources were locally available in the hospital or the town. Adina's uncle was also shocked that foreign students were often allowed to take on tasks above their level of training, although this tended to be viewed by the local people as an opportunity to help the students by allowing them to practice their skills. This took up nursing and support staff time, distracted from the education and training of local clinicians, and further stressed an already resource-strapped system.

The visitors also failed to try to understand the local culture. Adina's uncle had told her, for example, that the visiting students, used to a time- and appointment-driven system in the United States, got very frustrated and even angry when patients did not show up exactly on time or were annoyed when patients' families accompanied them to visits, a crucial support system in the culture. The superficial working relationship between the local and foreign students and clinicians was weakened further when the visiting students skipped work to travel or sightsee.

Commentary 1
by Mosepele Mosepele, MD
Jessica and Adina's conversation highlights the attraction global health electives (GHEs) hold for medical students, medical schools, and host communities. Students request these electives and medical schools and many communities around the world allow them. But who takes responsibility when ethical questions about GHE arise?

Up to thirty percent of American medical school graduates have participated in global health electives [1]. Their motives for participating vary and may include Jessica's difficult-to-justify goals, such as practicing invasive medical procedures on patients in resource-limited settings [2-6]. However, GHEs are generally encouraged because they expose medical students to the different determinants of health such as socioeconomic status, tropical and other geographically determined diseases, and cultural influences in resource-limited countries, among others [7].

Forty-four percent of Canadian and at least 40 percent of United Kingdom medical students personally choose and arrange a GHE at an elective site with minimal oversight from their medical school [8-10]. Only 30 percent of North American medical schools provide some kind of pre-departure education or counseling for students going on GHEs; all medical schools in the United Kingdom do, but 90 percent of them do not tailor that education to specific destinations [9, 11]. When so many students arrange their electives themselves and the majority of medical schools do not provide adequate preparatory education for GHEs, numerous problems can arise and go unresolved, as noted by Adina and her uncle [12]. These problems include, but are not limited to, unprofessional behavior and unreasonable expectations on the part of student participants, lack of sympathy and trust between program participants and the communities in which they are working, and poor leadership of the programs, leading to inadequately supervised students and injudicious allocation of the local practitioners' time between teaching and clinical duties. These concerns must be addressed on an individual level, with humility and cultural awareness on the part of each student, and on an organizational level, through the implementation of tightly structured programs, helmed by organized leadership that is accountable for the GHE's policies, keeping the program's eye on long-term sustainability, and the training of individual students.

Adina's uncle's doubts about the benefits of GHEs highlight the disconnect between students' and local perceptions of GHEs and the difficult positions in which both parties may find themselves. Unprofessional behavior by individual students is a problem even when students are screened prior to participating in GHEs [13]. For instance, students may overlook the importance of dressing appropriately or arriving on time at the host institution, partly because they do not consider a global health elective as important as other rotations. Without a responsible GHE program leadership to redirect students, engage Adina's community, and take responsibility for the implementation-related challenges that Adina, her uncle, and Jessica will confront, conflict will erupt between the students and the community.

Effective Leadership
An effective leadership team, comprising local and partner medical school staff, should identify preceptors whose main responsibility will be to create a practice and educational environment that promotes health care for the local community and facilitates students' education. Absent adequate leadership, GHEs may not have enough clinical personnel to take on teaching without compromising patient care or enough faculty to responsibly develop, implement, and evaluate the GHE curriculum; misconceptions may form among locals and students about the program. All these issues could be addressed by making dedicated GHE preceptors available.

The program leadership can also create time for teaching by increasing the number of clinicians at the GHE site through various funding sources such as grants or groups that support GHEs, like the Child Family Health Foundation (CFHI). The GHE curriculum should be the result of collaboration between the partner medical school and host health facility. It should address key issues such as practicing medicine in an unfamiliar culture and local health care delivery practices, including standards and preferred management strategies for common medical problems. If the GHE site also serves as a clinical teaching facility for local students, the GHE curriculum should allow interaction among all students; such interactions promote international scholarship and understanding.

Consistent with appropriate clinical teaching, availability of dedicated GHE preceptors ensures appropriate supervision of students. Clinical supervision promotes patient safety and may reduce the unacceptably high infectious hazards to students during electives [14]. Students' activities during the elective should reflect the values and ethics espoused in their home institutions' curricula. For instance, students' clinical activities should be supervised and match their level of training. The apprenticeship model should be followed to assist students in adapting the medical values, attitudes, skills, and knowledge to local challenges and opportunities in the provision of health care.

Preparing Students
Exactly how individual students navigate the ethical dilemmas inherent in their GHEs is not described in the literature, and there is little uniformity in the predeparture education that medical students obtain from their medical schools [8, 9]. Student adherence to the profession's ethical values of justice, beneficence, and non-maleficence in the practice of medicine may be limited by the meaning of these principles in a different culture and health care system. However, since the primary goal for GHEs is to create a learning experience for the students, and service provision is secondary, demonstrating humility is a useful way to interact in an unfamiliar learning environment. Genuinely attempting to seek common understanding and mutual acceptance between student and host will improve both care and the learning experience. For instance, locals may unjustly view students taking time off to sightsee as an unacceptable luxury considering their dire local situation, or a visiting student may be frustrated by patients' failure to arrive on time without considering the local public transport situation. Dealing with these

differences, without necessarily changing one's view of them, requires that students remain humble and seek guidance from their preceptors.

Individual students may not appreciate their impact on the health care of the local community; it is essential that they see themselves as part of a long-term commitment by the sponsoring medical school, colleagues, and the GHE site to develop a mutually beneficial relationship. Regular progress reports and ongoing feedback to all the stakeholders at the GHE site can contribute to long-term commitment. Students who organize their own electives can learn how to participate by talking to students who have gone on GHEs or requesting information from medical programs that organize them.

It is in the interest of the medical profession to seek innovative ways to deliver a GHE curriculum that is acceptable to the host community. Addressing the ethical challenges that will arise as more medical students participate in GHEs requires effective leadership that is responsive both to the host community and to student concerns. When the profession fails to achieve collaborative leadership that promotes ethical practices and a better understanding of activities at GHE sites, the students and communities that the profession serves will rightly judge GHEs as harmful, patients may feel taken advantage of, and students may struggle to understand the meaning of their GHEs for their professional development.

References

1. Association of American Medical Colleges. 2006 GQ medical school graduation questionnaire: all schools summary report. Washington, DC: Association of American Medical Colleges; 2006.
2. From Medical School to Mission: The Ethics of International Medical Volunteerism. *Virtual Mentor*. 2006;8(12):797-800. http://virtualmentor.ama-assn.org/2006/12/fred1-0612.html. Accessed February 12, 2009.
3. Bezruchka S. Medical tourism as medical harm to the Third World: Why? For whom? *Wilderness Environ Med*. 2000;11(2):77-78.
4. Bishop R, Litch JA. Medical tourism can do harm. *BMJ*. 2000;320(7240):1017.
5. Grennan T. A Wolf in Sheep's Clothing? A Closer Look at Medical Tourism. *McMaster University Med J*. 2003;1(1):50-54.
6. Ramsey KM, Weijer C. Ethics of surgical training in developing countries. *World J Surg*. 2007;31(11):2067-2069.
7. Association of Faculties of Medicine of Canada. Towards a medical education relevant to all: The Case of Global Health in Medical Education. http://www.cfms.org/pictures/file/Global%20Health/The%20Case%20for%20Global%20Health%20in%20Medical%20Education-%20AFMC.pdf. Accessed on February 12, 2010.
8. Izadnegahdar R, Correia S, Ohata B, et al. Global health in Canadian medical education: current practices and opportunities. *Acad Med*. 2008;83(2):192-198.

9. Miranda JJ, Yudkin JS, Willmot C. International health electives: Four years of experience. *Travel Med Infect Dis*. 2005;3(3):133-141.
10. Dowell J, Merrylees N. Electives: isn't it time for a change? *Med Educ*. 2009;43(2);121-126.
11. Haq C, Rothenberg D, Gjerde C, et al. New world views: preparing physicians in training for global health work. *Fam Med.* 2000;32(8):566-572.
12. Banatvala N, Doyal L. Knowing when to say "no" on the student elective. Students going on electives abroad need clinical guidelines. *BMJ*. 1998;316(7142):1404-1405.
13. Global Health Education Consortium. Professionalism 101: How to be professional and act ethical when abroad. http://globalhealthedu.org/PublicDocs/professionalism_cfhi.pdf. Accessed February 12, 2010.
14. Wilkinson, D. Medical students, their electives and HIV. *BMJ*. 1999;318(7177): 139-140.

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Commentary 2
by Sarah Lyon, MD, and C. Jessica Dine, MD, MSHPR
A successful collaboration in global health medicine requires significant planning and commitment. However well-intentioned, a global health rotation without proper forethought can create distrust of the visiting clinicians and their institutions and place unnecessary strain on the local health care system. For American medical students, such a rotation can add important experience to their training, but it needs to be developed in a collaborative fashion that also benefits the local community.

Inherent in the phrase "to practice medicine" is the understanding that physicians are constantly learning—taking in new procedural techniques, medical therapies, and newly discovered causes or manifestations of illness—while striving to provide the best care possible. This occurs at all levels of training, from medical students just starting their education to established, senior attending physicians following the evolution of their chosen fields. Conflict can arise between the need to allow trainees to gain experience and the duty to provide the best care possible to patients. The medical profession has always understood itself to entail lifelong learning; this is encouraged with certification, recertification, and continuing medical education requirements. This same value is imparted to trainees by ensuring adequate supervision, as outlined in the Institute of Medicine report [1], and by incrementally increasing their responsibilities as they advance in their training. These same checks and balances need to be applied to medical student rotations abroad to ensure a safe learning environment for the patient and the trainee. We will first discuss some key

elements of trainee supervision and appropriate responsibilities that may be unique to international rotations before turning to a broader view of a successful global health relationship.

Supervision can be a challenge in a resource-limited setting. Improperly supervised medical students encounter unfamiliar illnesses and advanced presentations of disease, with a limited, often unfamiliar, arsenal with which to treat these illnesses. Although it is tempting to think that treatment by an inadequately supervised individual is better than no treatment at all, such an experience can lead to frustration, confusion, and distress in the student and can engender the local population's distrust. Therefore, a successful medical student global health rotation ensures safety through adequate supervision comparable to that which the students receive at their home institution.

Both the hosting and home institutions should commit to providing more advanced trainees or attending faculty to accept this responsibility. In a resource-limited environment, supervision may still not be sufficiently rigorous during this rotation. Therefore, it is particularly important that the roles and responsibilities of medical students incorporate the norms of their host country but not exceed that which is customary at their home institutions. For example, students who have not yet completed clinical rotations should not be given clinical responsibilities abroad. These students may benefit from shadowing an established local practitioner. It is important to recognize that any inclusion of medical students in clinical settings, as observers or active assistants, requires additional time and responsibility, which may increase the local practitioner's burden; incorporating foreign students requires time not only to teach clinical medicine but also to perform a sort of cultural and linguistic translation. An experience as an observer, which would be less demanding of the local practitioner, can also be valuable for the student, furthering interest in global health, fostering cross-cultural communication skills, and enabling students to better understand local culture, clinical illnesses, and health concerns.

Adapting to different illnesses and constrained diagnostic and therapeutic interventions in a resource-limited setting can be difficult even for senior practitioners. Medical students who participate in these electives need ongoing supervision and instruction about local diseases, available resources, and approaches to clinical illness. Cultural differences, unfamiliar health beliefs, and language barriers further compound the difficulty of adapting to a new clinical setting. The additional challenges of a resource-limited setting may require a longer time commitment than most clinical electives in the Unites States. Committing additional time to the global health elective will improve the experience for the medical student and foster trust among the local population. Early planning to accommodate global health electives within the framework of required clinical rotations and residency program application will help facilitate longer global health rotations.

Some of the necessary preparation for a successful rotation abroad can begin at home. Although understanding our own biases and beliefs is important for any

medical practitioner, it is particularly helpful to become aware of them prior to traveling abroad. Cultural context provides a lens through which we experience events, informed by the specifics of our background: nationality, race, ethnicity, gender, sexual orientation, educational background, religious beliefs, and socioeconomic status. Understanding the nuances of our own cultural bias helps us avoid imposing these biases on others. Medical practitioners should always work to understand the cultural context from which their patients approach illness, striving to respect and understand their patients' beliefs and preferences with regard to their health and medical care, and to avoid imposing their own biases. International experiences allow both local and visiting practitioners to confront cultural differences and work towards improved cross-cultural understanding. Any traveling medical student should begin to think about his or her own cultural context, as well as learning about the history, culture and language of the host country, prior to leaving for the rotation.

A global health partnership should not only provide a learning opportunity for the medical student but should also meet the needs and goals of the hosting community. Even when educating medical trainees in a clinical setting, the primary emphasis should still be on providing the best clinical care possible. It is important that program leaders focus on:

- understanding the long- and short-term health needs of the community by consulting with community members and leaders—medical, political, and social—thereby increasing community investment in the project;
- establishing long-term goals and putting in place the oversight to create continuous, sustainable projects lasting longer than an individual student's tenure in the country; and
- training the local health care personnel.

Emphasizing these priorities is crucial to the creation and long-term success of a collaborative global health program.

References

1. Institute of Medicine (US) Committee on Optimizing Graduate Medical Trainee (Resident) Hours and Work Schedules to Improve Patient Safety, Ulmer C. *Residency Duty Hours: Enhancing Sleep, Supervision and Safety*. Washington, D.C.: National Academies Press; 2009.

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Virtual Mentor

CLINICAL CASE
Caring for Patients in Low-Resource Settings
Commentary by Audrey M. Provenzano and Kaveh Khoshnood, PhD

Jaime, a second-year medical student, has traveled to Zimbabwe for the summer to volunteer at a student- and resident-run health clinic. The clinic is located in a rural area where many people live below the poverty line and lack regular access to health care or basic resources like consistently clean water and electricity.

Shortly after arriving in Zimbabwe, Jaime sees a patient who is visiting the clinic for the first time. Mr. Gazi has come to the clinic after losing some weight over the past two months and recently noticing a reddish-purple nodular growth on his lower right leg. At first, he thought it was a bruise that was taking a long time to heal, but it has been growing and becoming more raised. After talking to Mr. Gazi and examining him, Jaime discusses the patient's symptoms with Dr. Gordan, the resident who is supervising the medical students in the clinic that day. After hearing about Mr. Gazi's symptoms, Dr. Gordan immediately suspects that Mr. Gazi has Kaposi's sarcoma, related to an underlying infection with HIV. Not realizing the clinic's limitations, Jaime suggests that the next step would be to confirm the diagnosis with laboratory tests to measure CD4 lymphocyte count and HIV viral load. Dr. Gordan explains that in resource-limited settings, where laboratory access is limited, physicians use the WHO Clinical Staging System for HIV/AIDS, which relies on the recognition of clinical findings to direct clinical decision making. He tells Jaime how his own extensive global health experience has helped him strengthen and expand his skills in taking thorough histories and conducting physical exams.

That night, Jaime goes home from his work in the clinic and looks up an article about the WHO Clinical Staging System. He determines that Mr. Gazi must be in Clinical Stage 4 based on his presumed Kaposi's sarcoma, and that by the WHO criteria, he would be an appropriate candidate for antiretroviral therapy. While he is excited by the idea of relying more on his clinical skills and less on technology, he is concerned about how Mr. Gazi will be able to access the care he will need and what possibly even more dire conditions Mr. Gazi must face in his daily life. Jaime's thoughts expand to the millions of people worldwide who also lack adequate care, as well as adequate living conditions, and he wonders what he can or should do now and in the course of his career to make a positive impact.

Commentary
Practicing medicine in resource-limited settings is challenging, and many medical students and physicians who go abroad sometimes feel overwhelmed, as Jaime does in this situation. While it is important to keep in mind that there are ferocious health

inequalities in the United States as well as internationally, Jaime took his first step to face these terrible health inequalities by going to Zimbabwe and participating in Mr. Gazi's care.

To practice medicine effectively in resource-limited settings, however, it is useful to educate oneself about the diseases most commonly seen and specifically the resources available at the destination site. In this situation, Jaime could have been more effective from the start had he learned about the clinical presentation of HIV/AIDS, the WHO Clinical Staging System for HIV/AIDS, and also specifically which laboratory tests were available at his destination site before meeting Mr. Gazi. Just as it is a medical student's responsibility to prepare thoroughly before a clinical rotation in the U.S. by reviewing salient course material and medical literature, students who travel to low-resource settings abroad must comprehensively prepare for the care of their patients. Furthermore, there is growing consensus that "solo" efforts such as Jaime's experience in Zimbabwe are more of a burden for the host institutions than beneficial and should be avoided [1, 2]. It is far better for Jaime to identify an established program in his own medical school or another one that has an established site [3, 4].

Students traveling abroad for rotations should ask their international preceptors as well as mentors at their home institution for guidance on preparing for these experiences, and U.S.-based institutions should ensure that their students are well prepared before departure [5].

Jaime is rightly very troubled by the fact that Mr. Gazi lacks access to the most basic necessities of human dignity, such as food, clean water, and adequate housing. To add to this, Mr. Gazi has AIDS, an eminently treatable illness, and yet he does not have access to the lifesaving medicines he needs because of the circumstances of his birth. We learn that, in the psychosocial model of complete patient care, physicians must address not only a patient's physical ailments, but his psychological and social needs as well. Of course, just as we have patients in the United States in intolerable social situations that we cannot adequately address—such as violence in the home, hunger, and homelessness—Jaime simply cannot change Mr. Gazi's social situation during one rotation. It is likely that Jaime could not change Mr. Gazi's social situation even after many years of work at this clinic. It is very, very difficult to see patients in such circumstances, and it is easy to give up hope in the face of such overwhelming challenges. Dr. Joia Mukherjee, a leader in global health with many years of experience caring for the poor, once commented about how she remains hopeful:

> **Interviewer:** Having worked in poor communities for many years, you must encounter a lot of despair. What keeps you hopeful in these situations?
>
> **JM**: That is where being a doctor is a great thing. I do sometimes feel that it is overwhelming, but when you are a doctor you get to make the person better. The whole world isn't going to be better in a single day, but you get to see people you

know you have helped and that is incredibly rewarding…That is what keeps me hopeful. Also, I think it is not fair of us, as privileged, middle-class Westerners to be despairing because the poor depend on us to not be despairing. If we despair we get to go home to our nice beds and sleep. If we want a better world for people who are essentially voiceless, then we have done them a disservice. It is not about our despairing as much as it is about the people whose life and death depends much more on our actions than even our own does [6].

Thus, it is important to focus on what we can offer immediately, as well as the change we aim to bring to low-resource settings over the long-term, which may be very slow—too slow, perhaps, for Mr. Gazi. While this hospital where Jaime is rotating may not be able to provide HAART or clean water for Mr. Gazi, Jaime can sit at his bedside and listen to Mr. Gazi, and allow Mr. Gazi the small dignity of sharing his story with a health professional. Of course, this act of solidarity with Mr. Gazi is not enough. We must realize, however, that the fight for health equity cannot be won overnight, or on one rotation—it is a challenge that we must take on throughout our careers and make our work every day.

Jaime can channel his frustration and anger at Mr. Gazi's situation into advocacy. Given the influence and respect accorded physicians in our society, Jaime could become an extremely potent advocate. Many physicians successfully combine some form of advocacy with clinical work. Performing research and using data to convince policy makers and the public of the necessity of providing clean water, for example, or access to essential medicines, is one method of advocating. Another is to communicate patients' stories through the media—physician Abraham Verghese has written beautifully about the challenges of caring for patients with HIV. Writing about the stories of patients and giving a voice to people who are so often voiceless is a personal and powerful way to explore the complexities of health inequality and can be an effective form of advocacy. Getting involved with large U.S.-based organizations such as the American Medical Student Association or international organizations like Medecins Sans Frontieres are other excellent avenues for patient advocacy. And there are always opportunities to act in behalf of underserved patients here in the U.S.—Jaime could get involved with outreach efforts at his local federally qualified community health center, and reach out to underserved patients in his own neighborhood.

Clinical experiences in low-resource settings can be overwhelming, as Jaime discovered. The problems can sometimes seem too vast to even comprehend. It is important to channel the feelings that such experiences evoke, however, into positive, sustained long-term efforts on behalf of underserved patients, rather than allowing oneself to become hopeless and despairing.

References
1. Shah S, Wu T. The medical student global health experience: professionalism and ethical implications. *J Med Ethics*. 2008;34(5):375-378.

2. White M, Cauley K. A caution against medical student tourism. *Virtual Mentor*. 2006;8(12):851-854. http://virtualmentor.ama-assn.org/2006/12/oped1-0612.html. Accessed October 4, 2009.
3. Babich LP, Bicknell WJ, Culpepper L, Jack BW. Social responsibility, international development, and institutional commitment: lessons from the Boston University experience. *Acad Med.* 2008;83(2):143-147.
4. Vermund SH, Sahasrabuddhe VV, Khedkar S, et al. Building global health through a center-without-walls: the Vanderbilt Institute for Global Health. *Acad Med.* 2008;83(2):154-164.
5. Crump JA, Sugarman J. Ethical considerations for short-term experiences by trainees in global health. *JAMA*. 2008;300(12):1456-1458.
6. Punjabi R. Health for the poor: an interview with Joia Mukherjee. *Z Magazine*. http://www.zmag.org/zmag/viewArticle/13965. Accessed December 10, 2009.

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Virtual Mentor

MEDICAL EDUCATION
Applying Themes from Research Ethics to International Education Partnerships
Jane Philpott, MD

The ethics of international research have been much discussed over the past decade in academic literature. These papers have primarily focused on the challenge of conducting ethically sound clinical trials. The related domain of medical education has also been affected by trends of globalization, but the literature addressing ethical issues in international medical education is insufficient.

Education and research are closely linked. Both are primary goals of higher academic institutions. Excellence in education requires some element of research, including the critical role of evaluation of program development. Thus, principles applied to research ethics should have some relevance to the field of education.

Globalization has affected medical education in numerous ways. One current trend is academic collaboration between educational institutions in high-income countries and those in low-income countries. Such partnerships are being entered into with much enthusiasm on the part of universities, faculty, and trainees. As institutions rush to build and boast of relationships in certain regions, some have described the phenomenon as a modern-day "Scramble for Africa." Yet there has been little academic discourse about the ethical issues raised by such collaborative efforts.

An example is the Toronto Addis Ababa Academic Collaboration (TAAAC). The University of Toronto (U of T) has been involved in postgraduate medical training at Addis Ababa University (AAU) since 2003. It began with a partnership to train psychiatrists. Before then, Ethiopian physicians had to leave the country for specialty training. Many never returned, and as a result there were only 10 psychiatrists in a country of 77 million people. AAU was able to launch a residency in 2003 that U of T assisted by sending faculty and residents for monthlong on-site teaching blocks several times a year. U of T also provided on-site supervision, examination support, and evaluation-tool development. Since then, 27 new psychiatrists have been trained and four new departments of psychiatry have been established outside of Addis Ababa in Jimma, Harar, Makele, and Nazareth.

Recently, AAU has encouraged U of T to expand this model to postgraduate training for other specialties and subspecialties. By 2010, 11 departments of the Faculty of Medicine were part of the expansion. U of T contributes to faculty development and teaching to support the introduction of several new residency programs at AAU, including the possibility of a new specialty in family medicine.

Many other universities in high-income countries have similar commitments to assist with medical education in international sites. Such partnerships for building capacity may be highly effective and laudable, but they require ethical analysis and guidance to avoid doing more harm than good. In this paper I examine the ethical issues in academic collaboration by applying tests more common to the field of international research—informed consent; risks and benefits; exploitation; standard of care; and codes and guidelines. After applying these concepts to medical education, I offer some essential requirements for ethical engagement in international collaborations for medical education.

Informed Consent
Informed consent, founded on the ethical principle of respect for autonomy (or respect for persons), is arguably the most discussed concept in research ethics. Guidelines in the domain of research have enumerated requirements for informed consent that include: providing adequate information, assuring that the information is comprehended, and confidence that the subject's participation is voluntary [1].

In the context of international research, the concept of informed consent requires some particular considerations. For example, language barriers can impact the successful provision and comprehension of information. The use of translators may allow a tendency to "camouflage, exaggerate or minimize information" [2]. Researchers have also described cultural differences in the location of decisional authority. One must bear in mind the role of community leaders in making consent decisions.

Ethical collaborations for medical education must similarly respect the principles that drive the notion of informed consent, beginning with the provision of information. If a visiting institution is offering educational assistance, the host institution must be adequately informed about what is being offered and given the opportunity to accept or decline the offer and the right to withdraw from the relationship.

In many cases, international universities have been invited to assist with education needs [3] but sometimes assistance is offered without a prior invitation. Clearly "collaboration" cannot be imposed on an institution. Consent to participate would require a full disclosure of risks and benefits for both host and visiting institutions. This is particularly important when an educational program such as postgraduate training in family medicine will be introduced in countries where it does not already exist. An outside university may offer support in launching such a program, but it should require documentation that the host facility has understood the offer, believes that the educational program is important and necessary in their location, and has voluntarily agreed to host it.

Risks and Benefits

In the context of international clinical trials, a second ethical theme that emerges is the balancing of risks and benefits. Some authors have helpfully categorized the potential risks associated with research trials as physical, psychological, social, and economic [4]. Others have clarified that the risks of participation include the costs of buildings, water, power, information technology, staff, administration, and hospitality [5]. An additional question or consideration is the risk to third parties who are indirectly affected by a clinical trial.

These kinds of evaluations should be applied to international collaborations for medical education. There may be a propensity to focus on the potential benefits of such partnerships, but ethical engagement demands a reasonable assessment of both risks and hoped-for benefits.

A host country that accepts international educational partners confronts a number of risks or costs: the additional time that it takes for communication, administration, and orientation of visiting faculty; host-site educators becoming distracted from other important tasks as they help to facilitate visitors; and educational priorities being determined by the expertise and interests of the visiting institution rather than by the needs of the local learners. There are also ongoing risks of cultural misunderstandings between institutions and their representatives and the likelihood that the standards of education of the partner institutions will differ.

Several recommendations for minimizing these risks can be drawn from the research ethics literature. Murff et al. have discussed systems factors in research centers and the importance of providing opportunities for participants to express their concerns about potential risks or faults in the research system [6]. Others have highlighted the importance of being willing to reinvent the design of the research [7]. This suggests that risks of adverse impact in educational collaborations could be minimized by an emphasis on obtaining adequate input from the host institution regarding curriculum, timelines, and educational priorities, input that might be enhanced through the development of a local advisory board.

One must determine whether the risks inherent in innovative educational collaboration are justified by studying how they are balanced by potential benefits. Advocates can readily point to potential benefits for the host site. In the case of medical education in low-income countries, there is hope that enhanced educational resources will increase the health workforce capacity. Historically, many countries have been obliged to send graduate physicians out of their home country for specialty training, an exigency that appears to have contributed to emigration of physicians. If international universities can increase postgraduate medical education in-country, local human resource capacity can be expected to improve. International institutions may be able to provide additional benefits such as access to electronic libraries.

A discussion of benefits must also acknowledge that visiting educators are also likely to benefit. Participation may result in career advancement and publications for some.

An honest analysis would recognize that some visiting educators might be driven by a form of Orientalism—a desire for professional intrigue and expanded horizons to punctuate what may be an otherwise mundane career [8].

Finally it can be hoped that mutual educational benefits are to be had through global partnerships. The opportunities for learning should be recognized to be reciprocal. One of the most delightful theories of adult education is that of social constructivism. As medical learners intermingle with educators and learners from another setting, they share perspectives and observations. Through this social discourse, knowledge is analyzed and shaped into new knowledge, thereby benefiting all participants.

While realization of these expectations and hoped-for benefits remains to be documented, it is certain that an ethical educational collaboration must entail a just means of sharing both risks and benefits.

Exploitation
Benatar has remarked that "research, even under the best of circumstances, is potentially exploitative" [9]. International collaborations for education risk being imperialistic or driven by supremacist ideologies and similarly accused of exploitation. The risk derives from the possibility that, in some circumstances, international teachers may have more to gain than communities taught. Fitzgerald and Wasunna have defined exploitation as occurring "when one person or group uses another person or group to gain advantage" [10], and have stated that it is more likely to happen when there is a pre-existing unequal relationship by reason of wealth, class, education, gender or race. Whether or not exploitation takes place depends on some of the issues discussed previously about the distribution of risks and benefits.

In the context of research, exploitation occurs when subjects are used as means to the ends of researchers, when they derive minimal benefits, or when they are denied post-trial access to beneficial therapies [11]. It can result from the fact that research populations in low-income countries have less access to science education and limited experience in understanding and giving informed consent [12]. Local researchers may have limited familiarity with ethical and scientific review of research protocols, and they may be constrained by limitations of infrastructure, personnel, and technical capacity.

Collaborations in education would benefit from applying the same considerations to their design. Clearly any potential for exploitation must be minimized by assessing the program's distribution of benefits and ensuring that power differentials are not abused. The parties involved must have a frank dialogue about their motivations for participation in the educational program. In the context of research ethics, Tangwa has elaborated on the Kantian concept that the moral value of particular actions must be determined from the perspective of the moral agent and not on the basis of outcomes [13]. Applying this to educational partnerships suggests that the moral value of the education should be determined from the intent of the visiting educator

or institution. Tangwa goes on to warn about the "possibility of nicely dressing up self-interest or exploitation in the robes of moral acceptability or even those of altruism and philanthropy" [14].

Standard of Care/Standard of Education
The discourse in international research ethics has established the principle that appropriate standards of care should be observed regardless of where the research takes place. The same should apply to education—the standard of education should not depend on where the teaching occurs. This principle has a number of implications. Visiting educators have an obligation to teach what is in the best interest of the host country, and the curriculum should not be determined on the basis of the interests and expertise of expatriate teachers. In clinical teaching, there should also be an obligation to translate educational efforts into improved access to good health care in the host country.

It may be noted that, when medical education is provided in low-income countries, multiple standards of education exist. Again one may borrow from research ethics literature to note that the "inability to achieve immediate equity should not be an impediment to making improvements that could spread more widely with time and effort" [15]. In this way an international educational collaboration may begin with the reality of dual standards of education while striving progressively to improve medical education in each location by working together.

Codes and Guidelines
International research ethics has benefited in the past 60 years from the development of various codes and guidelines particularly related to scientific study of human subjects. No similar international codes exist to guide in the ethical participation of education collaborations. As such partnerships spring up in increasing numbers; it may be time to draft some guiding principles; some examples from research guidelines have application to education.

Paragraph 7 in the World Medical Association Declaration of Helsinki states that "Even the best current interventions must be evaluated continually through research for their safety, effectiveness, efficiency, accessibility and quality" [16]. Such a principle of continuous evaluation would equally apply to educational interventions.

Paragraph 9 of the same document states that "Some research populations are particularly vulnerable and need special protection. These include those who cannot give or refuse consent for themselves and those who may be vulnerable to coercion or undue influence" [16]. Some portions of this statement have relevance to educational relationships, cautioning that power differentials between institutions and other stakeholders not be abused.

Eriksson has proposed several questions that could be useful in the development of guidelines for educational partnerships [17]. What problem or problems are the

guidelines meant to deal with? What ethical assumptions are the guidelines based on? What authority would they have? Who is expected to assume responsibility?

One might argue that the ethical issues in education are not as complex as those in clinical research. But even the simplest of relationships can benefit from statements that strive to ensure justice and autonomy for all participants. It is probably not too soon to establish guidelines for ethical collaboration in medical education.

Essentials for Ethical Engagement
I have argued that there are numerous ways in which the themes of international research ethics can be applied to the burgeoning field of international collaborations for medical education. Ultimately it is hoped that these educational collaborations will be of benefit to the health of the population where the education takes place. Educational efforts should take place in a context of fairness and respect for all stakeholders. Curriculum development as well as educational goals and strategies should be determined on the basis of an appropriate needs assessment and adequate consultation of all parties.

London's "human development approach" should be applied to international collaborations for medical education [18]. London has pointed out the need to focus on broad issues of social justice and not routinely to be sidetracked by practical issues. His approach would advocate going beyond a minimalist view of educational objectives so that educators address the broadest social determinants of health.

As a synopsis, the helpful list of requirements for moral progress in international research [19] provides a starting framework that I have adapted to propose ethical guidelines in educational collaborations (see appendix). Collaborations for medical education are now part of the global landscape. I have attempted to determine the principles that should undergird these efforts by borrowing from themes in international research ethics. Clearly, the principle of respect for autonomy must be observed to ensure the voluntary relationship with equitable input for all stakeholders. Additionally, the principle of justice must prevail so that burdens and benefits are fairly distributed.

Appendix
Requirements for making moral progress in international collaborations for medical education (adapted from Benatar and Singer 2000) [19].
1. Raise awareness of ethical implications of international collaborations for medical education;
2. Ensure that educators comprehend and are sensitive to the social, economic and political milieu in which their educational efforts take place;
3. Encourage members of the host country to take the lead in the design and conduct of the curriculum;
4. Ensure that educational materials are of direct relevance to the health needs of the host country;

5. Conduct prior evaluation by a local committee or governing body of whether curricular content/recommendations could be incorporated into the local health care system;
6. Provide trainees with content they would not ordinarily get through local resources;
7. Prevent existing disparities from becoming more deeply entrenched by unequal educational opportunities in regions of educational initiatives;
8. Pursue educational initiatives that will produce benefits for the practice setting and build the capacity of health care professionals in the host country.

References

1. Marshall PA. The relevance of culture for informed consent in U.S.-funded international health research: findings and recommendations from the case study on informed consent for genetic epidemiological studies of hypertension, breast cancer, and diabetes mellitus in Nigeria. In: National Bioethics Advisory Commission. *Commissioned Papers and Staff Analysis.* Bethesda, MD: National Bioethics Advisory Commission; 2001. *Ethical and Policy Issues in International Research: Clinical Trials in Developing Countries*; vol 2.
2. Marshall, C7.
3. Hellenberg D. Developing family medicine in South Africa: a new and important step for medical education. *Med Teach*. 2007;29(9):897-900.
4. Levine RJ. *Ethics and Regulation of Clinical Research*. 2nd ed. London: Yale University Press; 1988.
5. Shapiro K, Benatar SR. HIV prevention research and global inequity: steps towards improved standards of care. *J Med Ethics*. 2005;31(1):39-47.
6. Murff HJ, Pichert JW, Byrne DW, et al. Research participant safety and systems factors in general clinical research centers. *IRB Ethics Hum Res*. 2006;28(6):8-14.
7. Resnick DB, Sharp RR. Protecting third parties in human subjects research. *IRB Ethics and Human Research*. 2006;28(4):1-7.
8. Said EW. *Orientalism*. 25th anniversary ed. New York: Vintage Books; 2003.
9. Benatar SR. Imperialism, research ethics and global health. *J Med Ethics*. 1998;24(4):221.
10. Fitzgerald DW, Wasunna AA. Away from exploitation and towards engagement: an ethical compass for medical researchers working in resource-poor countries. *J Law Med Ethics*. 2005;33(3):559-565.
11. Benatar SR. Towards progress in resolving dilemmas in international research ethics. (The Public's Health and the Law in the 21st Century: Third Annual Partnership Conference on Public Health Law.) *J Law Med Ethics*. 2004;32(4):574-582.
12. Macklin R. After Helsinki: unresolved issues in international research. *Kennedy Inst Ethics J*. 2001;11(1):17-36.

13. Tangwa GB. International regulations and medical research in developing countries: double standards or differing standards? *Notozie di Politeia*. 2002;18:46-50.
14. Tangwa, 49.
15. Benatar SR. Towards progress in resolving dilemmas, etc. 581.
16. World Medical Association. World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human subjects. 6th revision. 2008: 1-5.
17. Eriksson S, Hoglund AT, Helgesson G. Do ethical guidelines give guidance? A critical examination of eight ethics regulations. *Camb Q Healthc Ethics*. 2008;17:15-29.
18. London AJ. Justice and the human development approach to international research. *Hastings Cent Rep*. 2005;35:24-37.
19. Benatar SR, Singer PA. A new look at international research ethics. *BMJ*. 2000;321(7264):824-826.

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Acknowledgement

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MEDICAL EDUCATION
Sustainable International Partnership Building for Academic Medical Centers: Experiences with the Botswana-UPenn Partnership
Jennifer Cohn, MD, and Harvey M. Friedman, MD

The world faces a global health workforce shortage of almost 4 million professionals, with the most severe gaps in sub-Saharan Africa [1]. Improvements in health, including meeting the health-related Millennium Development Goals, are linked with the density of skilled health workers [2]. In the U.S., the reauthorizing bill for the President's Emergency Plan for AIDS Relief (PEPFAR) requires the U.S. to support training of 140,000 new health workers in PEPFAR focus countries. The participation of U.S. academic medical centers (AMCs) will greatly help to close the workforce gap and expand training of health professionals in low- and middle-income countries.

Many partnerships have developed between AMCs and ministries of health in resource-limited countries. These programs range in depth, longevity, and sustainability. While some U.S. academic medical institutions focus on sending trainees abroad for electives, others have more comprehensive programs encompassing the tripartite mission of patient care, medical education, and research. Examples of robust, long-term partnerships include the University of Indiana-Moi University partnership, the Muhimbili University-UCSF project, and the Botswana-UPenn Partnership (BUP). Our experience with the BUP program has led us to believe it can serve as a useful model for such relationships because it possesses the qualities of successful international collaborations.

Auspicious Beginnings
The University of Pennsylvania (Penn) School of Medicine's involvement in Botswana began in 2001 at the request of ACHAP (African Comprehensive HIV AIDS Partnership), a collaboration involving the Government of Botswana, the Bill and Melinda Gates Foundation, and the Merck Company Foundation. The Government of Botswana had decided to make antiretroviral drugs available to its citizens. Doctors with experience using these drugs were needed to help train the local health care workers. The circumstances that led to the formation of BUP highlight an important principle: partnerships that develop at the invitation of the host country rather than at the request of the AMC are more likely to succeed.

A memorandum of agreement is critical for an ongoing relationship between an AMC and a developing country. Such an agreement establishes the legality of the program and sets parameters for the collaboration. In our experience, developing a memorandum of agreement helps to define the focus of the collaboration, which for

BUP has been to help build capacity of health care workers in Botswana to provide care to HIV-infected subjects. Keeping a focus helps increase the chances for success.

It is impossible to guarantee that a partnership will last; it is, however, important for the health of the relationship that it be predictable. Institutions should commit funding for specific time frames, and the details of this funding should be transparent to both partners. Goals, objectives, and activities may thus be planned based on the funding timeline.

Fairness
Multiple studies have shown that rotations abroad have beneficial effects on U.S. trainees, including exposing them to a broader spectrum of disease, familiarizing them with cost-benefit issues and structural determinants of health, and providing hands-on cross-cultural training [3, 4] and there is evidence that international rotations also have long-term impact on the U.S. health system; a larger percentage of medical students who participate in rotations abroad go into careers in primary care or public health [5].

One of the biggest assets of the BUP program for Penn is the opportunity it provides for Penn trainees to participate in medical care in Botswana. Nevertheless, the flow of personnel cannot be one way, and must be viewed as fair by both partners. The Ministry of Health in Botswana is very concerned about brain drain and does not want to send trainees abroad for extended periods of time. The University of Botswana (UB) just formed a new medical school, which enrolled its first class in August 2009 and currently has little interest in sending medical students for electives at Penn, though Penn sends approximately 24 students each year to do electives on the internal medicine wards at the Princess Marina Hospital in Botswana. What, then, constitutes a fair exchange? The principle here is that fair exchanges are fluid and require constant dialogue. Currently, "fair" means offering opportunities for UB undergraduates, nursing students, and faculty to spend semesters abroad or take sabbaticals at Penn. In time, the nature of the student and faculty exchanges may change. Flexibility is crucial.

Focus on the Future
Building sustainable capacity is an important goal of any international collaboration. Our approach, emphasized by PEPFAR, is to provide care in settings where we are working alongside local health care providers. In that way, we are always teaching as we provide care. In locations with too few health care workers, it is often difficult to free up health care personnel to work alongside BUP faculty. The temptation is strong to provide care under all circumstances, but if no local health care workers are involved in that care, we miss a valuable opportunity to build capacity. In our experience, insisting on using every patient encounter as an opportunity to teach has been one of the most difficult aspects of the program to implement, but also one of the most important. Working through these difficulties requires acknowledgement by

local authorities of the importance of capacity building, sometimes at the expense of more immediate returns.

Focus on the Host Country's Priorities
BUP is fortunate to be in Botswana at the time the country is forming its first medical school. Currently, we have 12 doctors living and working full time in Botswana. Some of our doctors were asked to help develop the curriculum for the internal medicine residency training program that started January 2010, while others were invited to serve as attending physician teachers on the medical wards at the Princess Marina Hospital. We are thrilled to participate in these activities, but here too the learning curve is steep for us. If we do too little, we risk disappointing our partners; if we do too much, we risk building resentment. Cultural differences sometimes complicate matters, but communication and mutual trust are keys to success.

The BUP program is centered in the Department of Medicine/Infectious Disease Division of Penn's School of Medicine, yet Botswana's greater needs are primary care and public health. AMCs that want to maximize the benefit to host countries must often shift from tertiary care training to prioritizing primary care and public health interventions [6, 7].

Multi-AMC Collaboration
As more AMCs form partnerships to improve training in low- and middle-income countries, coordination among AMCs becomes important as well. Multiple overlapping relationships may be an excellent model for partnerships, as they enrich technology transfer and provide additional security for the host country if one partner unexpectedly pulls out. (The Friends of Moi collaboration provides an example of how such a multi-AMC collaboration is optimized through frequent, transparent communication and regular planning meetings to outline activities and responsibilies [8].)

Accountability
What is the role of research collaborations in resource-limited countries? The BUP program began with clinical care and education, but as our program matured, we placed greater emphasis on research. This research has a focus that is rather different from that done by many of us at Penn, in that outcomes research is a high priority in Botswana. We want to know if the programs we are helping to implement are actually working because we have learned that a critical step in implementing any new program is to convince key stakeholders in the country of its worth. Without their support, the program will fail. To that end, investigators on research projects should include staff or faculty from the host institutions. One major focus of an AMC should be to transfer research skills and provide technical assistance to host faculty involved in their research [9].

Conclusion

Our increasingly interconnected world calls upon AMCs to meet the original mission of medical colleges: the "pursuit of health in the service of society" [10]. If built on trust, fairness, and sufficient funding, innovative international partnerships like BUP can help realize this goal on a worldwide scale.

References

1. World Health Organization. The global health workforce shortage and its impact. http://www.who.int/mediacentre/factsheets/fs302/en/index.html. Accessed December 20, 2009.
2. Nullis-Kapp C. Health workers shortage could derail development goals. *Bull World Health Organ*. 2005;83(1):5-6.
3. Bateman C, Baker T, Hoornenborg E, Ericsson U. Bringing global issues to medical teaching. *Lancet*. 2001;358(9292):1539-1542.
4. Federico SG, Zachar PA, Oravec CM, et al. A successful international child health elective: the University of Colorado Department of Pediatrics' experience. *Arch Pediatr Adolesc Med*. 2006;160(2):191-196.
5. Gupta AR, Wells CK, Horwitz RI, et al. The International Health Program: the fifteen-year experience with Yale University's Internal Medicine residency program. *Am J Trop Med Hyg*. 1999;61(6):1019-1023.
6. Ulmer DD. Some international efforts of medical schools to improve health systems. *Infect Dis Clin North Am*. 1995;9(2):425-431.
7. Macdonagh R, Jiddawi M, Parry V. Twinning: the future for sustainable collaboration. *BJU Int*. 2002;89(Suppl 1);13-17.
8. Oman K, Khwa-Otsyula B, Majoor G, et al. Working collaboratively to support medical education in developing countries: the case of the Friends of Moi University Faculty of Health Sciences. *Educ Health (Abingdon)*. 2007;20(1):12.
9. Costello A, Zumla A. Moving to research partnerships in developing countries. *BMJ*. 2000;321(7264):827-829.
10. Lewkonia RM. The missions of medical schools: the pursuit of health in the service of society. *BMC Med Educ*. 2001;1:4.

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Botswana-UPenn Partnership faculty and staff to develop the clinical, education, and research missions of the partnership.

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Virtual Mentor

MEDICAL EDUCATION
The University of Washington Pediatric Residency Program Experience in Global Health and Community Health and Advocacy

Kym Ahrens, MD, MPH, F. Bruder Stapleton, MD, and Maneesh Batra, MD, MPH

Among medical trainees, interest in international health experiences is at an all-time high. In the past 25 years, the percentage of graduating North American medical students who have participated in global health electives has risen from 6 percent to almost 30 percent [1, 2]. Involvement in international health experiences has also increased among resident physicians. In our own pediatrics residency program at the University of Washington, the percentage of residents reporting participation in an international health experience has almost doubled in the past 10 years, from 32 percent to 58 percent, and the majority of residents who report this type of experience prior to residency express interest in similar experiences during residency as well.

As a result of this increased interest, nearly all medical schools have incorporated some form of global health teaching into their curricula [3]. Many residencies have also established formal international electives [4] or even specialized tracks to train physicians interested in global health careers [5]. These experiences have undeniable benefits to participants. Medical trainees who have participated in international experiences report increased knowledge of tropical diseases and advanced presentations of diseases encountered in the United States, improved physical examination skills, and a deeper appreciation of issues related to public health, professionalism, and cultural sensitivity [5-9]. They are also more likely than their peers to report an interest in caring for underserved populations in the United States or in devoting their careers to international medicine [7, 8, 10].

Due to the demands of medical education, the duration of international health electives for medical trainees can be quite short. (These trips are particularly limited when they include residents who have a severely curtailed ability to take time off; they frequently have substantial patient care responsibilities assigned to them and are only paid for their physical presence at their home institution.) Concern has been expressed that short-term international medical trips, including those for medical trainees, can be self-serving, ineffective, and unsustainable. These trips may impose burdens on local health facilities or result in the delivery of care that does not meet standards in the U.S. or in the country being visited [11-13].

We assert that international health electives for resident physicians can be conducted ethically if undertaken with forethought and careful planning. In 2008, in collaboration with staff members from a non-governmental agency (NGO) in El

Salvador, several physicians from our institution, including the primary author of this article, outlined a set of principles to guide short-term international medical trips [14]. We summarize these principles below and subsequently illustrate their application to resident-focused international health electives, using an example from our own institution.

To conduct a short-term international health trip involving residents in an ethical manner, we believe that institutions should:

1. Develop a *mission*, or a specific shared purpose prior to the first visit to a new international site and share this early on with participants. We believe the mission of an international health elective should always emphasize improving the public health of the community being served.
2. Forge a *collaboration* with a local agency, such as an NGO, governmental agency, or other local organization to promote sustainability and to enhance the effectiveness of the care delivered.
3. Ensure that the *education* of group participants, community members, and other physicians and trainees is a part of the mission and that appropriate educational experiences are structured into the trip and into planning and debriefing sessions. *Before the trip*, educate participants regarding the country of choice and its sociopolitical context, as well as general principles of public health. Apprise them of medical problems likely to be seen in the specific location and setting as well as what, if any, treatment strategies are appropriate to deliver in the context of the trip. To maximize the quality of these educational experiences, they should be developed from and integrated into existing local and national resources. *During the trip*, employ strategies that allow for the reciprocal education of community members and elective participants; this strategy is endorsed in community-based health promotion work both in and outside of the United States [15]. *After the trip*, encourage participants to share what they learned with other physicians.
4. Establish that you are truly providing *service* to the community. Take the time beforehand to learn about the health priorities of the community from the NGO or other local agency with which you will be working. If possible, establish direct contact with physicians or community members prior to the trip.
5. Emphasize appropriate *teamwork*. In international settings, trainees should function within the team as they function in the United States—with appropriate supervision. It is also important to incorporate physicians from the host country into the team, inasmuch as they have more experience with the types of health problems in the setting in which they practice.
6. Promote *sustainability* by planning appropriately prior to conducting the first trip. Work with administrators at your home institution and residency program to effectively integrate education of group participants into the elective, facilitate coverage for group members' regular duties while they are on the trip, find liability coverage, and determine mechanisms to pay for the elective. Make every effort to offset costs associated with hosting U.S.-based trainees.
7. Build in an *evaluation* process from the start that incorporates the perspectives of group participants, local agency officials and health professionals, and

community members. Evaluation should include debriefing after the trainee returns to the U.S., including a discussion of performance as a member of the health care team, along with thorough evaluation of whether the educational objectives are being met for all stakeholders, including the host site.

In 2008, after 2 years of planning guided by these principles, the University of Washington Pediatric Residency Program launched a combined experience in global health (GH) and community health and advocacy (CHA). The mission and curricula of these two "pathways" were developed by an advisory council consisting of trainees and faculty engaged in these activities. The mission of the global health component was designed collaboratively with partner institutions in Kenya. The pathways' mission is to equip interested pediatric residents with the knowledge and experience to reduce health disparities among children in the U.S. and abroad. With the support of Seattle Children's Hospital and the Department of Pediatrics of the University of Washington, we created a curriculum based on the principles of collaboration, teamwork, education, service, and sustainability, with mutual benefit for all stakeholders involved.

Both the CHA and GH pathways consist of 4 months of activities during the second and third years of residency. In the first month, residents work together in an experiential, interactive curriculum that exposes them to issues in public health, social justice, program evaluation, media training, and ethics. The curriculum includes small group discussions with leaders and potential mentors in child advocacy and public and global health; experiential learning with local organizations engaged in activities in these fields; the development of an individualized learning plan to focus independent work in future months; and a series of problem-based learning sessions through which residents engage the community. The pathways are combined for the first month to highlight commonalities in the skills needed to work with underserved populations domestically and abroad and to encourage the development of common goals and interests among the residents. Furthermore, we chose to focus on the public health needs of the community rather than on clinical management in order to underscore the importance of health promotion and disease prevention in sustaining change.

In the second month of the curriculum, residents design projects with their assigned preceptors based on objectives identified in their learning plans. A critical feature of this portion of the curriculum is that the resident identifies specific knowledge and skills he or she will obtain during the month, along with means for measuring whether or not the objectives were met.

Following this preparatory education, each resident subsequently participates in a two-month experience in either domestic advocacy or global health. The global health experience is based in a rural district hospital in Kenya, where our residents are paired with pediatric residents from the University of Nairobi. In this manner, our residents are integrated into the local health structure, which ensures that they are given appropriate clinical supervision and that clinical care is provided in an ethical

and locally relevant manner. In addition to the hospital-based component of this elective, residents also spend time in the community, identifying educational needs of local health workers and barriers to accessing services. To ensure the impact is sustainable, we concentrate our efforts on one partnership with a single hospital, so that the residents' work builds on that of their predecessors and the program has a presence at the site 8 months out of the year. To support these ongoing partnerships, we have arranged funding for an in-country resident coordinator to facilitate logistics for both the Seattle-based and Kenyan residents and an in-country faculty advisor to oversee the educational experience, maintain relationships with partner institutions, and provide mentorship during the elective.

At the culmination of each rotation, the resident pairs present their findings and recommendations to the provincial hospital, representatives of the public health community and to faculty and trainees at both the University of Washington and the University of Nairobi. Furthermore, both residents are formally interviewed regarding their experiences and give written feedback on all aspects of the rotation. Upon return to the U.S., the Seattle-based resident is required to debrief further with the preceptor. Semi-annually, a summary report of the educational activities and progress towards reaching each institution's educational and service objectives are discussed in person. This evaluative process results in a written agenda of future directions for strengthening the collaboration between institutions and the educational program for the residents.

We believe that the example provided by the GH pathway experience at the University of Washington illustrates that the above principles can guide the development of sustainable, ethically sound international health electives. The incorporation of international health experiences into residency programs has the potential to benefit residents greatly and to improve public health both locally and globally.

References
1. Association of American Medical Colleges. 1984 GQ medical school graduation questionnaire: all schools summary report. Washington, DC: Association of American Medical Colleges; 1984.
2. Association of American Medical Colleges. 2009 GQ medical school graduation questionnaire: all schools summary report. Washington, DC: Association of American Medical Colleges; 2009. http://www.aamc.org/data/gq/allschoolsreports/gqfinalreport_2009.pdf. Accessed on January 8, 2010.
3. PK, Primack A, Hunt DD, et al. Global health in medical education: a call for more training and opportunities. Acad Med. 2007;82(3):226-230.
4. Nelson BD, Lee AC, Newby PK, et al. Global health training in pediatric residency programs. *Pediatrics*. 2008;122(1):28-33.
5. Drain PK, Holmes KK, Skeff KM, et al. Global health training and international clinical rotations during residency: current status, needs, and opportunities. *Acad Med*. 2009;84(3):320-325.

6. Federico SG, Zachar PA, Oravec CM, et al. A successful international child health elective: the University of Colorado Department of Pediatrics' experience. *Arch Pediatr Adolesc Med*. 2006;160(2):191-196.
7. Gupta AR, Wells CK, Horwitz RI, et al. The International Health Program: the fifteen-year experience with Yale University's Internal Medicine Residency Program. *Am J Trop Med Hyg*. 1999;61(6):1019-1023.
8. Miller WC, Corey GR, Lallinger GJ, Durack DT. International health and internal medicine residency training: the Duke University experience. *Am J Med*. 1995;99(3):291-297.
9. Haq C, Rothenberg D, Gjerde C, et al. New world views: preparing physicians in training for global health work. *Fam Med*. 2000;32(8):566-572.
10. Thompson MJ, Huntington MK, Hunt DD, et al. Educational effects of international health electives on U.S. and Canadian medical students and residents: a literature review. *Acad Med*. 2003;78(3):342-347.
11. Bezruchka S. Medical tourism as medical harm to the Third World: Why? For whom? *Wilderness Environ Med*. 2000;11(2):77-78.
12. Roberts M. A piece of my mind. Duffle bag medicine. *JAMA*. 2006;295(13):1491-1492.
13. Bishop R, Litch JA. Medical tourism can do harm. *BMJ*. 2000;320(7240):1017.
14. Suchdev P, Ahrens K, Click E, et al. A model for sustainable short-term international medical trips. *Ambul Pediatr*. 2007;7(4):317-320.
15. Minkler M, Wallerstein N, eds. *Community-Based Participatory Research for Health*. San Francisco, CA: Jossey-Bass; 2002.

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THE CODE SAYS

AMA *Code of Medical Ethics'* Opinion on International Research

Opinion 2.077 – Ethical Considerations in International Research

Physicians, either in their role as investigators or as decision-makers involved in the deliberations related to the funding or the review of research, hold an ethical obligation to ensure the protection of research participants. When the research is to be conducted in countries with differing cultural traditions, health care systems, and ethical standards, and in particular in countries with developing economies and with limited health care resources, US physicians should respect the following guidelines:

(1) First and foremost, physicians involved in clinical research that will be carried out internationally should be satisfied that a proposed research design has been developed according to a sound scientific design. Therefore, investigators must ascertain that there is genuine uncertainty within the clinical community about the comparative merits of the experimental treatment and the one to be offered as a control in the population among which the study is to be undertaken. In some instances, a three-pronged protocol, which offers the standard treatment in use in the US, a treatment that meets a level of care that is attainable and sustainable by the host country, and a placebo (see Opinion 2.075, "Surgical Placebo' Controls"), may be the best method to evaluate the safety and efficacy of a treatment in a given population. When US investigators participate in international research they must obtain approval for such protocols from U.S. Institutional Review Boards (IRBs).

(2) IRBs, which are responsible for ensuring the protection of research participants, must determine that risks have been minimized and that the protocol's ratio of risks to benefits is favorable to participants. In evaluating the risks and benefits that a protocol presents to a population, IRBs should obtain relevant input from representatives from the host country and from the research population. It is also appropriate for IRBs to consider the harm that is likely to result from forgoing the research.

(3) Also, IRBs are required to protect the welfare of individual participants. This can best be achieved by assuring that a suitable informed consent process is in place. Therefore, IRBs should ensure that individual potential participants will be informed of the nature of the research endeavor and that their voluntary consent will be sought. IRBs should recognize that, in some instances, information will be meaningful only if it is communicated in ways that are consistent with local customs.

(4) Overall, to ensure that the research does not exploit the population from which participants are recruited, IRBs should ensure that the research corresponds to a medical need in the region where it is undertaken. Furthermore, they should foster research with the potential for lasting benefits, especially when it is undertaken among populations that are severely deficient in health care resources. This can be achieved by facilitating the development of a health care infrastructure that will be of use during and beyond the conduct of the research. Additionally, physicians conducting studies must encourage research sponsors to continue to provide beneficial study interventions to all study participants at the conclusion of the study.

Based on the report Ethical Considerations in International Research, adopted June 2001.

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JOURNAL DISCUSSION
The Physician-Researcher's Dilemma
Hana Akselrod

Manabe YC, Jacob ST, Thomas D, et al. Resurrecting the triple threat: academic social responsibility in the context of global health research. *Clin Infec Dis*. 2009;48(10):1420-1422.

At its most basic, the title of a medical doctor represents a commitment to engage with patients, helping and advising them to the best of one's ability. When the physician also takes on the role of researcher, which responsibilities have the greater claim on his or her time? While the question of allocating time between the clinic and the laboratory can be personally stressful even in the best-equipped hospitals in the U.S., in settings of extreme physician shortage it becomes a stark moral dilemma—one that is only partially addressed by current ethical frameworks.

In "Resurrecting the Triple Threat," Manabe et al. propose a framework for tackling this question by examining the work of AIDS researchers in Uganda. The HIV/AIDS pandemic has exacerbated the health problems of resource-poor countries, galvanized international research and funding bodies into action, and brought about broader concern for the human rights of the affected. Global health research has expanded rapidly in recent decades, in part through collaborations that leverage resources from richer countries to attack the problems of developing nations at sites of high disease prevalence. These collaborations answer the call for new research that could reduce widespread human suffering. Yet their rise prompts new ethical challenges, starting with the problematic power relationships of international collaborations, their history of abuses, and their present distributions of power.

The best intentions of global health work are tested when priorities set by narrow research agendas collide with realities of widespread health problems on the ground. Manabe et al. describe the case of the Infectious Diseases Institute at Makerere University in Uganda—a new academic medical center, built with the capacity for treating 13,000 HIV-positive patients while supporting world-class clinical research, with funding from both private and public sources. Next to these modern facilities is the small, chronically overburdened Mulago Hospital—a public referral center, representative of the heartbreakingly brittle health care infrastructure on which most patients in developing nations rely [1, 2]. When an American research fellow at Makerere uses her time to volunteer in a public clinic, is she postponing the outcome of her research and letting down her sponsors? Conversely, when she passes by the long lines of patients awaiting basic care at Mulago Hospital on her way to the lab at Makerere, is she ignoring an obvious medical need?

The authors approach this dilemma by drawing upon a familiar model of academic medicine: the framework of a "triple threat" career that supports at once the humanistic practice of clinical medicine, the teaching and mentorship of students, and research supported by outside funding. They argue that academic institutions concerned with global health must resist the trend to prioritize the research component, and build professional structures that make it easier for global health researchers to both treat patients and teach while working in dramatically underserved communities. In the absence of clear guidelines and institutional support, physician-researchers struggle to balance empathy and impact in ways that are both ethically acceptable and practically sustainable. This dilemma places researchers at risk for personal disengagement and burnout, and, at worst, for committing frank exploitation.

Resource-intensive research in resource-poor settings is funded by the holders of global wealth: pharmaceutical companies, major philanthropic organizations, academic institutions, governments, and supranational agencies. Thus, medical research is subject to familiar global power dynamics—the same mechanisms that keep the residents of poorer nations vulnerable to diseases and exploitation alike. Existing ethics guidelines emphasize that, for global health research to be ethical, researchers must be scrupulously cognizant of who controls the information, who bears the greatest risks, and who will ultimately benefit from the work [3, 4]. Visiting medical researchers have the responsibility to prevent further exploitation of vulnerable populations and to look for upstream causes of ill health that can be addressed through advocacy [4, 5]. In particular, academic global health ethics highlights the principles of personal humility, introspection, solidarity, and social justice, guided by awareness of the rights of individuals and communities [5]. Other formulations outline principles for designing ethical research in developing countries, reinforcing the values of collaborative partnership, fair recruitment practices, respect for local communities, scientific validity, and favorable risk-benefit ratio for participants. The more specific recommendations have focused on ethical methods of enrolling patients in trials, such as obtaining valid informed consent [3]. However, on the topic of researchers' time allocation, the new guidelines are silent.

In the rest of this discussion, I evaluate the claim of an obligation to allocate researcher time for clinical care, using three of the four basic principles of medical ethics: beneficence, non-maleficence, and justice. (While the fourth—respect for patient autonomy—contributes to ethical concerns in global health research, especially with regard to individual versus group or community autonomy, it is less directly related to the allocation of physician time.) I then discuss the pragmatic levels on which the obligation may apply, along with the associated mechanisms of accountability and support.

Without a doubt, both research and clinical care can and do serve the principle of beneficence [6]. In fact, research arguably holds the greater potential for future

beneficence, as a breakthrough in HIV treatment or prevention could save millions of lives. At the same time, a complete exclusion of clinical work is hard to excuse, according to Manabe et al. "If we do nothing in situations where we perceive clear medical need," the authors rightly ask, "does this constitute inflicting harm?"[1]. Physicians are trained to weigh the costs of inaction as well as those of action, and ignoring the suffering of the sick when one possesses the clinical skills to help them, along with some freedom to do so, certainly seems like a failure of non-maleficence.

In the present case, the main ethical challenge—and the one Manabe et al. address most effectively—is the matter of justice and non-exploitation. From a strict utilitarian perspective, it would seem that the researcher's time is most efficiently invested in the laboratory or research facility, where treatments of worldwide importance are devised. This argument is especially powerful in situations of urgency, such as research on a rapidly emerging pathogen (e.g., H1N1). If the situation is examined with an eye to social or Rawlsian justice, though, the argument is reversed, and medical professionals have a positive responsibility to ensure that the needs of the sickest and most marginalized patients are not neglected [6]. In a global health setting, the principles of social justice and non-exploitation support a broad view of the visiting physician's obligation to the entire host community. Here, preferentially rewarding pure research over clinical care can prompt the neglect of medical needs in the community while benefiting individual careers and powerful corporations, effectively committing exploitation.

Furthermore, it was recently argued by Barnhart in *Virtual Mentor* [7], that a type of brain drain occurs when an academic institution in a developing country uses its scarce teaching resources to subsidize the professional development of an American trainee instead of a comparably skilled local medical student. Even with the concomitant increase in tuition revenue, hosting professionals from a wealthy country in the short term reduces the long-term supply of caretakers to the local community [7]. This criticism easily extends to the training of researchers: although research fellows require less direct teaching than do medical students, they can still create a significant drain on the time of more experienced local faculty, administrative support, and other limited institutional resources.

Once we accept that ethical principles compel researchers to engage with the underserved community, we must tackle the pragmatic question of how this obligation can be met. Researchers must juggle three types of ethical obligations: personal (to uphold one's moral beliefs), professional (to meet professional standards), and contractual (to satisfy the providers of funding). It is here that the "triple threat" model of professional development invoked by Manabe et al. is most useful. This model has long empowered physicians to contribute to advances in modern medicine while remaining grounded in interactions with patients and passing on their knowledge to generations of students.

In the global health context, "resurrecting the triple threat" is a call to restructure international academic partnerships with the goal of promoting greater social

responsibility; it is an invitation to see a doctor's engagement with the community through service and teaching not as distractions from research work, but as valuable components of a rewarding professional life. On the personal level, embracing this paradigm would offer physicians a framework for resolving a number of ethical problems, including that of time allocation between the lab and the clinic, and a more supportive model for personal social responsibility overall. On the professional level, the obligation to treat patients in extremely disadvantaged communities can be emphasized in initial training, institutional policies, and continuing medical education—not as a naive ideal, but as a pragmatic career component and the basis for professional respect. Finally, through regular clinical practice, researchers may gain greater insight into the community, increasing cultural competency and understanding between the academic institution and its surroundings.

The contractual element of this obligation is predictably the most complex, and crucial. Competitive academic programs are fueled by research funding, which selectively rewards time spent on research, incidentally de-prioritizing activities undertaken out of a sense of social responsibility. The mechanisms of remuneration and accountability must be restructured to help balance the contractual obligations of the academic physician with the values of medical ethics and the actual needs on the ground. If funding sources and host sites are serious about their commitment to global health, they should formalize the allocation of time between research and clinical care at their sites, much as they formalize the terms of the research itself, and include local communities in the planning process. This is obviously a challenge, but it must be viewed as an opportunity for global health institutions to organize themselves, to strengthen their relationships with their hosts, and to make an even more substantive contribution to the evolution of medical ethics.

With its privileged role in society, the medical profession has a broad responsibility to the health of the greater community—a responsibility that extends beyond the walls of the laboratory and the hospital. In settings of extreme medical need, this translates into a positive obligation to help the sickest and the poorest, even if this is not the primary goal of the institution. At the same time, a structured approach is vital: we cannot afford to frame responsibilities that are too broad to fulfill or too vague to be actionable. To do so would be a disservice to our patients and to the profession alike. By explicitly integrating the ethics of global health with the traditional ideals of academic medicine, we may arrive at a pragmatic framework for academic social responsibility—to the empowerment of institutions, doctors, and victims of disease in the most disadvantaged places in the world.

References
1. Manabe YC, Jacob ST, Thomas D, et al. Resurrecting the triple threat: Academic social responsibility in the context of global health research. *Clin Infect Dis*. 2009;48(10):1420-1422.
2. Sande M, Ronald A. The academic alliance for AIDS care and prevention in Africa. *Acad Med*. 2008;83(2):180-184.

3. Emanuel EJ, Wendler D, Killen J, Grady C. What makes clinical research in developing countries ethical? The benchmarks of ethical research. *J Infect Dis*. 2004;189(5):930-937.
4. Farmer PE, Nizeye B, Stulac S, Keshavjee S. Structural violence and clinical medicine. *PLoS Med*. 2006;3(10):e449.
5. Pinto AD, Upshur RE. Global health ethics for students. *Dev World Bioeth*. 2009;9(1):1-10.
6. Coughlin SS, Soskolne CL, Goodman KW. *Case Studies in Public Health Ethics*. Washington, D.C.: APHA; 1998.
7. Barnhart S. Should medical education fight international brain drain? *Virtual Mentor*. 2009; 11(7):498-501. http://virtualmentor.ama-assn.org/2009/07/ccas2-0907.html. Accessed February 4, 2010.

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Virtual Mentor

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JOURNAL DISCUSSION
Global Health Ethics and Professionalism Education at Medical Schools
Sujal M. Parikh

Shah S, Wu T. The medical student global health experience: professionalism and ethical implications. *J Med Ethics*. 2008;34(5):375-378.

Global health has enjoyed a great deal of attention in the past several years, due to the growing sense of interconnectedness across continents and cultures, as well as to the health challenges we collectively face, such as the H1N1 influenza pandemic and the effects of climate change. These challenges compound the existing problems of health worker migration, disparities in access to affordable care, armed conflict, and population growth that already confront health care systems around the world.

Interest in global health within the medical and public health community might be crudely assessed by the number of peer-reviewed articles discussing the topic. If a hypothetical researcher searched MEDLINE for "global health" or "international health" in 1925, one article would appear. By 1990, there would be 528 articles, but by 2010, 9,243 articles would be related to those terms.

Medical students and medical schools are not insulated from these trends. Among medical students in the United States graduating in 2009, 29.9 percent will have participated in a global health experience [1]. Depending on where they went to school and their own motivation, these students may or may not have engaged in discussions of the ethical or professional implications of their work. Their formal education related to global health could have ranged from virtually nothing to multiyear programs with close faculty supervision. In the view of U. S. medical students who graduated in 2009, medical schools' ability or willingness to provide global health education does not match the demand; 41.3 percent of them felt that inadequate time was spent on global health [1].

The Obligations of Medical Schools
As students within this system, Shah and Wu provide an insightful discussion of ethical and professional implications of medical student participation in global health experiences (GHEs) [2]. Though they note that "research, teaching, and related activities are also GHEs," they limit their discussion to clinical scenarios. This is an understandable distinction to make, as the challenges, relevant ethical and professional principles, and potential solutions are different for each of those domains. Physicians and students should keep in mind, however, that in actual practice, the work that medical students do in resource-limited and international settings rarely fits neatly within those boundaries.

Shah and Wu emphasize the institutional obligations of medical schools in addition to the responsibilities of medical students or physicians—which numerous other articles discuss. They note that

> medical schools bear the responsibility of fostering principled and professional frameworks for students to approach medicine, and it seems natural that this preparation ought to extend to patients served in any context, including those populations in resource-limited settings [3].

That is, the authors focus on the educational structures that produce the medical students and physicians who later find themselves in ethical and professional dilemmas in resource-limited or international settings.

This emphasis is increasingly relevant, since, in my experience, many of these institutions now directly sponsor global health experiences through groups based within the school and provide indirect support for students and faculty working with organizations unaffiliated with the school. The institutions have an obligation to ensure that the global health experiences comply with the highest ethical standards. They should, for example, require that a physician licensed in the jurisdiction where the GHE is taking place supervises provision of medical care and that all donated pharmaceuticals and medical supplies comply with WHO standards. The institutions must also ensure that students are aware of their ethical and professional obligations while working in resource-limited settings.

Shah and Wu specify that medical schools should develop a "formalized global health professional curriculum" to "better prepare their students for the unique challenges of practicing medicine in resource-limited settings" [3]. They refer to the Association of American Medical Colleges' (AAMC's) four key attributes of professionalism as a starting point for standardized ethical guidelines for global health experiences. These attributes are: (1) adhering to high ethical and moral standards, (2) responding to societal needs that reflect a social contract with the communities served, (3) subordinating self-interest to the interest of others, and (4) evincing core humanistic values. They also mention that the courses should "incorporate preparation for the health and personal safety challenges of working in these environments" [4].

Professional and ethical behavior and attitudes are greatly influenced by students' and other professionals' understanding of the environmental, social, political, economic, and cultural structures and forces at work in host communities. Thus, any effort to teach global health ethics and professionalism must be grounded in a broader education on the history, ideas, organizations, and challenges that affect global health in general and the particular communities where the students plan to work.

Education about global health should not be limited to those students who happen to participate in global health experiences during their time as medical students. As the

world becomes more interdependent and interconnected, a basic understanding of global health topics will be necessary for all physicians [5], but there is no consensus on what those topics should be. The Global Health Education Consortium and the Association of Faculties of Medicine of Canada Resource Group on Global Health have begun the process of developing consensus by forming a committee to develop global health curriculum guidelines that will be relevant to all medical students [6].

The Obligations of Individuals
Shah and Wu make important recommendations for institutions, but they do not neglect the responsibilities of individuals. The authors make an astute observation about the dilemma experienced by medical students who seek to serve in resource-limited and international settings:

> The *opportunity to serve* an underserved population is an important factor motivating GHE participation for many of our peers. This *ability to serve*, however, is often tempered by the limitations in our clinical knowledge, given our status as physicians-in-training. This desire to help, combined with relative inexperience, can pose ethical conflicts and leave both patients and students vulnerable to negative outcomes… [emphasis added] [7].

They also discuss the all-too-pervasive view that many volunteers (not just medical students) have about the communities they serve: "people who live in poverty will benefit from *any* medical services, irrespective of the experience, or lack thereof, of the provider" [8]. I sometimes hear this from students and physicians stated as "Well, it's better than nothing."

Physicians and physicians-in-training are bound by the ethical principle of nonmaleficence, often succinctly stated as *primum non nocere*. Working abroad or with people who have no other options for care does not eliminate this ethical requirement. Physicians and medical students must evaluate the potential harm of their actions and inform patients of this harm. Often, however, physicians and students working in new settings, with unfamiliar diseases and disease presentations and without sufficient knowledge about options for follow-up care, are not fully aware of the possible harms of their actions and inaction [9, 10]. Moreover, cultures vary in how they balance risks and benefits and how they assess uncertainty. This underscores the need for physicians and students to learn as much as they can about their destination prior to leaving, and the need for them to work in conjunction with local health care providers. As Shah and Wu state, physicians and students "bear the responsibility of saying 'no' and recognizing their own limitations" [4].

Conclusions
It is exciting and encouraging that an increasing number of physicians and medical students are interested in promoting global health equity. Although a large percentage of medical students think medical schools have not kept pace with this interest, these institutions play a crucial role within the health care system domestically and internationally. They can strengthen efforts to address the needs of the underserved by incorporating global health topics into the core medical

curriculum, teaching more continuing medical education classes on relevant topics, and supporting efforts to develop guidelines for ethical and professional behavior for physicians and students participating in global health experiences.

Health care professionals who seek to serve the underserved devote their already-stretched time and energy and should be commended for their efforts. Their patients should expect that they will receive high quality care and that their caregivers will adhere to the highest ethical and professional standards. In their role as patient-advocates, physicians and medical students should demand this of themselves, their colleagues, and the organizations with which they work.

References
1. Association of American Medical Colleges. 2009 GQ medical school graduation questionnaire: all schools summary report. Washington, DC: Association of American Medical Colleges; 2009. http://www.aamc.org/data/gq/allschoolsreports/gqfinalreport_2009.pdf. Accessed on February 16, 2010.
2. Shah S, Wu T. The medical student global health experience: professionalism and ethical implications. *J Med Ethics*. 2008;34(5):375-378.
3. Shah, Wu, 375.
4. Shah, Wu, 377.
5. Drain PK, Primack A, Hunt DD, et al. Global health in medical education: a call for more training and opportunities. *Acad Med*. 2007;82(3):226-230.
6. Brewer TF, Saba N, Clair V. From boutique to basic: a call for standardised medical education in global health. *Med Educ*. 2009;43(10):930-933.
7. Shah, Wu, 375-376.
8. Shah, Wu, 376.
9. Crump JA, Sugarman J. Ethical considerations for short-term experiences by trainees in global health. *JAMA*. 2008;300(12):1456-1458.
10. Green T, Green H, Scandlyn J, Kestler A. Perceptions of short-term medical volunteer work: a qualitative study in Guatemala. *Global Health*. 2009;5:4.

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CLINICAL PEARL
The WHO Clinical Staging System for HIV/AIDS
Jennifer L. Weinberg and Carrie L. Kovarik, MD

For over twenty years, human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS) have been significant public health concerns, and the epidemic continues to challenge humanity. The majority of the world's new HIV infections occur in low- and middle-income countries, with two-thirds of the world's HIV-infected population living in Africa [1]. Many complex factors contribute to the disproportionate impact of HIV in resource-poor settings: poverty, disease stigma, cultural and social barriers to testing and treatment, insufficient health care infrastructure to support the large patient pool, lack of health literacy, limited provider training, inadequate medical equipment, scarce manpower to distribute health care throughout the region, and few qualified laboratory facilities [2].

In areas with adequate resources, laboratory measurements of CD4+ T cells and plasma HIV viral load are commonly used to establish a patient's degree of immunosuppression and the rate of destruction of the immune system [3]. These tools are used to ascertain a patient's eligibility for treatment and to monitor disease progression. With insufficient resources to test CD4+ T-cell counts and plasma HIV viral load in many resource-limited settings, including many of the regions hardest hit by the HIV/AIDS epidemic, clinicians must rely on clinical parameters when assessing a patient's disease status. The World Health Organization (WHO) has developed case definitions for HIV surveillance and clinical staging and immunological classification of HIV-related disease in adults and children. This system uses standardized clinical parameters to direct medical decision making for patients with HIV/AIDS and can be used based solely on patient clinical features, thus accommodating facilities with no or limited access to laboratory testing [4]. The WHO Clinical Staging system has been shown to be a practical and accurate way to manage HIV-infected patients, with international studies showing agreement between clinical manifestations included in the WHO staging system and laboratory markers including CD4 cell count and total lymphocyte count [5-8].

With the progression of the HIV/AIDS epidemic, consideration of the entire spectrum of infection is necessary. Several discrete clinical phases can be recognized along the continuum, and they correlate with the degree of immunodeficiency that arises with progression of HIV infection. Early identification and treatment is crucial to reduce transmission of the virus, but many people remain unaware of their HIV status during the crucial early months of infection when transmission risk is high, secondary to elevated levels of viremia [3]. Monitoring systems that do not rely on

laboratory techniques are also needed in resource-limited settings to monitor the increasing numbers of patients on antiretroviral medications [9]. The Revised WHO HIV/AIDS Clinical Staging System is intended for baseline assessment of patients and for use in provision of ongoing care. The revised system:

- Provides guidance including when to start, switch, or stop prophylactic medications, antiretrovirals, and other interventions;
- Assists clinicians in the assessment of a patient's current clinical status;
- Encourages clinical providers to offer diagnostic HIV testing to patients who exhibit clinical signs suggestive of HIV infection;
- Classifies disease in a progressive sequence from least to most severe;
- Is designed to be used with reference to current and previous clinical events, making it useful for surveillance purposes [4].

Four Clinical Stages
The WHO system for adults sorts patients into one of four hierarchical clinical stages ranging from stage 1 (asymptomatic) to stage 4 (AIDS). Patients are assigned to a particular stage when they demonstrate at least one clinical condition in that stage's criteria. Patients remain at a higher stage after they recover from the clinical condition which placed them in that stage [5].

Stage 1. Patients who are asymptomatic or have persistent generalized lymphadenopathy (lymphadenopathy of at least two sites [not including inguinal] for longer than 6 months) are categorized as being in stage 1, where they may remain for several years [10].

Stage 2. Even in early HIV infection, patients may demonstrate several clinical manifestations. Clinical findings included in stage 2 (mildly symptomatic stage) are unexplained weight loss of less than 10 percent of total body weight and recurrent respiratory infections (such as sinusitis, bronchitis, otitis media, and pharyngitis), as well as a range of dermatological conditions including herpes zoster flares, angular cheilitis, recurrent oral ulcerations, papular pruritic eruptions, seborrhoeic dermatitis, and fungal nail infections [4].

Stage 3. As disease progresses, additional clinical manifestations may appear. Those encompassed by the WHO clinical stage 3 (the moderately symptomatic stage) category are weight loss of greater than 10 percent of total body weight, prolonged (more than 1 month) unexplained diarrhea, pulmonary tuberculosis, and severe systemic bacterial infections including pneumonia, pyelonephritis, empyema, pyomyositis, meningitis, bone and joint infections, and bacteremia. Mucocutaneous conditions, including recurrent oral candidiasis, oral hairy leukoplakia, and acute necrotizing ulcerative stomatitis, gingivitis, or periodontitis, may also occur at this stage [4].

Stage 4. The WHO clinical stage 4 (the severely symptomatic stage) designation includes all of the AIDS-defining illnesses. Clinical manifestations for stage 4 disease that allow presumptive diagnosis of AIDS to be made based on clinical

findings alone are HIV wasting syndrome, *Pneumocystis pneumonia* (PCP), recurrent severe or radiological bacterial pneumonia, extrapulmonary tuberculosis, HIV encephalopathy, CNS toxoplasmosis, chronic (more than 1 month) or orolabial herpes simplex infection, esophageal candidiasis, and Kaposi's sarcoma [4]. Other conditions that should arouse suspicion that a patient is in clinical stage include cytomegaloviral (CMV) infections (CMV retinitis or infection of organs other than the liver, spleen or lymph nodes), extrapulmonary cryptococcosis, disseminated endemic mycoses (e.g., coccidiomycosis, penicilliosis, histoplasmosis), cryptosporidiosis, isosporiasis, disseminated non-tuberculous mycobacteria infection, tracheal, bronchial or pulmonary candida infection, visceral herpes simplex infection, acquired HIV-associated rectal fistula, cerebral or B cell non-Hodgkin lymphoma, progressive multifocal leukoencephalopathy (PML), and HIV-associated cardiomyopathy or nephropathy [4]. Presence of these conditions unaccompanied by the AIDS-defining illnesses, however, should prompt confirmatory testing.

These categories apply to adults and adolescents 15 years-of-age and older. A modified version of the WHO Clinical Staging System is available for infants and children under 15 [4].

Like CD4 counts and viral load testing, recognition of these clinical findings included in the WHO system is an important method for identifying HIV-infected individuals at high risk for morbidity and mortality. Remaining aware of the natural course of HIV infection allows one to base management decisions on the patient's clinical presentation. According to the WHO, advanced HIV/AIDS disease is defined for surveillance purposes as any clinical stage-3 or stage-4 disease or any clinical stage with a CD4 count greater than 350 per cubic mm, and this information can be used to calculate the burden of disease and the demand for antiretroviral therapy [4]. Strong evidence supports the clinical benefit of antiretroviral medications for adults with advanced HIV/AIDS as determined clinically or immunologically, with the WHO recommending definitive initiation of antiretroviral therapy in adults and adolescents in clinical stage 4, consideration of therapy initiation for those in clinical stage 3, and antiretroviral use for those in clinical stage 1 or 2 only if the CD4 count is greater than 200 per cubic mm [4]. For patients taking antiretroviral therapy for more than 24 weeks, new or recurrent clinical staging events can be a guide to decision-making. Prior to 24 weeks of antiretroviral treatment, clinical events are largely influenced by immune reconstitution or treatment toxicity and may not accurately reflect immune deterioration [11]. WHO guidelines report that the appearance of new or recurrent WHO clinical stage 3 and 4 conditions beyond 24 weeks after initiation of therapy suggests treatment failure [9].

The HIV/AIDS epidemic clearly has broad and significant implications for individuals living around the globe. Populations in developing nations are especially hard-hit by HIV infection and, at the same time, frequently lack access to technological advances and other resources for diagnosing and managing care. Screening strategies, such as the WHO Clinical Staging System, allow for efficient

identification of early infection and aggressive management when clinicians are equipped with the knowledge to apply them, and can therefore be useful tools for improving access to and implementation of care.

References
1. Bendavid E, Young SD, Katzenstein DA, et al. Cost-effectiveness of HIV monitoring strategies in resource-limited settings: a southern African analysis. *Arch Intern Med*. 2008;168(17):1910-1918.
2. Charles M, Boyle B. Excess and access: The continuing controversy regarding HIV and health care in Africa. *AIDS Read*. 2002;12(7):288-292.
3. Simon V, Ho DD, Abdool Karim Q. HIV/AIDS epidemiology, pathogenesis, prevention, and treatment. *Lancet*. 2006;368(9534):489-504.
4. World Health Organization. Interim WHO clinical staging of HIV/AIDS and HIV/AIDS case definitions for surveillance: African region. Switzerland: World Health Organization; 2005.
5. Malamba SS, Morgan D, Clayton T, et al. The prognostic value of the World Health Organization staging system for HIV infection and disease in rural Uganda. *AIDS*. 1999;13(18):2555–2562.
6. Kassa E, Rinke de Wit TF, Hailu E, et al. Evaluation of the World Health Organization staging system for HIV infection and disease in Ethiopia: Association between clinical stages and laboratory markers. *AIDS*. 1999;13(3):381-389.
7. Kagaayi J, Makumbi F, Nakigozi G, et al. WHO HIV clinical staging or CD4 cell counts for antiretroviral therapy eligibility assessment? An evaluation in rural Rakai district, Uganda. *AIDS*. 2007;21(9):1208-1210.
8. Lynen L, Thai S, De Munter P, et al. The added value of a CD4 count to identify patients eligible for highly active antiretroviral therapy among HIV-positive adults in Cambodia. *J Acquir Immune Defic Syndr*. 2006;42(3):322-324.
9. Colebunders R, Moses KR, Laurence J, et al. A new model to monitor the virological efficacy of antiretroviral treatment in resource-poor countries. *Lancet Infect Dis*. 2006;6(1):53-59.
10. South Africa Department of Health. Natural course of HIV disease and WHO clinical staging in adults. Pretoria, South Africa: South Africa Department of Health.
11. World Health Organization. WHO case definitions of HIV for surveillance and revised clinical staging and immunological classification of HIV-related disease in adults and children. Switzerland: World Health Organization; 2007.

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Virtual Mentor

HEALTH LAW
Liability Considerations for Physician Volunteers in the U.S.

Lisa Benrud, PhD, JD, Jacqueline Darrah, JD, MA, and Alison Johnson, RN, MBA

Physicians are often asked to provide free or reduced-cost care to uninsured and underinsured community members. Most physicians are willing to help. Participation can take many forms, including seeing patients with Medicaid or other coverage where payment may not cover the cost of services; seeing patients without charge in the physician's usual clinic; volunteering time at a clinic that provides free or reduced-cost care; treating those in homeless shelters, temporary clinics, or on the streets; and volunteering in disaster relief situations without a formal structure. Under these circumstances, the physician is often unfamiliar with patients and their histories and may be treating them for conditions or stages of disease that are not within the doctor's regular scope of practice. Supplies and diagnostic capabilities may be limited or rudimentary, and, when treating patients with mental illness or substance abuse issues, the physician may not have access to behavioral health workers to help with treatment decisions.

Liability Questions

Delivering care under these circumstances often presents liability concerns for physicians. If no fee is charged, does the responsibility of the malpractice carrier change? Do Good Samaritan laws provide protection from legal action, especially in the case of street work or in temporary situations?

The practice of medicine may be different in volunteer situations than in a traditional clinical setting. Physicians often rely on diagnostic algorithms when laboratory and other diagnostic tests are not available to the patient for financial or practical reasons. What kind of liability (if any) does the physician incur by diagnosing a patient and recommending treatment in the absence of the usual diagnostic tests? Physicians may also be concerned about issues related to incomplete treatment when they care for indigent populations. If treatment will be unavailable because the patient is uninsured, what is the use of diagnostic testing?

State Law Protections for Physician Volunteers

Physicians who volunteer in free clinics and community settings and for charitable organizations may be eligible for liability protection under both state and federal law. Most states have some form of limited liability or immunity for physicians who volunteer their professional services, and some subsidize the purchase of malpractice insurance [1]. These protections, and the circumstances under which they apply, vary widely by state. Although state immunity laws provide some protections for

physicians who provide volunteer medical services, they do not guarantee that physicians will not be sued as a result of volunteering their professional services.

It is important to distinguish these state immunity laws from Good Samaritan laws. Good Samaritan laws protect health professionals only when they are providing care in emergency situations.

Federal Law Protections for Physician Volunteers
The Volunteer Protection Act of 1997: Volunteers of a Nonprofit or Governmental Entity. The Volunteer Protection Act of 1997 (VPA) was enacted to provide minimum protections for volunteers [2]. Testimony in support of the legislation indicated that concern and uncertainty about the potential for personal liability acted as a significant deterrent to volunteering [3].

The VPA establishes a minimum level of protection for volunteers and preempts inconsistent state law unless the state law provides greater protection [4]. A "volunteer" is defined as an individual performing services for a nonprofit organization or government entity who does not receive compensation (other than reasonable reimbursement or allowance for expenses incurred) or any other thing of value in lieu of compensation in excess of $500 per year [5].

The VPA provides immunity for harm caused by the acts or omissions of volunteers serving nonprofit organizations or governmental entities if:
- The volunteer was acting within the scope of his or her responsibilities at the time of the alleged act or omission;
- The volunteer was properly licensed, certified, or authorized to act, if such license or authorization is needed;
- The harm was not caused by willful, criminal, or reckless misconduct; gross negligence; or a conscious, flagrant indifference to the rights or safety of the individual harmed by the volunteer; and
- The harm was not caused by the volunteer's operating a motor vehicle, vessel, aircraft, or other vehicle for which the state requires an operator's license or insurance [6].

Volunteers protected by the VPA are, however, still subject to state laws of the following types, which the VPA does not preempt:
- A state law requiring the nonprofit organization or governmental entity to adhere to risk management procedures, including mandatory training of volunteers;
- A state law making the organization or entity liable for the acts or omissions of its volunteers to the same extent an employer is liable for the acts or omissions of its employees;
- A state law making limitation of liability inapplicable if the action is brought by an officer of a state or local government pursuant to state or local law; or

- A state law making limitation of liability applicable only if the organization or entity provides a financially secure source of recovery for harmed individuals (e.g., an insurance policy within specified limits) [7].

If a volunteer is held liable under these conditions, the VPA limits the award of punitive damages to those cases in which there is clear and convincing evidence of willful or criminal misconduct or a conscious, flagrant indifference to the rights or safety of the individual harmed [8]. The VPA does not apply to volunteers' misconduct that constitutes a crime of violence or act of international terrorism, a hate crime, a sexual offense, a violation of state or federal civil rights law, or misconduct where the volunteer was under the influence of intoxicating alcohol or drugs [9].

The Federal Tort Claims Act: Volunteer Services Provided by Health Professionals.
The Free Clinic Federal Tort Claims Act (FTCA) Medical Malpractice Program is another source of federal protection for physician volunteers [10]. If all the requirements of the program are met, a health care professional volunteering for a qualifying free clinic will be "deemed" a public health service employee eligible for medical malpractice coverage under the FTCA [10, 11]. This provides the volunteer with immunity from medical malpractice lawsuits resulting from performance of medical, surgical, dental or related functions within the scope of the health care professional's activity at the free clinic.

To qualify for the Free Clinic FTCA Medical Malpractice Program, the clinic and the volunteer health care professional must meet certain requirements. The health care clinic must qualify as a "free clinic," defined as a health care facility operated by a nonprofit private entity (i.e., a 501(c)(3) organization) that:
- Does not accept reimbursement from any third-party payor (including reimbursement from any insurance policy, health plan, or federal or state health benefits program that is individually determined);
- Does not impose charges on patients to whom service is provided or imposes charges on patients according to their ability to pay; and
- Is licensed or certified to provide health services in accordance with applicable law [12].

A volunteer physician is considered a "free clinic health professional" under the program if the following conditions are met:
- The physician provides services to patients at a free clinic or through offsite programs or events carried out by a free clinic;
- The physician is sponsored by a free clinic;
- The physician provides a qualifying health service (i.e., any medical assistance required or authorized to be provided under Title XIX of the Social Security Act [13]);
- The clinic and the physician do not receive compensation for services either from patients directly or from any third-party payor (with the exception of payment to the physician for reasonable expenses incurred or voluntary donations to the clinic);

- Before the service is provided, the physician or clinic provides the patient with written notification of the extent to which the physician's legal liability is limited; and
- At the time the services are provided, the physician is licensed or certified to provide such health care services in accordance with applicable law [14].

Practical Implications for Physician Volunteers
Physicians who volunteer typically need to obtain their own insurance to cover volunteer activities that fall outside federal or state immunity or protection. Physicians should consider the following questions when looking into volunteer opportunities.

Does your state have a statute that limits liability for physician volunteers, and if so, what type of protection does the state law provide? Listed below are the most common types of volunteer protection offered by state law. Because state laws vary widely, physicians must investigate what, if any, type of liability protection their state offers for physician volunteers. [1]
- Immunity statute where the physician volunteer is not liable for common negligence, but only for gross negligence or willful misconduct. In these states, a patient could not prevail on a malpractice suit against a physician providing volunteer services unless the patient could prove that the physician was grossly negligent in providing the services.
- Immunity statute where, under prescribed circumstances, the physician volunteer is considered a state employee when providing uncompensated care and therefore is protected under the state tort claims act. This generally means the state will indemnify the volunteer physician (pay the legal defense costs and cover any monetary damages incurred as a result of a malpractice claim) if all conditions of the statute are met.
- A state-established malpractice insurance program which either purchases insurance for physician volunteers or establishes a self-insured pool.

Is protection otherwise provided by federal law? These laws, as discussed above, provide a minimum level of protection for physician volunteers in all states.
- Is the volunteer opportunity for a free clinic that qualifies under the Free Clinic Federal Tort Claims Act Medical Malpractice Program? If so, the federal government will indemnify the volunteer physician (provided all conditions of the statute are met).
- Is protection afforded under the federal Volunteer Protection Act (e.g., providing volunteer care for a nonprofit organization or governmental entity)? If so, the physician volunteer is immune from liability for common negligence (but could still be found liable for gross or reckless misconduct).

Are there any conditions or limitations on the available liability protection? Both state and federal volunteer immunity laws typically include some conditions that must be met before the law affords any protection against liability. Most only apply

to simple negligence. Therefore, a physician volunteer will not be protected for gross or reckless misconduct. Other common conditions are highlighted below. [1]

- Is protection limited to volunteer care provided in or associated with certain settings/organizations such as free clinics, nonprofits, or charitable organizations? Physicians providing volunteer care outside of these settings would not be protected by the state law.
- Is patient notification required? Several state laws require the provider to notify the patient of the limitation on liability before providing care. [15]
- Are there limits based on a physician's existing insurance coverage? Some state laws do not provide protection if the physician's own insurance coverage extends to volunteer care.
- Are there limits based on the services provided?

Conclusion
Are physicians and students immune from malpractice claims when providing volunteer services? The answer is "it depends." State and federal laws may provide some protection, and the physician's current malpractice carrier may also include coverage. (Protection from common negligence claims is the most common.) Fears of liability should not deter physicians from volunteering. Rather, physicians should ask questions about the opportunity, including the existence of applicable state immunity statutes, clinic qualification under federal law, and policies on liability limits and patient notification.

References
1. Hattis PA, Walton J, Staton S. *Understanding Charitable Immunity Legislation: A Volunteers in Health Care Guide*. Pawtucket, RI: Volunteers in Health Care; 2003.
2. Volunteer Protection Act, 42 USC sec 14501 (1997).
3. Nonprofit Risk Management Center. State Liability Laws for Charitable Organizations and Volunteers. Leesburg, VA: Nonprofit Risk Management Center; 2009. http://www.nonprofitrisk.org/downloads/state-liability.pdf. Accessed on February 9, 2010.
4. Volunteer Protection Act, 42 USC sec 14502 (1997).
5. Volunteer Protection Act, 42 USC sec 14505(6) (1997).
6. Volunteer Protection Act, 42 USC sec 14503(a) (1997).
7. Volunteer Protection Act, 42 USC sec 14503(d) (1997).
8. Volunteer Protection Act, 42 USC sec 14503(e)(1) (1997).
9. Volunteer Protection Act, 42 USC sec 14503(f) (1997).
10. U.S. Department of Health and Human Services. Policy Information Notice 2004-24: Federal Tort Claims Act Coverage of Free Clinic Volunteer Health Care Professionals, Revised June 18, 2009. http://bphc.hrsa.gov/policy/pin0424.htm. Accessed February 9, 2010.
11. Health Insurance Portability and Accountability Act, 42 USC sec 233(o)(1) (1996).
12. Health Insurance Portability and Accountability Act, 42 USC sec 233(o)(3) (1996).

13. Health Insurance Portability and Accountability Act, 42 USC sec 1396 et seq. (2006).
14. Health Insurance Portability and Accountability Act, 42 USC sec 233(o)(2) (1996).
15. Idaho and Louisiana are examples of states that require the provider to notify the person receiving health services of the limitation of liability under state law. *See* Idaho Code Ann sec 39-7703 and Louisiana Rev Stat Ann 9:2799.5.

Further Reading
Shapiro HB. Providing charity care: a primer on liability risk. *Fam Pract Manage*. 2003;10(1):52-54.

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Virtual Mentor

POLICY FORUM
Is International Trade Impacting Health? Challenges for This Decade
Josh Ruxin, PhD, MPH

The mention of an intersection between trade and health surely brings to mind the recent swine flu pandemic, SARS, and the threat of other diseases that have disrupted global commerce. These are simply symptoms of far deeper trade and health issues that will spur debates—and one hopes, progress—in this decade. Debate has been fueled by the growing use of expensive drugs for treating HIV in developing countries. This is but one area where the intersection of trade and health has emerged as a life-saving—or life-denying—issue. Increasing regional and global trade impacts health in manifold ways, however, from policies about medical personnel working abroad to government choices about using locally produced food when more nutritious ones might be available from other countries.

In the 1990s, it was still common to see the conflation of global trade and humanitarian discussions. Market forces were declared patently destructive and desperate measures were called for: keep doctors in place, provide people with the drugs they need regardless of price, patents, or provenance. Recent developments—most importantly the flow of money, beginning in 2002, from the Global Fund to Fight AIDS, Tuberculosis and Malaria, among other funding sources to actually pay for health personnel, drugs, and compulsory licensing—have led the humanitarian discussion to focus on global trade once again. As health workers continue to migrate and drug effectiveness diminishes, however, the humanitarian debate of the late '90s—should patents be broken to ensure the poor get the drugs they need for AIDS and malaria?—will rear its head again with potentially serious consequences for research and development, on one hand, and for saving lives, on the other. Although there are myriad areas where these issues will enter the policy debate, I examine just three of them here: drugs, commerce in services, and commerce in products.

The Drug Trade
Before the Global Fund to Fight AIDS, Tuberculosis and Malaria and the Bush Administration's support for related causes, the relative impact and market size for expensive biotech-engineered drugs were miniscule. With the advent in particular of drugs for HIV, health advocates started posing serious and compelling questions to big pharma about what size market would drive prices down. Big pharma argued that poor countries did not have adequate financial resources to pay for the drugs—even at discounted prices. The activists countered that if all the people in need received drugs and international financing mechanisms helped pay, the scale of drug production would drive prices down substantially. Now that we're several years out,

it's clear the activists were right: the bottom of the pyramid can sustain pharmaceutical economics previously thought to be impossible. The leading drug combinations that cost $10,000 to $15,000 in 1996 today cost less than $100 [1]. These emerging socioeconomic and demographic trends are swiftly revealing a central irony that was once merely the concern of AIDS activists: good drugs are patent-protected, and those patents mean big pharma can keep prices (and quality) high.

This patent debate takes place against a tragic backdrop: WHO estimates that currently one-third of the world's population lacks access to essential drugs, and that over 50 percent of people in poor countries in Africa and Asia do not have access to even the most basic essential drugs. Worse yet, counterfeit drugs, which often contain few or no active ingredients and may actually be harmful to health, are a major problem in many developing countries, notably in sub-Saharan Africa and Southeast Asia. The TRIPS Agreement, which requires WTO members to establish minimum standards for protecting and enforcing intellectual property rights, contains several provisions that enable governments to consider immediate and longer-term public health implications when applying their intellectual property regimes. It also provides for some flexibility in the implementation of the agreement itself, allowing countries to limit patent owners' exclusive rights under certain conditions, for instance by granting compulsory licenses and allowing parallel importation of patented products. This flexibility was reaffirmed by WTO members at the Doha Ministerial Conference. Still, a basic tenet of the TRIPS Agreement is to encourage technological advancement through research and development by means of patent and copyright protection, and governments may lobby on behalf of their corporations if they feel member states are violating the agreement.

Specific to the issue of health and trade, while the TRIPS Agreement should enhance incentives for R&D into new drugs, there is also concern that more stringent patent protection will lead to drug price increases. Although there were some conflicting views about the conditions under which the flexibility provided by the TRIPS Agreement could be applied, the Doha Declaration on the TRIPS Agreement and Public Health helps clarify this issue: where patent protection confers pricing power for drugs of vital public health or life-saving importance, differential pricing can be used as one way of ensuring that prices in poor developing countries are as low as possible; higher prices in rich countries continue to provide incentives for R&D. The TRIPS Agreement does not stand in the way of such arrangements.

TRIPS only covers the drugs that were in existence at the time the agreement was finalized, however. Since then, newer, more effective drugs have come onto the market and first-line drugs' effectiveness has decreased. There is and will continue to be increased attention to the newer and more expensive companion drugs. Further, a major element of TRIPS calls for even poor nations to improve their ability to police intellectual property rights. Thus, there's an expectation that the old drugs that become generic will sell at low cost while emerging drugs will command a premium. One can imagine that, as pathogens become resistant to current antibiotics, anti-

malarials, and HIV therapy, the newer drugs will command steep prices and stir debate again.

It is perhaps not unfair to say that the WTO and WHO, large international organizations whose ideologies have been largely if not completely influenced by developed countries, have provided an unequal playing field with respect to health and trade agreements. Even though we have discussed ways in which the TRIPS and Doha agreements have provided a safety net to developing countries, the fact remains that poor people do not have access to life-saving and even life-sustaining drugs in part because of the structure of pricing and patent protection put into place by the WTO and WHO. In my view, the failure to create competent health systems plays a far more profound role in the lack of access to essential medicines, but, nonetheless, WTO and WHO will be under pressure in years to come to lower prices for the poor—regardless of the state of individual countries' health systems.

Food Fans the Flames
Pick up any newspaper or magazine, and it is immediately obvious that products get from one point on the globe to another more easily than ever before. Coffee from Vietnam, cars from South Korea, vanilla beans from Uganda—these business interactions are woven into the tapestry of today's trade. While our clothes are clearly labeled with the name of the country where they were produced, the source of our food is less obvious. This is an important point: where a country gets most of its food greatly affects both the health of its economy and the health of its people. Considering the massive subsidies that developed countries are able to pay their farmers, there is a fair bit of food "dumping" to developing nations. On the one hand, this can be a good thing—hungry people in poor countries can get food and powdered milk at an extremely low cost. On the other hand, it can and usually does bankrupt local farmers, who cannot compete with the prices that developed countries can charge for these items.

Perhaps the starkest example of this is the way the corn market has been altered by the North American Free Trade Agreement (NAFTA). The U.S., which pays massive subsidies to its corn farmers, has flooded the Mexican corn market, ostensibly putting most Mexican corn farmers out of business. Mexican consumers are able to buy corn at a low price, but at what cost? Yet, if one is evaluating a nation's health from the perspective of how much food its population can buy, then an argument can certainly be made for free trade policies.

From my perch here in Rwanda—importer of 5 million Ugandan eggs per week and of millions of liters of processed milk annually—the fall of trade barriers presents both opportunity and challenge. The challenge is clear: conventional and antiquated producers face the wrath of market dynamics from many, many miles away. A simple dairy farmer with a few cows in Rwanda is competing against larger dairy factories with access to capital and technology in Uganda. At the same time, the very same farmer may be producing a surplus of cassava which he can easily send by bicycle to the market in Burundi. It's not a zero-sum marketplace, and those who are

skilled in finding niches are likely to emerge wealthier, and healthier, for their efforts. This brings us to the final area of trade flows, and one of the most debated: medical brain drain.

Losing Our Minds
It's no secret that there has been massive migration of trained doctors and nurses from their poor home countries to wealthier ones for decades. Well-trained personnel follow their wallets, and for years their wallets at home have been precariously thin. Monetary incentives and pro-migration policies for professionals make it attractive for health care workers to leave rural areas and even urban areas in poor countries to respond to the need for doctors and nurses in rich nations.

When it comes to the impact this has on poor people, especially in developing countries (but also in depressed areas of developed ones), the results are obvious; even if Western donors provide money for state-of-the-art clinics, there may be no doctors or nurses to staff them. It is unsustainable for international nongovernmental organizations (NGOs) to plug this hole by raising salaries to attract staff. There are two clear ways to address this untenable situation.

First, nurses and doctors trained in developing countries should have time in the field built into their education and post-education plans. In exchange for commitments to working in district hospitals and health centers for a few years, student debt can be forgiven while opportunities to help the poor are provided. Beyond that, it's considerably tougher to address retention. Borders are porous and money talks. It's high time that ministries of health started investing in retention. That means offering salaries that are competitive—not necessarily in the lucrative international marketplace, but certainly in the lucrative local private marketplace. Just this past week I was in a superb hospital in rural Rwanda where the director informed me that she had lost 3 out of her 15 doctors to the private sector in the past year; she simply doesn't have the funding to pay them. The amount of money needed to retain these doctors and bring nurses out of the cobwebs is not a fortune, but it is essential. It's time to stop blaming rich countries for brain drain and start taking responsibility at home. Health ministries, even in terribly poor countries, need line items on their donor budgets for competitive personnel benefits. There's no other option.

Toward Healthier Trade
To protect health amid rapidly expanding trade relations, governments in developing countries will have to find a middle ground between reaping the benefits of pro-trade agreements and making sure their needs are not being subsumed by those of the big players on the world stage. To this end, trade incentives must be carefully analyzed, and poor nations need to lobby the WTO when they disagree with trade policies. Allowances must be made to support poor countries' access to medications—especially life-saving drugs—at reduced costs. Still, it is clear that free-trade agreements provide great opportunities to developed and developing countries alike, and governments in the Global South should devote more energy and resources to shoring up local markets, particularly for the products in which they have a

comparative advantage. Such change demands a new breed of policy makers who are savvy about the marketplace—from brain drain to poultry imports. Business as usual—the painfully slow decision-making of ministries and businesses alike—will have to be replaced with dynamic decision processes that treat food, drugs, and people like the commodities they have become. WTO and WHO must work with countries to navigate the pitfalls of this fierce new marketplace and replace their old style of business too. The health and well-being—the very future—of the poorest depends on the ability of all to recognize that the world is, after all, one huge brimming marketplace where deals can frequently result in life or death.

References
1. AVERT.org. AIDS, drug prices and generic drugs. http://www.avert.org/generic.htm Accessed February 8, 2010.

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Virtual Mentor

MEDICINE AND SOCIETY
Health Electives in Africa and the Duty to Care in the Age of HIV/AIDS
Claire L. Wendland, MD, PhD

Destinations on the African continent—where three-quarters of the world's HIV-infected people live, and where the complications of HIV are overrepresented in hospitals and clinics—have become sought-after sites for medical students and residents seeking experience in global health. Motivations vary: some travelers are pursuing scientific opportunities or building resumes; others are curious about tropical diseases or about practice unencumbered by American bureaucracy. Many (perhaps most) of the medical trainees who make such journeys, however, are compelled by an awareness of the suffering engendered by HIV and other health problems. They feel a moral obligation to help where help is so clearly needed; in other words, they are motivated by what bioethicists have come to refer to as a "duty to care."

Some physicians and ethicists understand the duty to care as the single most important commandment of medicine [1]. Others see it as a dangerous idea that should be discarded, lest health care personnel feel coerced into working in situations that put them at undue risk (psychological or physical) [2]. For the purposes of this discussion, I will table the question of whether such a duty actually exists, and whether the belief that it does has benevolent or pernicious effects. In practice, whether the duty is a "real" ethical command or not, its consequences are real when we act upon it.

Many student doctors describe a strong sense of duty to assist those in the parts of the world that bear the heaviest burdens of disease and poverty. Others do not. Rather than goading the latter group into a sense of obligation, I want to explore what the implications of the duty to care *that they already feel* might be for the former group. I will assume that students who seek out situations in which they have contacts with patients take on a moral obligation to those patients. Those who choose to engage in short-term medical outreach in a setting of epidemic disease, in other words, through that choice accept a duty to care for the people with whom they interact during the course of the program. But what might that duty actually mean? As one ethicist who teaches about global health puts it, "the real issue is not about whether there is a duty to assist, but about the nature, extent, aim, and fulfillment of this duty" [3]. If we embrace a duty to care in an epidemic, what does "caring" entail? Is it a duty to feel somehow, to act in some way, to think about something—or all three?

Context: HIV/AIDS on Two Continents

Epidemic transmission of the HIV virus probably began almost simultaneously in North America and Africa, but, as is well known, the epidemiologic picture of the disease looked very different in the two regions. Clinicians' responses to the epidemic were also different. In the early 1980s in the United States, HIV hit a country that had not faced a lethal and untreatable epidemic in some time. It also first seriously affected populations that were already highly stigmatized: gay men, and, soon after, intravenous drug users. The HIV-infected became pariahs. Many avoided them, and some clinicians refused to treat them, while others took on HIV research and care as not just an intellectual opportunity but a moral mission. Debates over the duty to care raged: did doctors or nurses, dentists or students, have an obligation to provide medical care, even to those of whom they disapproved, even when doing so might put them, and possibly their family members, at risk [4]?

The burgeoning African epidemic, essentially off the radar for most American clinicians in the 1980s and early '90s, was all too visible to African doctors and nurses. For them the impact of HIV was different and greater. An opportunistic virus hit communities made vulnerable by a long history of chronic disruption and population movements, not to mention other illnesses and malnutrition [5]. Epidemic disease was no novelty, nor—alas—was widespread death at early ages, although there was a notable shift from a concentration of deaths among children to its concentration among young adults. Stigma was different too. In some places HIV became associated with "promiscuous women," but overall it did not disproportionately afflict already stigmatized groups. The disease's toll was felt across social classes and religious affiliations and ethnicities, among men and women, in rural and urban areas.

By the mid-1990s, the situation had changed in both settings. With the advent of protease inhibitors, HIV infection in North America became a manageable if serious chronic disease, and the epidemic stabilized at low levels without a large-scale impact on most of the communities that doctors and nurses call home. Most clinicians could feel themselves to be safely separate from the groups at greatest risk. Among Americans, attention turned belatedly to the problem of African AIDS. Meanwhile, in much of sub-Saharan Africa, the magnitude of death among young adults reached a level never seen before. Hard-won gains in life expectancy were lost across much of the continent. Teachers, nurses, doctors, the highly educated, and the upwardly mobile were overrepresented among the casualties; clinicians saw their colleagues, friends, and family members sicken and die [6]. Where patient loads were high, equipment old and not always sterile, and post-exposure prophylaxis nonexistent, the fear of contracting AIDS in the course of patient care was widespread [7] and justified; many observers believe that the impact of unsafe medical practices on the African epidemic has been underestimated and under-investigated [8, 9]. AIDS often gave rise to feelings of immense frustration and medical impotence, as demoralized health care workers watched their patients die, knowing full well that effective treatment was available to people in wealthy parts of the world [10, 11].

Many of these stresses and strains remain in the African clinical venues where students on short-term outreach projects learn today. It is true that steady pressure from HIV/AIDS activists, including physicians, has ensured that basic antiretroviral drugs (ARVs) are now prolonging the lives of African patients (including clinicians) in a wide range of settings. In most places, however, ARVs are not yet available on the scale necessary to treat the numbers of those infected. Clinicians are often forced to triage, deciding who will get lifesaving drugs and who will not [11, 12]. Across most of the continent, in outpatient or inpatient contexts, one cannot work or learn without extensive contact with HIV-infected patients. In some settings, estimated seropositivity of patients on medical and surgical wards is in the 80-90 percent range, even when HIV infection rates in the adult general population are much lower. Clinical work in these venues is often difficult. Regional poverty, transnational economic forces, and the loss of personnel to migration, premature death, or better-paid jobs with non-governmental organizations continue to strip the public hospitals and clinics that provide the most care, leaving a thin line of beleaguered staff facing staggering patient loads [13].

What might a "duty to care" mean, abstractly and concretely, for medical students and residents who enter these wards during a global health elective or short-term outreach project?

Three Components of the Duty to Care
It is useful to consider the ordinary ways in which clinicians use the word care—to care deeply about a problem, to provide patient care, to be careful. These everyday meanings can illuminate the practical and conceptual issues at stake.

- *Care as emotion: a feeling of concern*
  Medical students and doctors are often drawn to Africa by a deep feeling of concern and empathy, the first meaning of "care." We care about the suffering of those affected by HIV and other apparently intractable health problems, and that caring prompts a desire to help where help is desperately needed.
- *Care as action: provision of medical services*
  The second meaning of "care" is one with which clinicians are well acquainted: care as our everyday work providing medical services. "Patient care" covers a range of actions, from changing bandages to counseling to surgery, whether those actions are in a district hospital in Botswana or an outpatient clinic in Minnesota.
- *Care as cognition: preparation, caution, reflection*
  Care can also mean caution, and taking care can require deliberate thought, preparation, and reflection. This third meaning of "care" is the one most often overlooked in global health ethics—and as students prepare for global health experiences.

Propelled by feelings of concern (caring) and a desire to assist (by giving care), we are sometimes at risk of forgetting another ethical principle: first do no harm (take

care). In this sense, the duty to take care requires us to make every prospective attempt to minimize harm, and to learn retrospectively from mistakes and failures as well as from successes.

Limited opportunities for follow-up, time constraints due to heavy patient loads, abundant cultural and linguistic barriers, and the high status often afforded to foreigners in white coats can add up to plenty of opportunities to harm. Students on global health clerkships often encounter situations in which they can exceed their capabilities—prescribing unfamiliar medications or performing half-learned procedures—with impunity. (Indeed, this is part of the draw for some. It is also an area that is beginning to draw attention and debate in global health ethics [14, 15].) For instance, students in an HIV clinic could overlook signs and symptoms of a worsening cough if they were unaware that patients in the first stages of response to ARVs may suffer acute, potentially even fatal, reactivation of tuberculosis [16]. The duty to care requires that we recognize our limitations, strive to educate ourselves as much as possible, and seek assistance from those—nurses, midlevel clinicians, doctors—who are experienced and knowledgeable.

Doing harm can take subtler forms, and care requires us to think about these too. I have worked at a medical school in Malawi through which many European, American, and Australian medical students circulate. These students understand themselves as motivated by altruism and perceive themselves as both caring and providing care. But some of them choose not to perform—and others are forbidden by their schools from participating in—procedures that might entail a risk of contracting HIV. Their Malawian student colleagues place intravenous catheters, catch babies, scrub in on surgery cases while expatriate students watch. Refusal to care for the HIV-infected sends troubling messages to our African colleagues and patients. Like exceeding the limits of our training, refusing to implement our training when it might put us at risk does harm. It exploits African patients as learning material. It also says plainly to our African colleagues that we consider our lives more valuable than theirs. A duty to care means that students and residents who plan global health electives in epidemic-affected areas must prepare themselves to accept the small risks associated with giving care to the HIV-infected.

Conclusion
This discussion sidesteps several important topics. Do health care professionals—and would-be professionals—indeed have a duty to care for others? If we do not, how else can we think about our moral obligations to patients? If we do, how is that duty circumscribed, geographically or otherwise? Does it lessen or disappear as we move farther away from our families, our communities, our states, our nations? In a world with enormous and growing health disparities, do our obligations as health care professionals somehow extend to everyone around the globe? Instead of tackling these difficult questions, I have focused closely on what the concept of care might mean for students who are already concerned about global health and who are planning electives in Africa.

Many students have found short-term global health outreach electives to be times of personal transformation and intellectual growth. Such experiences can be powerful motivators for continued involvement in global health or for other kinds of efforts to make the world a better place. Converting empathy to action, embracing a duty to care, feels good and can result in good work. If not carried out with due care, it can also do real harm. A version of "care" that does not incorporate all three aspects—concern, intervention, and caution—is ethically inadequate.

If reflection and preparation as well as empathy are understood as ethical tasks central to the provision of care, students will consider carefully what their impact in Africa's outpatient clinics and hospital wards may be. They will learn as much as they can about medical care for the afflicted and seek to understand the upstream factors—the social, economic, and political determinants—that are so much more crucial to health than medical care alone. They will also do some honest introspection about their own motivations and limitations [17]. Some may ultimately decide not to do a global health elective, instead donating the funds they would have spent on travel to support African institutions that help the HIV-infected—a practical expression of solidarity that does not put them at physical risk. Others may choose to travel abroad to study and work with African colleagues side-by-side, and with those colleagues work out ways to maximize the long-term impact of their visit. Still others may choose to channel their altruistic impulses into clinical and educational experiences closer to home, among poor or HIV-infected members of their own communities. All of these choices harness empathy to both action and reflection. An understanding of care that incorporates its emotional, practical and cognitive aspects can be a powerful motivator for ethical responses to the devastation of epidemic disease.

References
1. O'Neil E. Jr. *Awakening Hippocrates: A Primer on Health, Poverty, and Global Service.* Chicago, IL: American Medical Association; 2006.
2. Sokol DK. Virulent epidemics and scope of healthcare workers' duty of care. *Emerg Infec Dis.* 2006;12(8):1238-1241.
3. Dwyer J. Teaching global bioethics. *Bioethics.* 2003;17(5-6):436.
4. Daniels N. Duty to treat or right to refuse? *Hastings Cent Rep.* 1991;21(2):36-46.
5. Barnett T, Whiteside A. *AIDS in the Twenty-First Century: Disease and Globalization.* New York, NY: Palgrave Macmillan; 2002.
6. Harries AD. High death rates in health care workers and teachers in Malawi. *Trans R Soc Trop Med Hyg.* 2002;96(1):34-37.
7. Iliffe J. *East African Doctors: A History.* Cambridge: Cambridge University Press; 1998.
8. Oppong JR, Kalipeni E. Perceptions and misperceptions of AIDS in Africa. In: Kalipeni E, Craddock S, Oppong JR, Ghosh J, eds. *HIV and AIDS in Africa: Beyond Epidemiology.* Malden, MA: Blackwell Publishing; 2004: 47-57.

9. Consten EC, van Lanschot JJ, Henny PC, et al. A prospective study on the risk of exposure to HIV during surgery in Zambia. *AIDS*. 1995;9(6):585-586.
10. Iliffe J. *The African AIDS Epidemic: A History*. Oxford: James Currey Ltd.; 2006.
11. Good MJ, Mwaikambo E, Amayo E, Machoki JM. Clinical realities and moral dilemmas: contrasting perspectives from academic medicine in Kenya, Tanzania, and America. *Daedalus*. 1999;128(4):167-195.
12. Fox RC, Goemaere E. They call it 'patient selection' in Khayelitsha: the experience of Medecins Sans Frontieres-South Africa in enrolling patients to receive antiretroviral treatment for HIV/AIDS. *Camb Q Healthc Ethics*. 2006;15(3):302-312.
13. Ooms G, Van Damme W, Temmerman M. Medicines without doctors: why the Global Fund must fund salaries of health workers to expand AIDS treatment. *PLoS Med*. 2007;4(4):e128.
14. Shah S, Wu T. The medical student global health experience: professionalism and ethical implications. *J Med Ethics*. 2008;34(5):375-378.
15. DeCamp M. Scrutinizing global short-term medical outreach. *Hastings Cent Rep*. 2007;37(6):21-23.
16. Meintjes G, Lawn SD, Scano F, et al. for the International Network for the Study of HIV-Associated IRIS. Tuberculosis-associated immune reconstitution inflammatory syndrome: case definitions for use in resource-limited settings. *Lancet Infec Dis*. 2008;8(8):516-523.
17. Pinto AD, Upshur RE. Global health ethics for students. *Dev World Bioeth*. 2009;9(1):1-10.

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Virtual Mentor

HISTORY OF MEDICINE
Stigmatization Complicates Infectious Disease Management

Phil Perry, MSJ, and Fred Donini-Lenhoff, MA

"The kind of discrimination I faced from my neighbours made me regret sharing my condition with them; I could not even share the communal sink," a Kenyan woman with TB told a UN investigator in November 2009 [1]. Unfortunately, these words are illustrative of a long history of stigmatization in human communities when contagious diseases strike [2-5].

In *Twelve Diseases that Changed our World,* a history of microbiological research into causes of disease, Irwin Sherman documents the historical repercussions of infectious disease for world history [3]—among them tuberculosis, influenza, and cholera, as well as HIV/AIDS. In the course of his research he also encountered stigmatization of patients, again and again. Stigmatization looms large in global health ethics because it prevents those with disease from seeking care, engenders fear of those who have disease, causes prejudice against entire groups or communities, and has, in some cases, led to violence against the stigmatized group. For these reasons, enlightened public health interventions have sought to neutralize stigma even as they manage care for patients, patient families, and the communities to which the afflicted belong.

Stigma and Disease—Historical Examples
Leprosy. The Bible gives us the classic case of stigma arising from readily visible disease symptoms: leprosy. Lacking a cure, society organized itself to handle a perceived danger to others. The priest's role was to decide if the diseased person was clean or unclean based on symptoms—white or raw skin for example. "When a person contracts a leprous disease, he shall be brought to the priest" [6]. If the disease proved serious, the leper was required to follow specific societal rules to limit potential exposure to others: "The person who has the leprous disease shall wear torn clothes…and cry out 'unclean, unclean.' He shall remain unclean as long as he has the disease….He shall live alone; his dwelling shall be outside the camp" [7].

Lest we relegate this problem to ancient times, it's clear that modern India is still coping with stigma toward leprosy (Hansen Disease or HD) at the village level, where infected persons are shunned, even after their multidrug therapy has cured them [5]. A medical anthropologist writes:

> The extreme discrepancies between the clinical and social realities of
> HD in India underscore a common distinction in medical
> anthropology between the pathophysiology of disease and the human

experience of illness as suffering (Kleinman 1988)….Yet, although this distinction may be useful for initial criticism, further examination reveals that…the physical and social stigmata of HD are too interconnected to be adequately disentangled. As such, leprosy is best approached as an illness of discrimination inclusive of its physical condition [5].

Cholera. A number of infectious diseases could be discussed in relation to social stigma, but drawing on Sherman's work, cholera and yellow fever are the most clear-cut cases. From a strictly medical perspective, cholera outbreaks require quarantine. But Sherman points out that "when quarantine becomes a social policy, its effects can be pernicious: it can isolate more than those labeled as 'diseased' and can stigmatize an entire group." His case in point—the cholera epidemic of 1892, at that time a global disease. The cholera toll in Europe was so high that U.S. government authorities decided to quarantine immigrants upon arrival. In New York, some 39,000 home inspections were carried out and suspect dwellings were blockaded. An executive order from President Benjamin Harrison labeled immigrants "a direct menace to the public health," singling out Russian Hebrews, and U.S. immigration policies were made more restrictive [8]. "The disease entered our port on account of defective quarantine and it has been carried to us mainly by filthy immigrants," said a New York physician [9]. Fear overruled reason. "The stigma of disease was cast over all European Jews seeking entry into the United States long after the threat of cholera had ceased," Sherman concludes [10].

Yellow fever. Yellow fever can be said to have stigmatized the American South in a series of outbreaks, peaking around 1850, with high mortality and dramatic symptoms. The Northern press, already crusading against slavery, denounced the South for its unhealthy conditions and people. This "contributed to the image of the American South as a region that, along with its people, was distinctly different from the rest of the country. Only after these diseases [yellow fever, malaria, hookworm, pellagra] were eradicated—by the mid-1900s, would that perception change" [11].

Stigmatization: Recent Responses and Xenophobia
Turning to more modern instances, consider Asia in 2003. While seeking to understand the effects of the SARS outbreak in 2003 on the Hong Kong population, researchers at Hong Kong University found that the respondents feared HIV/AIDS the most, followed by TB and SARS, in that order.

Testing an attributive model of stigmatization, they found that people strongly expressed negative feelings about individuals with HIV/AIDS and TB in significant numbers, with SARS, a lesser-known threat, at a lower level [12].

They conclude,
> More efforts should be placed in strategically changing the
> attributions made by the public towards infectious diseases. In so
> doing the public would develop more acceptable attitudes towards the

diseases and the affected individuals…. For preventive programs of
infectious diseases to be effective, their associated stigma must be
actively addressed [13].

Similarly, in the U.S., anti-immigrant groups, in particular, seized on the 2009 flu
pandemic to instill fear of a "rising tide" of infectious disease. One syndicated radio
talk show host, for example, called illegal aliens "the perfect mules for bringing this
virus into America" [14]. Others have pointed to "illegals who skulk across our
borders" as contributing to increased incidence of such diseases as tuberculosis,
Chagas disease, Dengue fever, polio, and malaria [15]. Even well-known reporters
have lent credence to the claims of anti-immigrant activists: In 2007, for example,
the Southern Poverty Law Center took to task former CNN reporter Lou Dobbs for a
report claiming a rapid rise in leprosy in the United States, due in part to "unscreened
illegal immigrants coming into this country" [16].

Likewise, a survey of recent news headlines from South Africa shows that
xenophobia flared up intermittently in the past decade in serious forms [17]. In 2001,
Bronwyn Harris studied the experiences of people in the Lindela Repatriation Centre
in South Africa, where 1,000 to 2,000 foreigners were housed while awaiting
transport or deportation:

> In general, South Africa's public culture has become increasingly
> xenophobic, and politicians often make unsubstantiated and
> inflammatory statements that the "deluge" of migrants is responsible
> for the current crime wave, rising unemployment, or even the spread
> of diseases. As the unfounded perception that migrants are
> responsible for a variety of social ills grows, migrants have
> increasingly become the target of abuse [17].

By May 2008, riots left 20,000 displaced, and 40 camps were set up to house those
fleeing xenophobic violence in Cape Town. Camp caregivers encountered TB and
HIV among the displaced foreign workers and sought government help in treating
the refugees [18].

To place this in a larger context, remember that sub-Saharan Africa, more than other
regions, has had a history of severe epidemics, among them outbreaks of meningitis,
cholera, malaria, tuberculosis, measles, and hemorrhagic fevers, in addition to
HIV/AIDS, during the past century alone [19].

Stigmatization of a given race, country, or community as a source or carrier of
disease has often occurred through history, as Erving Goffman showed [4], and has
all too frequently served as a pretext for violence. During the Black Death, for
example, European Jews were said to have caused the epidemic by poisoning wells;
consequently, thousands were murdered and entire communities wiped out: "public
rumor had become current and a strong clamor had arisen because of the poison put
by [Jews] into the wells, springs, and other things which the Christians use—
demanding that they die, that they are able to be found guilty and, therefore, that they

should be punished" [20]. In this century, the metaphor of the Jew as an agent of infection and contagion was wielded by the Third Reich, with devastating results, as it called for racial "purity," "cleansing," and "hygiene."

Today, media reports combined with common myths and misconceptions crystallize public fears and serve to justify drastic measures to contain disease (and its carriers, actual or supposed). Semantics matter too. Consider the names of the known influenza pandemics since the late 1880s: Russian flu, Spanish flu, Asian flu, Hong Kong flu, and, in 2009, what became called by many Mexican flu (H1N1). Naming a disease by country of origin serves to emphasize its "other" aspect and, again, to make repressive policies (putatively aimed at disease, but actually at "otherness") more politically palatable.

Conclusion
Just recently, the U.S. opened its borders to HIV-positive travelers, after a 20-year ban. It was long recognized that there was no medical reason for the travel ban, but the political value of the ban and lingering fear of HIV kept it in place for longer than reason would have dictated. This is one more way in which diseases have literally changed the course of lives. Ideally, better science, knowledge of disease, and media cooperation in promoting public understanding could ameliorate the severity of unwanted events like social disruption or discrimination due to disease.

Knowledge of the history of medicine and public health challenges can make a contribution to the understanding of present-day clinicians—as well as the media, which has to cover these issues, and the public, which needs health education. In particular, clinicians in developing countries should be prepared for the challenges of providing care to diverse populations through a deeper understanding of what past caregivers and patients have encountered when disease and discrimination intersected.

References
1. UN Office for the Coordination of Human Affairs. Kenya: Stigma holding back the fight against TB. *IRIN News*. Nov. 29, 2009. http://www.irinnews.org/Report.aspx?ReportId=87108. Accessed January 26, 2010.
2. Keusch GT, Wilentz J, Kleinman A. Stigma and global health: developing a research agenda. *Lancet*. 2006;367(9509):525-527.
3. Sherman I. *Twelve Diseases that Changed Our World*. Washington DC: American Society of Microbiology, ASM Press; 2007.
4. Goffman E. *Stigma*. Englewood Cliffs, NJ: Prentice-Hall, Inc;. 1963.
5. Barrett R. Self-mortification and the stigma of leprosy in northern India. *Med Anthropol Q*. 2005;19(2):216-230.
6. Lev 12:9 (NRSV).
7. Lev 13:45 (NRSV).
8. Sherman, 40-43.
9. Sherman, 42.

10. Sherman, 43.
11. Sherman, 146-147.
12. Mak WW, Mo PK, Cheung RY, et al. Comparative stigma of HIV/AIDS, SARS, and tuberculosis in Hong Kong. *Soc Sci Med*. 2006;63(7):1912-1922.
13. Mak WW, Mo PK, Cheung RY, 1921.
14. Martinez G. As swine flu spreads, so does backlash against Mexico. New American Media. http://news.ncmonline.com/news/view_article.html?article_id=8541edacc34b183012cd118e8b83e68a. Accessed February 15, 2010.
15. Cosman M. Hospital to the world welcomes illegals and contagious diseases. U.S. Border Control. http://www.usbc.org/profiles/2005/spr/hospital.htm. Accessed February 15, 2010.
16. Southern Poverty Law Center. Center urges CNN to retract false reporting by Lou Dobbs. http://www.splcenter.org/get-informed/news/center-urges-cnn-to-retract-false-reporting-by-lou-dobbs. Accessed February 15, 2010.
17. Harris B. *A Foreign Experience: Violence, Crime and Xenophobia during South Africa's Transition*. South Africa: Centre for the Study of Violence and Reconciliation; 2001: 44. *Violence and Transition*; vol. 5.
18. Xenophobia: Camps breeding zone for disease. *The Mercury*. May 26, 2008. http://www.themercury.co.za/?fSectionId=&fArticleId=nw20080526154541731C334817. Accessed January 24, 2010.
19. Wasunna A, Fitzgerald DW. Ethics and epidemics in the developing world: the case of AIDS in Africa: treatment challenges. In: Balint J, Philpott S, Baker R, Strosberg M, eds. *Ethics and Epidemics*. Oxford, UK: Elsevier/JAI Press; 2006: 189-190. *Advances in Bioethics*; vol. 9.
20. Halsall P. The Black Death and the Jews 1348-1349 CE. Jewish History Sourcebook. http://www.fordham.edu/halsall/jewish/1348-jewsblackdeath.html. Accessed January 27, 2010.

Further Reading
Schaller M. Infectious diseases and the evolution of cross-cultural differences. In: Schaller M, Norenzayan A, Heine SJ, et al, eds. *Evolution, Culture, and the Human Mind*. New York: Psychology Press; 2010.

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MEDICAL NARRATIVE
Training for a Global State of Mind
Jane Philpott, MD

Universities and medical schools in high-income countries are scrambling to develop global health curricula for their undergraduate and postgraduate trainees in order to demonstrate their leading role in this burgeoning field. Missing from the topics of discourse is the matter of just why we are caught up in this global health education frenzy.

At a recent global health education meeting, someone stated that the ultimate goal of the global health programs that we facilitate for our trainees is to improve the health of the world's people. Yet I sense our motivations are not purely noble. If our primary goal were to improve global health outcomes there are likely more efficient and effective ways to accomplish this. There is no evidence that the number of medical trainees who have visited an international location correlates with improved health outcomes in that setting. As a guilty participant in the rush to design global health education curricula, I'd like to start an honest dialogue about why we're doing this.

At a meeting with a group of postgraduate medical trainees at the University of Toronto, I asked them to brainstorm a list of reasons why students or universities want to be involved in global health education (see table 1). Then we tried to assign them to one of three categories:
1. Motivations I'd rather suppress
2. Motivations I can tolerate
3. Motivations to which I aspire

Motivations I'd Rather Suppress
Students quickly recognize that some of their motivation is the potential glamour and mystique associated with global health training. I am personally convinced that at some level, I'm motivated by a form of neocolonialism or Orientalism [1]. Edward Said has suggested that academic and literary fascination with the "other" can be not only condescending but domineering and exploitative. In the same way that a literary figure may be on a quest to find adventure or to bring home some mystic object, I'd like to admit that my motivations for involvement with global health have surely been mixed with a desire for professional intrigue and escapades to punctuate what may be an otherwise dreary career.

Other motivations I'd rather not admit would be the ruinous combination of self-aggrandizement, superiority and sensationalism. Many of us involved in global

health initiatives may not consciously be searching for self-affirmation but we find our work reinforced by praise received for these ambitious efforts. There is great danger for those who work in the area of global health and may subconsciously develop a false sense of superiority from this work. The risk is well described by Nigerian author Chinua Achebe in the context of the role of the foreign correspondent. He acknowledges that such reporters have a role to play in telling important stories and bringing media attention to global crises. But he cautions about the "moral danger of indulging in sensationalism and dehumanizing the sufferer" [2]. Surely there are similar hazards for those engaged in global health education. Though these risks may not be entirely avoidable, it is worthwhile to be aware of the danger. Achebe points out that "when we are comfortable and inattentive, we run the risk of committing grave injustices absent-mindedly" [3].

Motivations I Can Tolerate
Having admitted some impurities in my motives, I'm not ready to abandon the task. I expect there are many decision makers at universities and medical schools whose motivations are much less complicated than my own. One possible motivation may be the reality of market-driven education. In the case of global health education, the market for global health programs is powerfully driven by consumers—in this case the trainees. Students from all medical specialties and many non-medical fields have created what's been described as a tsunami of interest in global health programs. The university who hesitates in developing them will be lost.

For the most part I can tolerate this motivation but there may be cause for caution. It may be that the demands of students need to be shaped and challenged. These marvelously altruistic young people should be exposed early in their education to a challenging discussion of what really does impact global health outcomes. And many of us may not want to pay the price of addressing the overarching determinants of global health outcomes.

Ultimately, I am willing to tolerate a motivation driven by learner demand. In fact, I'm willing to take advantage of such demands and will admit to the recruitment value of global health education. For example, I believe in the importance of Family Medicine. This specialty has the opportunity to be in the forefront of provision of global health curricula. So if it takes the provision of such curricula to attract the best and the brightest minds to postgraduate training in primary care, this I can abide.

Another tolerable motivation may be the exposure of trainees to the realities of health and social conditions in low-income countries. A Hausa proverb, "*Dutsen dake ruwa bai san ana rana ba,*" means "The stone that is in the water does not know that the sun is hot." Many trainees have spent their whole life "in the water"—in the protected conditions of a high-income country. Though the background realities that affect global health outcomes could be studied without international travel, few would deny the value of directly witnessing these conditions.

Finally, I can tolerate one more oft-cited motivation, though it smacks of self-preservation. Global health advocates often point to the fact that someone half a world away can get on a plane with their infectious disease and less than a day later land in a high-income country previously free of this disease. These protective instincts help us argue that we should teach global health but we must acknowledge the implications. Do we imply that certain diseases such as XDR-TB don't matter if they keep their distance, but we want to learn about them if there's a chance they'll contaminate our world?

Motivations to Which I Aspire
What would be the finest motivation for global health education of which I can currently conceive? Why am I still willing to commit part of this phase of my career to improving global health teaching?

I don't want to produce "global health practitioners." The last thing we need in medicine is another silo or subspecialty. And there seems to be confusion trying to identify to what population or needs a global health practitioner is required to respond. Instead, I am driven by a desire to *train excellent physicians with a global state of mind* [4].

In fact, I suspect that it is the absence of a global state of mind that has driven this uprising of sorts on the part of medical trainees demanding global health curricula. They have identified the fact that the educational model of recent generations has been narrow in its focus. Young students have recognized the limitations of a biomedical framework that focuses primarily on the health needs of the world's wealthiest citizens. They also appreciate the collaborative, reciprocal learning that occurs when they interact with patients and colleagues from other cultures and locations [5].

With this in mind, the goal is not to teach or study global health as a distinct subject or skill-set. But every topic of medicine needs to be reconsidered from a global perspective. I aspire to teach global health as a way of looking at wellness and the world. The excellent 21st century physician, no matter where she or he has trained, should be able to look at any medical problem or any patient encounter in its global context.

In my search for the most satisfactory motivation for global health education, I find a clue from the trainees who developed the list in table 1. They recognize the global community and their responsibility as advocates. This concept as a driver for global health education is best described by Martin Luther King Jr., who said that "injustice anywhere is a threat to justice everywhere. We are caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly, affects all indirectly" [6].

I like to paraphrase King by noting that ill health anywhere is a threat to wellness everywhere. None of us are truly well or whole if we ignore the health status of

others in the world. Our destiny is indeed connected. Achebe, too, notes that "we cannot trample on the humanity of others without devaluing our own. The Igbo, always practical, put it concretely in their proverb '*Onye ji onye n-ani ju onwe ya*': 'He who will hold another down in the mud must stay in the mud to keep him down'" [7].

The finest motivation for global health education is the recognition of our common humanity, our shared destiny, and the interconnected determinants of health. We should continue our efforts to train excellent physicians with a global state of mind. May the training proceed in a spirit of humility, reciprocity and solidarity.

Table 1
Brainstorming exercise for postgraduate trainees: Why are you interested in global health education?

Motivations I'd rather suppress
- For the excitement and mystique
- "Glamour" of becoming an MSF doctor
- Because global health is "sexy"
- Because it's trendy
- I want to be like David Suzuki
- "Vacation-electives"
- A love of adventure travel
- Get more points for your frequent-flyer program

Motivations I can tolerate
- Sense of reward
- Feeling useful
- Feel more reward helping those with greater need vs. helping those who have so much
- I'm selfish. I love to travel and work, so why not combine both and benefit society at the same time?
- A yearning for purpose
- Meet other people who are like-minded
- Curiosity about the world
- Guilt—too much given to me—time to give back
- Interesting medical problems
- To broaden my clinical experience
- To contribute to the country where my parents grew up
- To better understand the background of immigrant populations in Canada
- I worked for MSF last year and found it immensely rewarding
- Encourages government and private donations to university programs
- To attract high-profile staff to universities

- Universities are interested because they want to market themselves and this is another way to look good to the public
- Universities want to attract students

Motivations to which I aspire
- Recognizing that I am part of a global community
- Because my definition of community is broad and physicians are a resource to the community
- Because physicians need to be advocates for all patients
- "Reverse entitlement"—feeling as though my upbringing and country of birth have given me so much that I have a responsibility to repay it to those less fortunate
- Exchange of ideas and cultures
- Because resources should be redistributed to where they are needed
- Learn about disparities of health delivery and health care
- Learn how different cultures approach the same health issues
- Learn how borders affect health
- Learn about how international policies relate to global health
- To better understand the social determinants of health
- Many of the principles of international health also apply to medical practice here (e.g. underserviced populations and aboriginal health)
- To gain a balanced perspective on life
- Justice—health as a human right

References
1. Said EW. *Orientalism*. 25th anniversary ed. New York: Vintage Books; 2003.
2. Achebe C. *The Education of a British-Protected Child: Essays*. New York: Alfred A. Knopf; 2009: 93.
3. Achebe, 95.
4. Benatar SR, Daar AS, Singer PA. Global health ethics: the rationale for mutual caring. *Int Aff*. 2003;79(1):107-138.
5. Philpott J, Batty H. Learning best together: social constructivism and global partnerships in medical education. *Med Educ*. 2009;43(9):923-924.
6. King ML. *I Have a Dream: Writings and Speeches That Changed the World*. San Francisco, CA: HarperSanFrancisco; 1992:85.
7. Achebe, 136.

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program in West Africa from 1989 to 1998 and is the founding chair of Give a Day to World AIDS, which has raised more than Can$2 million for those affected by HIV in Africa.

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The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

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Suggested Readings and Resources

Achebe C. *The Education of a British-Protected Child: Essays*. New York: Alfred A. Knopf; 2009: 93.

Alcauskas MP. From Medical School to Mission: The Ethics of International Medical Volunteerism. *Virtual Mentor*. 2006;8(12):797-800. http://virtualmentor.ama-assn.org/2006/12/fred1-0612.html. Accessed February 12, 2009.

AVERT.org. AIDS, drug prices and generic drugs. http://www.avert.org/generic.htm. Accessed February 8, 2010.

Association of American Medical Colleges. 1984 GQ medical school graduation questionnaire: all schools summary report. Washington, DC: Association of American Medical Colleges; 1984.

Association of American Medical Colleges. 2006 GQ medical school graduation questionnaire: all schools summary report. Washington, DC: Association of American Medical Colleges; 2006.

Association of American Medical Colleges. 2009 GQ medical school graduation questionnaire: all schools summary report. Washington, DC: Association of American Medical Colleges; 2009. http://www.aamc.org/data/gq/allschoolsreports/gqfinalreport_2009.pdf. Accessed on January 8, 2010.

Association of Faculties of Medicine of Canada. Towards a medical education relevant to all: The Case of Global Health in Medical Education. http://www.cfms.org/pictures/file/Global%20Health/The%20Case%20for%20Global%20Health%20in%20Medical%20Education-%20AFMC.pdf. Accessed on February 12, 2010.

Babich LP, Bicknell WJ, Culpepper L, Jack BW. Social responsibility, international development, and institutional commitment: lessons from the Boston University experience. *Acad Med.* 2008;83(2):143-147.

Banatvala N, Doyal L. Knowing when to say "no" on the student elective. Students going on electives abroad need clinical guidelines. *BMJ*. 1998;316(7142):1404-1405.

Barnett T, Whiteside A. *AIDS in the Twenty-First Century: Disease and Globalization.* New York, NY: Palgrave Macmillan; 2002.

Barnhart S. Should medical education fight international brain drain? *Virtual Mentor*. 2009; 11(7):498-501. http://virtualmentor.ama-assn.org/2009/07/ccas2-0907.html. Accessed February 4, 2010.

Barrett R. Self-mortification and the stigma of leprosy in northern India. *Med Anthropol Q*. 2005;19(2):216-230.

Bateman C, Baker T, Hoornenborg E, Ericsson U. Bringing global issues to medical teaching. *Lancet*. 2001;358(9292):1539-1542.

Benatar SR, Daar AS, Singer PA. Global health ethics: the rationale for mutual caring. *Int Aff*. 2003;79(1):107-138.

Benatar SR, Singer PA. A new look at international research ethics. *BMJ*. 2000;321(7264):824-826.

Benatar SR. Imperialism, research ethics and global health. *J Med Ethics*. 1998;24(4):221.

Benatar SR. Towards progress in resolving dilemmas in international research ethics. (The Public's Health and the Law in the 21st Century: Third Annual Partnership Conference on Public Health Law.) *J Law Med Ethics*. 2004;32(4):574-582.

Bendavid E, Young SD, Katzenstein DA, et al. Cost-effectiveness of HIV monitoring strategies in resource-limited settings: a southern African analysis. *Arch Intern Med*. 2008;168(17):1910-1918.

Bezruchka S. Medical tourism as medical harm to the Third World: Why? For whom? *Wilderness Environ Med*. 2000;11(2):77-78.

Bishop R, Litch JA. Medical tourism can do harm. *BMJ*. 2000;320(7240):1017.

Boelen C, Heck J. Defining and measuring the social accountability of medical schools. Geneva: World Health Organization; 1995. (Unpublished document WHO/HRH/95.7.)

Brewer TF, Saba N, Clair V. From boutique to basic: a call for standardised medical education in global health. *Med Educ*. 2009;43(10):930-933.

Buchanan D, Witlen R. Balancing service and education: ethical management of student-run clinics. *J Health Care Poor Underserved*. 2006;17(3):477-485.

Charles M, Boyle B. Excess and access: The continuing controversy regarding HIV and health care in Africa. *AIDS Read*. 2002;12(7):288-292.

Colebunders R, Moses KR, Laurence J, et al. A new model to monitor the virological efficacy of antiretroviral treatment in resource-poor countries. *Lancet Infect Dis*. 2006;6(1):53-59.

Consten EC, van Lanschot JJ, Henny PC, et al. A prospective study on the risk of exposure to HIV during surgery in Zambia. *AIDS*. 1995;9(6):585-586.

Cosman M. Hospital to the world welcomes illegals and contagious diseases. U.S. Border Control. http://www.usbc.org/profiles/2005/spr/hospital.htm. Accessed February 15, 2010.

Costello A, Zumla A. Moving to research partnerships in developing countries. *BMJ*. 2000;321(7264):827-829.

Coughlin SS, Soskolne CL, Goodman KW. *Case Studies in Public Health Ethics*. Washington, D.C.: APHA; 1998.

Crump JA, Sugarman J. Ethical considerations for short-term experiences by trainees in global health. *JAMA*. 2008;300(12):1456-1458.

Daniels N. Duty to treat or right to refuse? *Hastings Cent Rep*. 1991;21(2):36-46.

DeCamp M. Scrutinizing global short-term medical outreach. *Hastings Cent Rep*. 2007;37(6):21-23.

Dowell J, Merrylees N. Electives: isn't it time for a change? *Med Educ*. 2009;43(2);121-126.

Drain PK, Holmes KK, Skeff KM, et al. Global health training and international clinical rotations during residency: current status, needs, and opportunities. *Acad Med*. 2009;84(3):320-325.

Drain PK, Primack A, Hunt DD, et al. Global health in medical education: a call for more training and opportunities. *Acad Med*. 2007;82(3):226-230.

Dwyer J. Teaching global bioethics. *Bioethics*. 2003;17(5-6):436.

Elansary M, Graber LK, Provenzano AM, Barry M, Khoshnood K, Rastegar A. Ethical dilemmas in global clinical electives. Submitted for publication. 2010.

Emanuel EJ, Wendler D, Killen J, Grady C. What makes clinical research in developing countries ethical? The benchmarks of ethical research. *J Infect Dis*. 2004;189(5):930-937.

Eriksson S, Hoglund AT, Helgesson G. Do ethical guidelines give guidance? A critical examination of eight ethics regulations. *Camb Q Healthc Ethics*. 2008;17:15-29.

Farmer PE, Nizeye B, Stulac S, Keshavjee S. Structural violence and clinical medicine. *PLoS Med*. 2006;3(10):e449.

Federico SG, Zachar PA, Oravec CM, et al. A successful international child health elective: the University of Colorado Department of Pediatrics' experience. *Arch Pediatr Adolesc Med*. 2006;160(2):191-196.

Fitzgerald DW, Wasunna AA. Away from exploitation and towards engagement: an ethical compass for medical researchers working in resource-poor countries. *J Law Med Ethics*. 2005;33(3):559-565.

Fox RC, Goemaere E. They call it 'patient selection' in Khayelitsha: the experience of Medecins Sans Frontieres-South Africa in enrolling patients to receive antiretroviral treatment for HIV/AIDS. *Camb Q Healthc Ethics*. 2006;15(3):302-312.

Global Health Education Consortium. Professionalism 101: How to be professional and act ethical when abroad. http://globalhealthedu.org/PublicDocs/professionalism_cfhi.pdf. Accessed February 12, 2010.

Goffman E. *Stigma*. Englewood Cliffs, NJ: Prentice-Hall, Inc.; 1963.

Good MJ, Mwaikambo E, Amayo E, Machoki JM. Clinical realities and moral dilemmas: contrasting perspectives from academic medicine in Kenya, Tanzania, and America. *Daedalus*. 1999;128(4):167-195.

Green T, Green H, Scandlyn J, Kestler A. Perceptions of short-term medical volunteer work: a qualitative study in Guatemala. *Global Health*. 2009;5:4.

Grennan T. A Wolf in Sheep's Clothing? A Closer Look at Medical Tourism. McMaster University Med J. 2003;1(1):50-54.

Gupta AR, Wells CK, Horwitz RI, et al. The International Health Program: the fifteen-year experience with Yale University's Internal Medicine Residency Program. *Am J Trop Med Hyg*. 1999;61(6):1019-1023.

Halsall P. The Black Death and the Jews 1348-1349 CE. Jewish History Sourcebook. http://www.fordham.edu/halsall/jewish/1348-jewsblackdeath.html. Accessed January 27, 2010.

Haq C, Rothenberg D, Gjerde C, et al. New world views: preparing physicians in training for global health work. *Fam Med*. 2000;32(8):566-572.

Harries AD. High death rates in health care workers and teachers in Malawi. *Trans R Soc Trop Med Hyg*. 2002;96(1):34-37.

Harris B. *A Foreign Experience: Violence, Crime and Xenophobia during South Africa's Transition*. South Africa: Centre for the Study of Violence and Reconciliation; 2001: 44. *Violence and Transition*; vol. 5.

Hattis PA, Walton J, Staton S. *Understanding Charitable Immunity Legislation: A Volunteers in Health Care Guide*. Pawtucket, RI: Volunteers in Health Care; 2003.

Health Insurance Portability and Accountability Act, 42 USC sec 1396 et seq. (2006).

Health Insurance Portability and Accountability Act, 42 USC sec 233(o)(1) (1996).

Health Insurance Portability and Accountability Act, 42 USC sec 233(o)(3) (1996).

Health Insurance Portability and Accountability Act, 42 USC sec 233(o)(2) (1996).

Hellenberg D. Developing family medicine in South Africa: a new and important step for medical education. *Med Teach*. 2007;29(9):897-900.

Idaho Code Ann sec 39-7703.

Iliffe J. *East African Doctors: A History*. Cambridge: Cambridge University Press; 1998.

Iliffe J. *The African AIDS Epidemic: A History*. Oxford: James Currey Ltd.; 2006.

Institute of Medicine (U.S.). Committee on Optimizing Graduate Medical Trainee (Resident) Hours and Work Schedules to Improve Patient Safety, Ulmer C. *Residency Duty Hours: Enhancing Sleep, Supervision and Safety.* Washington, D.C.: National Academies Press; 2009.

Izadnegahdar R, Correia S, Ohata B, et al. Global health in Canadian medical education: current practices and opportunities. *Acad Med*. 2008;83(2):192-198.

Joint Learning Initiative. *Human Resources for Health: Overcoming the Crisis.* Cambridge, MA: President and Fellows of Harvard College; 2004.

Kagaayi J, Makumbi F, Nakigozi G, et al. WHO HIV clinical staging or CD4 cell counts for antiretroviral therapy eligibility assessment? An evaluation in rural Rakai district, Uganda. *AIDS*. 2007;21(9):1208-1210.

Kanter SL. Global health is more important in a smaller world. *Acad Med*. 2008;83(2):115-116.

Kassa E, Rinke de Wit TF, Hailu E, et al. Evaluation of the World Health Organization staging system for HIV infection and disease in Ethiopia: Association between clinical stages and laboratory markers. *AIDS*. 1999;13(3):381-389.

Keusch GT, Wilentz J, Kleinman A. Stigma and global health: developing a research agenda. *Lancet*. 2006;367(9509):525-527.

King ML. *I Have a Dream: Writings and Speeches That Changed the World*. San Francisco, CA: HarperSanFrancisco; 1992:85.

Koplan JP, Bond TC, Merson MH, et al. Towards a common definition of global health. *Lancet*. 2009;373(9679):1993-1995.

Levine RJ. *Ethics and Regulation of Clinical Research*. 2nd ed. London: Yale University Press; 1988.

Lewkonia RM. The missions of medical schools: the pursuit of health in the service of society. *BMC Med Educ*. 2001;1:4.

Lev 12:9 (NRSV).

Lev 13:45 (NRSV).

London AJ. Justice and the human development approach to international research. *Hastings Cent Rep*. 2005;35:24-37.

Louisiana Rev Stat Ann 9:2799.5.

Lynen L, Thai S, De Munter P, et al. The added value of a CD4 count to identify patients eligible for highly active antiretroviral therapy among HIV-positive adults in Cambodia. *J Acquir Immune Defic Syndr*. 2006;42(3):322-324.

Macdonagh R, Jiddawi M, Parry V. Twinning: the future for sustainable collaboration. *BJU Int*. 2002;89(Suppl 1);13-17.

Macfarlane SB, Agabian N, Novotny TE, et al. Think globally, act locally, and collaborate internationally: global health sciences at the University of California, San Francisco. *Acad Med*. 2008;83(2):173-179.

Macklin R. After Helsinki: unresolved issues in international research. *Kennedy Inst Ethics J*. 2001;11(1):17-36.

Mak WW, Mo PK, Cheung RY, et al. Comparative stigma of HIV/AIDS, SARS, and tuberculosis in Hong Kong. *Soc Sci Med*. 2006;63(7):1912-1922.

Malamba SS, Morgan D, Clayton T, et al. The prognostic value of the World Health Organization staging system for HIV infection and disease in rural Uganda. *AIDS*. 1999;13(18):2555–2562.

Manabe YC, Jacob ST, Thomas D, et al. Resurrecting the triple threat: Academic social responsibility in the context of global health research. *Clin Infect Dis*. 2009;48(10):1420-1422.

Marshall PA. The relevance of culture for informed consent in U.S.-funded international health research: findings and recommendations from the case study on informed consent for genetic epidemiological studies of hypertension, breast cancer, and diabetes mellitus in Nigeria. In: National Bioethics Advisory Commission. Commissioned Papers and Staff Analysis. Bethesda, MD: National Bioethics Advisory Commission; 2001. *Ethical and Policy Issues in International Research: Clinical Trials in Developing Countries*; vol 2.

Martinez G. As swine flu spreads, so does backlash against Mexico. New American Media. http://news.ncmonline.com/news/view_article.html?article_id=8541edacc34b183012 cd118e8b83e68a. Accessed February 15, 2010.

Meintjes G, Lawn SD, Scano F, et al. for the International Network for the Study of HIV-Associated IRIS. Tuberculosis-associated immune reconstitution inflammatory syndrome: case definitions for use in resource-limited settings. *Lancet Infec Dis*. 2008;8(8):516-523.

Miller WC, Corey GR, Lallinger GJ, Durack DT. International health and internal medicine residency training: the Duke University experience. *Am J Med*. 1995;99(3):291-297.

Minkler M, Wallerstein N, eds. *Community-Based Participatory Research for Health*. San Francisco, CA: Jossey-Bass; 2002.

Miranda JJ, Yudkin JS, Willmot C. International health electives: Four years of experience. *Travel Med Infect Dis*. 2005;3(3):133-141.

Murff HJ, Pichert JW, Byrne DW, et al. Research participant safety and systems factors in general clinical research centers. *IRB Ethics Hum Res*. 2006;28(6):8-14.

National Health Care for the Homeless Council (NHCHC), Community-Campus Partnerships for Health. A guide to community-campus partnerships for the health of people experiencing homelessness.

http://depts.washington.edu/ccph/pdf_files/HCHCampusStudyf.pdf. Accessed January 10, 2010.

Nelson BD, Lee AC, Newby PK, et al. Global health training in pediatric residency programs. *Pediatrics*. 2008;122(1):28-33.

Niemantsverdriet S, van der Vleuten CP, Majoor GD, Scherpbier AJ. The learning processes of international students through the eyes of foreign supervisors. *Med Teach*. 2006;28(4):e104-e111.

Nonprofit Risk Management Center. State Liability Laws for Charitable Organizations and Volunteers. Leesburg, VA: Nonprofit Risk Management Center; 2009. http://www.nonprofitrisk.org/downloads/state-liability.pdf. Accessed on February 9, 2010.

Nullis-Kapp C. Health workers shortage could derail development goals. *Bull World Health Organ*. 2005;83(1):5-6.

O'Neil E. Jr. *Awakening Hippocrates: A Primer on Health, Poverty, and Global Service.* Chicago, IL: American Medical Association; 2006.

Oman K, Khwa-Otsyula B, Majoor G, et al. Working collaboratively to support medical education in developing countries: the case of the Friends of Moi University Faculty of Health Sciences. *Educ Health (Abingdon)*. 2007;20(1):12.

Ooms G, Van Damme W, Temmerman M. Medicines without doctors: why the Global Fund must fund salaries of health workers to expand AIDS treatment. *PLoS Med*. 2007;4(4):e128.

Oppong JR, Kalipeni E. Perceptions and misperceptions of AIDS in Africa. In: Kalipeni E, Craddock S, Oppong JR, Ghosh J, eds. *HIV and AIDS in Africa: Beyond Epidemiology*. Malden, MA: Blackwell Publishing; 2004: 47-57.

O'Toole TP, Gibbon J, Harvey J, Switzer G. Students' attitudes toward indigent patients. *Acad Med*. 2002;77(6):586.

Philpott J, Batty H. Learning best together: social constructivism and global partnerships in medical education. *Med Educ*. 2009;43(9):923-924.

Pinto AD, Upshur RE. Global health ethics for students. *Dev World Bioeth*. 2009;9(1):1-10.

Provenzano AM, Graber LK, Elansary M, Khoshnood K, Rastegar A, Barry M. Ethical concerns in short-term international research among U.S.-based medical students. Submitted for publication. 2010.

Punjabi R. Health for the poor: an interview with Joia Mukherjee. *Z Magazine*. http://www.zmag.org/zmag/viewArticle/13965. Accessed December 10, 2009.

Ramsey A, Haq C, Gjerde C, Rothenberg D. Career influence of an international health experience during medical school. *Fam Med*. 2004;36(6):412-416.

Ramsey KM, Weijer C. Ethics of surgical training in developing countries. *World J Surg*. 2007;31(11):2067-2069.

Resnick DB, Sharp RR. Protecting third parties in human subjects research. *IRB Ethics and Human Research*. 2006;28(4):1-7.

Roberts M. A piece of my mind. Duffle bag medicine. *JAMA*. 2006;295(13):1491-1492.

Rose MA, Lyons KJ, Swenson Miller K, Cornman-Levy D. The effect of an interdisciplinary community health project on student attitudes toward community health, people who are indigent and homeless, and team leadership skill development. J *Allied Health*. 2003;32(2):122-125.

Said EW. *Orientalism*. 25th anniversary ed. New York: Vintage Books; 2003.

Sande M, Ronald A. The academic alliance for AIDS care and prevention in Africa. *Acad Med*. 2008;83(2):180-184.

Schaller M. Infectious diseases and the evolution of cross-cultural differences. In: Schaller M, Norenzayan A, Heine SJ, et al, eds. *Evolution, Culture, and the Human Mind*. New York: Psychology Press; 2010.

Shah S, Wu T. The medical student global health experience: professionalism and ethical implications. *J Med Ethics*. 2008;34(5):375-378.

Shapiro K, Benatar SR. HIV prevention research and global inequity: steps towards improved standards of care. *J Med Ethics*. 2005;31(1):39-47.

Shaywitz DA, Ausiello DA. Global health: A chance for Western physicians to give- and receive. *Am J Med*. 2002;113(4):354-357.

Sherman I. *Twelve Diseases that Changed Our World*. Washington DC: American Society of Microbiology, ASM Press; 2007.

Simon V, Ho DD, Abdool Karim Q. HIV/AIDS epidemiology, pathogenesis, prevention, and treatment. *Lancet*. 2006;368(9534):489-504.

Smith JK, Weaver DB. Capturing medical students' idealism. *Ann Fam Med*. 2006;4 Suppl 1:S32-S37.

Sokol DK. Virulent epidemics and scope of healthcare workers' duty of care. *Emerg Infec Dis.* 2006;12(8):1238-1241.

South Africa Department of Health. Natural course of HIV disease and WHO clinical staging in adults. Pretoria, South Africa: South Africa Department of Health.

Southern Poverty Law Center. Center urges CNN to retract false reporting by Lou Dobbs. http://www.splcenter.org/get-informed/news/center-urges-cnn-to-retract-false-reporting-by-lou-dobbs. Accessed February 15, 2010.

Suchdev P, Ahrens K, Click E, et al. A model for sustainable short-term international medical trips. *Ambul Pediatr*. 2007;7(4):317-320.

Tangwa GB. International regulations and medical research in developing countries: double standards or differing standards? *Notozie di Politeia*. 2002;18:46-50.

Thompson MJ, Huntington MK, Hunt DD, et al. Educational effects of international health electives on U.S. and Canadian medical students and residents: a literature review. *Acad Med*. 2003;78(8):342-347.

U.S. Department of Health and Human Services. Policy Information Notice 2004-24: Federal Tort Claims Act Coverage of Free Clinic Volunteer Health Care Professionals, Revised June 18, 2009. http://bphc.hrsa.gov/policy/pin0424.htm. Accessed February 9, 2010.

Ulmer DD. Some international efforts of medical schools to improve health systems. *Infect Dis Clin North Am*. 1995;9(2):425-431.

UN Office for the Coordination of Human Affairs. Kenya: Stigma holding back the fight against TB. *IRIN News*. Nov. 29, 2009. http://www.irinnews.org/Report.aspx?ReportId=87108. Accessed January 26, 2010.

Vermund SH, Sahasrabuddhe VV, Khedkar S, et al. Building global health through a center-without-walls: the Vanderbilt Institute for Global Health. *Acad Med*. 2008;83(2):154-164.

Volunteer Protection Act, 42 USC sec 14501 (1997).

Volunteer Protection Act, 42 USC sec 14502 (1997).

Volunteer Protection Act, 42 USC sec 14503(a) (1997).

Volunteer Protection Act, 42 USC sec 14503(d) (1997).

Volunteer Protection Act, 42 USC sec 14503(e)(1) (1997).

Volunteer Protection Act, 42 USC sec 14503(f) (1997).

Volunteer Protection Act, 42 USC sec 14505(6) (1997).

Wasunna A, Fitzgerald DW. Ethics and epidemics in the developing world: the case of AIDS in Africa: treatment challenges. In: Balint J, Philpott S, Baker R, Strosberg M, eds. *Ethics and Epidemics*. Oxford, UK: Elsevier/JAI Press; 2006: 189-190. *Advances in Bioethics*; vol. 9.

White M, Cauley K. A caution against medical student tourism. *Virtual Mentor*. 2006;8(12):851-854. http://virtualmentor.ama-assn.org/2006/12/oped1-0612.html. Accessed October 4, 2009.

Wilkinson, D. Medical students, their electives and HIV. *BMJ*. 1999; 318(7177): 139-140.

Woollard RF. Caring for a common future: medical schools' social accountability. *Med Educ*. 2006;40(4):301-313.

World Health Organization. Global Health Workforce Alliance: About the Alliance. Geneva: http://www.who.int/workforcealliance/about/en/. Accessed January 25, 2010.

World Health Organization. Interim WHO clinical staging of HIV/AIDS and HIV/AIDS case definitions for surveillance: African region. Switzerland: World Health Organization; 2005.

World Health Organization. The global health workforce shortage and its impact. http://www.who.int/mediacentre/factsheets/fs302/en/index.html. Accessed December 20, 2009.

World Health Organization. WHO case definitions of HIV for surveillance and revised clinical staging and immunological classification of HIV-related disease in adults and children. Switzerland: World Health Organization; 2007.

World Medical Association. World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human subjects. 6th revision. 2008: 1-5.

Xenophobia: Camps breeding zone for disease. The Mercury. May 26, 2008. http://www.themercury.co.za/?fSectionId=&fArticleId=nw20080526154541731C33 4817. Accessed January 24, 2010.

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