Global Health Educational Engagement—A Tale of Two Models

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Abstract

Global health learning experiences for medical students sit at the intersection of capacity building, ethics, and education. As interest in global health programs during medical school continues to rise, Northwestern University Alliance for International Development, a student-led and -run organization at Northwestern University Feinberg School of Medicine, has provided students with the opportunity to engage in two contrasting models of global health educational engagement.

Eleven students, accompanied by two Northwestern physicians, participated in a one-week trip to Matagalpa, Nicaragua, in December 2010. This model allowed learning within a familiar Western framework, facilitated high-volume care, and focused on hands-on experiences. This approach aimed to provide basic medical services to the local population.

In July 2011, 10 other Feinberg students participated in a four-week program in Puerto Escondido, Mexico, which was coordinated by Child Family Health International, a nonprofit organization that partners with native health care providers. A longer duration, homestays, and daily language classes hallmarked this experience. An intermediary, third-party organization served to bridge the cultural and ethical gap between visiting medical students and the local population. This program focused on providing a holistic cultural experience for rotating students.

Establishing comprehensive global health curricula requires finding a balance between providing medical students with a fulfilling educational experience and honoring the integrity of populations that are medically underserved. This article provides a rich comparison between two global health educational models and aims to inform future efforts to standardize global health education curricula.

Editor's Note: A commentary by J. Scott appears on page 1596–1597.

Young medical trainees across the United States have demonstrated a high level of interest in global health opportunities for many decades.[1–3] In fact, participation in global health at the medical school level has increased more than threefold from 1984 to 2010.[4] Infrastructure that assists students and residents in their pursuit of global health training has concurrently flourished in recent years, irrespective of medical specialty.[4–8] Global health education may offer unique advantages during the formative years of medical training including the following: understanding the dynamics of the doctor–patient relationship, incorporating cultural sensitivity into patient encounters, recognizing the socioeconomic barriers to effective patient care, and introducing students to potential careers in underserved areas.[9] Indeed, data suggest that the benefits of even brief exposure to global health through an international visit may persist years after the initial experience.[10] Students who have completed an international rotation in a developing country have reported increased confidence in clinical skills, a greater understanding of the cost burden of disease, less reliance on technology, and a larger appreciation of the barriers to communication between the physician and patient.[3] The ultimate goal of such educational efforts is to inspire and nurture, at an early stage, a vested interest in global health and in the care of medically underserved populations.[11]

Although the benefits of international medical rotations have been demonstrated in various settings, the optimal model of global health education has yet to be established, especially for medical students. The authors of a recent review of global health programs found that these programs lack standardization and that information on their structure is elusive.[12] This issue has garnered significant interest in domestic and international arenas. In 1991, the Global Health Education Consortium, a pan-American nonprofit organization, first formally recognized the unmet need to standardize policies related to international medical education across different medical schools.[13] Since then, multiple other organizations have spearheaded efforts to create standardized curricula for medical students in the United States and abroad.

To date, the studies exploring the development of global health curricula for medical students have entailed small, isolated experiences. Further, they have not offered a comparison of different models. International training

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Acad Med. 2013;88:00–00.
First published online
doi: 10.1097/ACM.0b013e3182a6d0b0

experiences are highly variable: They range from months-long trips focused on exposing participants to international sites to weeklong immersion trips; some involve an intermediary coordinating organization, while others do not.[13,14] Recent data suggest that although one-week service–learning trips may benefit students, they may also raise concerns regarding the value of global health engagement, particularly about the effects these student placements have on host communities.[15,16] Thus, further program evaluation comparing multiple models of global health educational delivery is warranted.

Northwestern University Alliance for International Development (NU-AID) is a student-led and student-run organization at the Feinberg School of Medicine that is dedicated to promoting public and global health. For the last 12 years, NU-AID has coordinated short-term trips to various regions of the world in order both to provide direct medical assistance in areas that are medically underserved and to offer global learning opportunities for medical students. Because of a recent expansion of the medical school's internal global health program, NU-AID leaders have transitioned international trip structures from the short-term service trips towards longer-term, more sustainable projects. Thus, NU-AID and participating students had the unique experience of approaching global health education from two varying angles: Model 1, in which medical students accompanied U.S. doctors to temporary clinic sites to provide high-volume care; and Model 2, in which medical students worked directly with local physicians and with a nonprofit organization committed to long-term care for patients and educational agendas for visiting students. Although many in the global health field have met short-term service trips and medication distribution between nonaligned institutions with skepticism,[17] in this article we explore the optimal educational delivery strategy for students, rather than the provision of care itself. Major themes that we address include the value of immersion experiences, the ethics involved with medical student participation, the relative costs and durations of stays, and the role of an intermediary organization.

Model One—Matagalpa, Nicaragua, December 2010

Matagalpa is a small city in northern Nicaragua with only 3 physicians per 10,000 people.[15] The approximately 145 health centers and/or clinics in Matagalpa, along with the 3 physicians, bring the health care center or provider-to-patient ratio to approximately 1:850 persons.[15] Matagalpa was one of the areas devastated by Hurricane Mitch and its aftermath in 1999. After the hurricane, local nonprofit organizations solicited external medical care providers.

This call for assistance was the major driver in the initial interaction between NU-AID and this international site. In 2010, NU-AID recruited 1 family medicine physician, 1 cardiologist, and 11 medical students to deliver care to this medically underserved population. Specific learning objectives for the students included developing concrete clinical skills when working with patients in community health clinics in an international setting and learning tropical medicine in a "Western" framework under the instruction of U.S. physicians. For the purposes of this article, we define "Western" countries broadly as "non-lower- or middle-income countries that are situated in the Western hemisphere, primarily the United States and Canada." NU-AID partnered with Fundación por los Derechos y Equidad Ciudadana A.C. (Foundation for Citizens' Rights and Equality), which is a nongovernmental organization committed to indigent health care.[18] This organization subsequently connected the NU-AID team with another organization called Casa de la Mujer ("Woman's House"). Casa de la Mujer is a local Nicaraguan organization dedicated to the medical care of domestic abuse victims.[19] It fosters female empowerment by providing business classes and job training opportunities to local women. In Nicaragua, Casa de la Mujer assisted the NU-AID team with organizing local clinic sites, transporting supplies, and recruiting patients.

The 13-member NU-AID team visited four total sites over the course of one week. The first clinic was at Casa de La Mujer's main health site, located in the central town square. Normally, health "promoters" (i.e., nurses, social workers), rather than physicians, staffed the clinic. The second clinic site was at a distant coffee plantation where the local workers have routine access to only a nurse. The third site was in a nearby neighborhood within the home of local community members. For the fourth site, the team traveled to a remote coffee processing center where the workers were frequently without electricity and medical care. At each site, 10 medical students (of the total 11) were divided into five pairs, each composed of one upperclassman (a third- or fourth-year student) and one underclassman (a first- or second-year student). The remaining student assisted with patient flow to enhance the overall efficiency of the clinic sites. At all four clinical sites, students were able to speak directly with patients. On a rotating basis, one student pair established a pharmacy and dispensed medications (all provided by NU-AID) according to patient needs; the senior member of the student pair supervised the pharmacy. Throughout the week, senior students were responsible for teaching junior students how to elicit a pertinent history, conduct a physical exam, posit an assessment, and formulate an appropriate treatment plan. After doing so, each student pair presented their patient case to one attending physician, and together the team revisited the patient. Patients received counseling on basic public health behaviors (e.g., condom use, hand sanitation), as well as necessary medications, with detailed instructions. The team served nearly 700 patients over the course of their one-week visit.

Although we described a visit that occurred in December 2010, a NU-AID team established (with the assistance of Casa de la Mujer) the four clinic sites biannually between 1999 and 2010. The clinics were neither staffed nor functional between these trips.

Model Two—Oaxaca, Mexico, July 2011

Puerto Escondido is a small coastal town in the state of Oaxaca in southern Mexico. The city is composed of two general populations: (1) a stable, long-standing indigenous population; and (2) a high-volume, tourist population. In the summer of 2011, NU-AID collaborated with Child Family Health International (CFHI), a nonprofit organization,[20] to send 10 medical students on a pilot trip to Puerto Escondido.

CFHI, operating in six countries, provides global health education programs for U.S. medical students. CFHI immerses students into local cultures by organizing homestays for them and integrating them into various public and nongovernmental safety-net systems with local providers.[21] Because CFHI has been running programs for 20 years, it has cultivated and maintained long-standing relationships with homestay families, local coordinators, and medical directors. In addition, CFHI has policies, procedures, and risk management approaches aimed at ensuring patient and student safety.

Specific learning objectives for the summer 2011 trip to Puerto Escondido included broadening participant understanding of the social determinants of health, engendering a larger sense of cultural competency, and cultivating a deeper interest in service and in the primary-care-oriented fields. To enhance student education regarding national and local health infrastructure, local CFHI staff members gave weekly lectures on topics ranging from national health policy to endemic diseases.

The four-week trip was divided into two 2-week blocks. During the first block students rotated in local primary health care clinics, and during the second, students joined brigades (small groups of community members) to learn about public health measures within the community. During the first two clinical weeks, Northwestern students were assigned to pairs by two parameters: (1) medical school year (i.e., a first-year medical student with a fourth-year medical student) and (2) Spanish fluency (i.e., a fluent speaker with a nonfluent speaker). Each student pair was assigned to one of five clinics along the coast of Puerto Escondido. Each of these *centros de salud* (health centers) was staffed by at least one local physician and nurse who cared for approximately 15 to 35 patients each day. The second two-week block was further divided: one week was dedicated to maternal and reproductive health, and the second to vector-borne diseases such as Chagas, dengue, and malaria. To learn about maternal and reproductive health, the students met midwives and attended classes on reproductive health. At the end of the week, they delivered a public health presentation regarding contraception and perinatal care to a group of 30 women from the community. To learn about vector-borne diseases, the 10 students joined a local brigade member from the Ministry of Health and visited local cemeteries and fields, identifying risk factors for disease transmission. At the conclusion of this week, the students delivered a second public health presentation regarding the transmission, symptoms, and treatments of tropical disease.

Approach to Program Evaluation

NU-AID released information advertising each trip approximately six months prior to departure. Interested students completed applications, in which they expressed their prior and current interest in pursuing global health outreach work. The NU-AID executive board selected approximately 10 students biannually for these trips. U.S. physicians recruited by the NU-AID team under Model 1 participated on a strictly voluntary basis. Trip costs approximated U.S. $400 (Model 1) or U.S. $800 (Model 2) per student per week. Predeparture fundraising and institutional support helped to fund student participation in these global health experiences. Predeparture curricula included team-building activities, language assessment, an overview of the program and local region, and informal discussion of ethical/cultural issues of global health student experiences. Clinical and nonclinical mentors (i.e., Northwestern physicians and Mexican health brigade members) were available during the course of each trip to help medical students navigate ethical, cultural, and social situations. Within one month of returning to the United States, the students who had traveled on the trips, along with medical school program staff, participated in an unrecorded, two- to three-hour, group-based discussion forum. All global health participants attended these mandatory sessions, which NU-AID leaders moderated. Students did not receive any incentive for attending.

Some of the major themes that the students returning from Mexico and the students returning from Nicaragua discussed included constructive educational structures, volume of patients, extent of on-site learning, degree of "immersion," the social and ethical issues of global health educational endeavors, and suggestions for future programs. Below, we attempt to summarize the major findings from these program evaluation meetings, primarily from the perspective of the medical student. Although NU-AID has been involved in planning short-term global health experiences for the last 12 years (1999–2011), this article reflects only the experiences of the students who visited Nicaragua in December 2010 and Mexico in July 2011.

A Rich Comparison

Model 1's team structure, consisting of both physicians and students from the United States, allowed for a more cohesive team dynamic. U.S. physicians were able to maintain the familiar Western university teaching framework (i.e., obtain a history, develop presentation skills, posit an assessment, and formulate a plan) that was reportedly easier for students to follow. Model 1 allowed for a higher volume of supervised hands-on care compared with Model 2; that is, Model 1 students saw approximately 70 (versus 25) patients per week—which greatly helped to refine their physical exam and history-taking skills. Through collaboration with a local Nicaraguan partner, Model 1 students engaged in semi-independent clinical care, a potentially important difference between these two models. (As explained, Casa de la Mujer, though a locally based organization, did not independently provide health care to surrounding communities but, rather, built a framework through which the NU-AID medical team was able to do so.)

Provision of medical care in Nicaragua was challenging. The U.S. team was forced to navigate a number of endemic barriers including (1) financial—patients often delayed medical examination because of the perceived high cost of care; (2) sociocultural—major medical conditions such as diabetes, hypertension, and dengue were considered the "norm" and part of daily life; (3) geographic—the access to health care for most local residents was regionally restricted and limited by the lack of established public transportation systems; and (4) structural—national investment in medical resources is minimal. Though possibly compromising continuity of care,[15] importing short-term, single-visit U.S. physicians provided resources

for those who otherwise faced great challenges in obtaining medical attention.

On the other hand, collaborating with an intermediary organization, such as CFHI, as was done in Model 2, facilitated a more holistic understanding of medicine and of the overarching local health care system as it exists without external actors. Homestays, language studies, and collaboration with local physicians nurtured an immersive experience that provided students with a deeper understanding of the health status and cultural nuances of the local community. The clinical role of the student, however, was less active, as local physicians and nurses—rather than student pairs—tended to patients. Although students assumed observer roles, they were able to learn more formally about the local and national insurance systems and about the ongoing public health agenda in Mexico through scheduled didactic sessions organized by CFHI.

Through CFHI, students were able to engage in community health, an aspect lost in the first model because of consuming clinical demands. This public health work fostered communication and presentation skills as well as an aspect of cultural sensitivity. Students completed the program with a thorough understanding of the health infrastructure in Puerto Escondido, which students on trips of shorter duration may not gain.

Table 1 summarizes the major characteristics of the two global health models. Both Puerto Escondido and Matagalpa are burdened by a high incidence of vector-borne infectious diseases[22–24] and of maternal mortality[15] that physicians in the United States rarely witness. During these relatively brief global health trips, medical students in both models were afforded a learning opportunity that transcended the traditional classroom setting. Both experiences encouraged students to integrate clinical medicine and public health at international sites. To optimize learning for all students, NU-AID enlisted a vertical learning structure for both models. In this structure, first- and second-year medical students were paired with more clinically experienced third- and fourth-year students. Each member of each pair directly participated in clinical care, deriving patient histories and refining physical exam skills, and the senior student offered constructive feedback to his or her more junior colleague at each step of the examination process.

Table 1

Comparative Description of Two Models of Global Health Programs Experienced by Medical Students at Northwestern University, Feinberg School of Medicine*

Characteristic	Model 1	Model 2
Site	Matagalpa, Nicaragua	Puerto Escondido, Mexico
Date	December 2010	July 2011
Duration of trip	1 week	4 weeks
Population	~110,000	~20,000
Relative access to medical resources	Minimal	Moderate
Primary site of training	4 team-established temporary clinics	7 locally established clinics
Accompanying staff	2 U.S. physicians	Local physicians/staff
Coordinating organizations	FUNDECI and Casa de la Mujer (Woman's House)	CFHI
Average number of patients seen per student per week	~70	~25
Financial cost per student per week	~U.S. $400	~U.S. $800
Teaching mode	"Western" model, service–learning	Holistic model, immersion experience
Supplies and donations	Medications	Mosquito nets
Public health interventions	Minimal	High

*This comparison focuses on the major differences identified between the two global health models as determined by consensus during posttrip reflection sessions. "Minimal," "moderate," and "high" represent the students' consensus of the measure. FUNDECI indicates Fundación por los Derechos y Equidad Ciudadana A.C. (or, in English, Foundation for Citizens' Rights and Equality); CFHI, Child Family Health International.

Both modalities also included debriefing sessions at which students were able to discuss their experiences in the international clinics. These sessions served as an outlet for students to identify the challenges in working in international health and to further brainstorm solutions to these barriers.

There are important differences between these global health program models in the relative financial costs to the students and to the institution. Model 1 requires dedicated institutional faculty to be away from academic duties for the trip duration (in this case, a voluntary decision). Model 2 may represent a less resource-intensive approach for academic institutions to be able to provide their learners with international medical experiences. Model 2 allows institutions to ensure safety, orientation, partner site coordination, and faculty involvement all without committing huge internal resources. This represents an excellent opportunity for smaller institutions that may lack the experience, staff, and resources to run independent global health programs. However, in Model 2, the intermediary program (CFHI) required a program tuition. Thus, without an external funding source, the burden of the expense shifts to the learners who are then responsible for their own trip expenses and for the organizational fees that fund their classes abroad and their homestays, and which contribute to overall program quality. These fees are integral to the program model as they are reinvested in the community through the compensation given to local preceptors for their work as educators, through capacity-building efforts (support for degrees, training, and other professional development), and through concurrent, locally driven community health projects.[25] Model 2 reflected a tuition-based approach similar to educational institutions and offered reciprocity to the local site through, as mentioned, financial compensation of local preceptors and others—rather than through externally provided health care services.

The inherent barriers (primarily language and cultural) that make international

health work difficult may also decrease the learning of U.S. students in international settings. The two models took different approaches to manage the obstacles to effective learning. The first model allowed for educational delivery in the context of a known and familiar framework; that is, U.S. physicians applied and reinforced educational practices common in their home institutions but with a tropical medicine focus. The familiar practices helped students anchor their understanding and expand their knowledge base despite the new context. The high volume of patients also provided more hands-on experience through which students could solidify their clinical skills. Because patient care followed a Western structure in Model 1, students were able to apply skills learned in Nicaragua to clinical settings at their home institution. Model 2 reflected a mode of global health care delivery that is recognized as more sustainable.[16] This model directly targeted barriers to education and student learning by providing an "immersion"-based solution. Homestays and daily language classes helped students relate directly with patients and the greater community, strengthening the patient–provider bond. Further, trips of longer durations appear to help students assimilate to a new culture and learn to adapt their medical knowledge to better suit a resource-limited setting. This approach provides students an opportunity to see "global health" through the eyes of the local community as it exists without Western intervention. In addition, it empowers local providers to educate foreigners about their own reality. Following the immersion at health care sites, CFHI organized structured didactics with local medical directors to bridge gaps between local realities and student perceptions. After experiencing Model 2, medical students reported returning to the United States with a more holistic understanding of the impact of cultural issues on medical care delivery.

Medical Students and Ethics

Although the purpose of this article is to highlight the strengths of two different global health education models in terms of medical student learning, these educational programs fit into a larger system of global health care delivery, and this article touches on larger issues of ethics. During the posttrip debriefing discussions, medical students frequently commented on the lack of training in the ethics of international health education. Though consensus reports recognize ethics as an integral part of global education programs,[26] few practical, real-world approaches have been attempted to address this issue.[27] This deficit is consistent with others' experiences.[28]

Indeed, each model prioritizes unique global health ethical concepts. Model 1 emphasizes health equity as a central tenet in global health. In that model, U.S. personnel address the immediate health care needs of community members, filling an apparent void. This model facilitates high-volume care and directly addresses several identified barriers to health care delivery, including access to quality care; however, this model precludes reliable follow-up and makes continuity of care challenging for the local population. Larger systemic approaches are likely required to ameliorate structural issues, such as poverty and maldistribution of resources. One hope of the weeklong, intensive experience was to inspire young physicians-in-training to become a part of this larger systemic approach and to help establish more equitable and sustainable health care in medically underserved regions.

However, this model carries concerns about sustainability, unintended malfeasance, and, potentially, lack of humility.[29] Very temporary interventions, such as the one in Nicaragua, that do not concurrently build capacity through training local professionals or collaborating with an established local health care system, are in their very nature unsustainable. In addition, there is an inference that health care issues can be addressed adequately through sporadic short-term interventions, which is contrary to existing health care systems and chronic disease care models.[28] Furthermore, Model 1 risks malfeasance in the possibility that patients may experience side effects from medications they take that are from the United States. Patients may not be able to access appropriate follow-up care as a result of the short-term efforts, or the use of a foreign medication may hamper follow-up care with local health care providers. Finally, this approach challenges humility by positioning students as primary caregivers and U.S. physicians as empowered providers, rather than empowering local providers through support, education, and collaboration.[30,31] This imbalance has led medical students in the past to question the services provided during one-week international health trips and to identify a need for community partnership.[15]

The CFHI model[25] aims to support local practitioners by making them the experts of their own health care environment. In doing so, this empowerment alters the prevalent power dynamic present when Westerners insert themselves into medically underserved communities abroad. CFHI uses an asset-based engagement approach that reflects similar development models[32] to provide educational opportunities that reflect the strengths and agenda of the host community. In this way, CFHI's model aspires to embody humility, sustainability, and justice.[33] However, there are challenges to this model too, as it assumes local health care personnel or systems are operating with an eye to health equity or social justice. In addition, Model 2 preferentially addresses the goals of the community over those of the visiting students who more commonly observe other health care providers, rather than actively engage in medical care themselves.

The Working Group on Ethics Guidelines for Global Health Training[34] suggests that best practice is to "consider the local needs and priorities regarding optimal program structure." It appears that Model 1 and Model 2 have interpreted local needs in different fashions: Model 1 with an eye to immediate alleviation of disease, and Model 2 with a goal of nurturing a better understanding of local health infrastructure. These contrasting models exemplify needs-based versus asset-based community development. In the former, a need (lack of medical care) was identified and immediately addressed by U.S. physicians and medical students. In contrast, in the latter, students immersed in the local health care context capitalized on existing assets—the local health infrastructure and local expertise. Subsequently, the students in Model 2 further built on these by providing integrated community health education.[33,35] The primary tenets of the asset-based model are to leverage the preexisting skills of local populations, to use intermediary organizations, and to

provide a supportive network for future sustainable growth. This latter model, however, is fairly resource-intensive and requires long-term investment of social and financial capital. The Asset-Based Community Development Institute, based at Northwestern University, has been developed to focus specifically on this sustainable model.[35,36]

Striking a Balance

Global health learning experiences for medical students sit at the intersection of capacity building, ethics, and education. Western students and their sponsoring institutions may erroneously focus on the attainment of clinical skills over that of cultural competency or anthropological understanding. From early in their medical training, Western medical students receive relatively few tools to deal successfully with potential ethical dilemmas. Many of these students have had minimal prior international experience, yet often when they visit a medically underserved community in another country, they are allotted a higher degree of freedom than they usually receive within their structured, regulation-based institutional environment. At the patient level, local populations face vulnerabilities related to their social, economic, and health status as well as to their overall lack of situational control. Ethical standards suggest that medical students should be in a learning—rather than a service—role during international placements because their lack of supervision and experience, especially in performing clinical tasks, raises concerns.[15,34,37] However, students are often regarded as fully educated health practitioners in an international setting, or they are less carefully supervised than when they rotate through domestic clinical placements.[38] Models that place students in a service or provider role may increase the students' access to patients and pathology but also may violate ethical commitments to the community.

Thus, intermediary organizations may be integral to bridging the gap between U.S. medical students and local communities (Figure 1). These third-party organizations can serve to ameliorate the large power imbalances, cultural differences, and language barriers that exist between these two players. In addition, these organizations can mediate between the agendas of local communities and Western institutions. They may also play a role in safeguarding the interests of the host communities and ensuring appropriate compensation for local personnel who have helped to facilitate the global health education experiences for students. Importantly, long-standing affiliations between these third-party organizations and local populations are required to ensure that the relationships remain mutually beneficial and continue to serve the community.

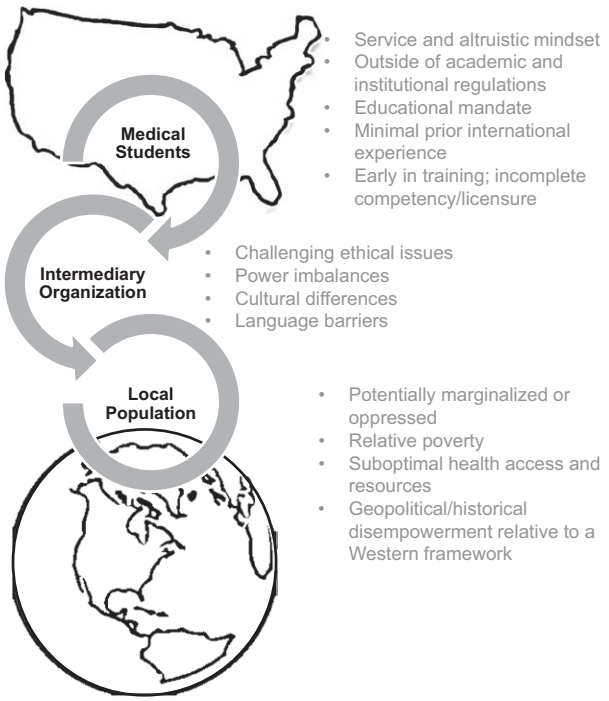

Figure 1 Bridging the gap. A schematic illustration of the unique elements that influence international educational models from the perspective of the medical student and the local population. Intermediary organizations may serve an integral role in bridging the gap between these two potentially disparate entities.

Future Directions

A number of key areas need to be addressed in the future evaluation process of these global health experiences. Literature-based resources may help administrative organizations such as NU-AID better structure reflection sessions so as to facilitate semiquantitative data output, increase student participation, and foster reproducible methodologies. Using more established program evaluation strategies, we hope to continue to collect data about international trips and perhaps to track students longitudinally to evaluate whether they pursue global health careers. Future initiatives must focus on bolstering medical student knowledge of ethical issues and cultural competency during predeparture sessions prior to students actually engaging in global health outreach work. Recently developed ethical curricula can be integrated into a more traditional pretrip preparatory guide.[39] As programs' relationships with the local community build, longer-term patient follow-up may be plausible—just as assessing patient experiences and gathering local feedback after the medical student encounters may be. NU-AID plans to continue to partner with CFHI in upcoming years on the basis of the general consensus of participants of prior trips and the internal global health program at Northwestern. On the basis of positive feedback from Model 1 participants, future iterations of the month-long program in Oaxaca will attempt to incorporate higher-volume, more hands-on involvement and patient care within the established local framework.

Conclusions

Establishing comprehensive global health curricula requires finding a balance between providing medical students with a fulfilling educational experience and honoring the integrity of the local community members. An intermediary, third-party organization may serve to bridge the cultural and ethical

gap between visiting medical students and local populations. More comparative data evaluating the influence of these global health programs on medical student trajectories will help inform future efforts to standardize global health education curricula.

Acknowledgments: The authors would like to thank the Global Health Initiative and the Center for Global Health at Northwestern University, Feinberg School of Medicine, for their continued support. The authors would also like to thank Northwestern University Alliance for International Development (NU-AID) for their dedication to student involvement in international endeavors. Finally, they would like to extend their deepest gratitude and love to Dr. Jorge Naranjo. It was his enthusiasm that incited a passion for international health in the students of NU-AID and it is his mentorship that encourages the authors to continue to actively pursue global health work.

Funding/Support: Child Family Health International funded the Western institutional review board application fee for this program evaluation.

Other disclosures: Dr. Jessica Evert is the medical director of Child Family Health International (CFHI), the intermediary non-profit organization that coordinated Model 2. As such, she is not independent of one of the organizations discussed in this program evaluation. It is important to note that students elected to organize reflection sessions in Model 2 independently. CFHI and other third-party organizations were not directly involved in the reflection sessions detailed in the program evaluation.

Ethical approval: The University of California, San Francisco Committee on Human Research (CHR) was presented with this project and considered the contents to be a reflective description of two educational approaches rather than research. Thus, it was deemed neither necessary nor appropriate for CHR submission. The Western institutional review board (IRB) provided a Regulatory Opinion of IRB Exemption.

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