

Examining the Scale and Outcomes of Global Health Fellowship Programs in the United States

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In this issue of the *Journal of Graduate Medical Education*, Nelson and colleagues¹ report the results of a survey of global health fellowship programs in the United States. The findings provide a glimpse at the scale, design, and career outcomes of graduates from global health fellowships. The results also prompt reflection on what is driving the expansion of academic global health training programs in high-income countries, who benefits and who is burdened, and to what extent such programs are addressing health disparities.

Nelson et al¹ identified 80 eligible global health fellowship programs, with emergency medicine, family medicine, and internal medicine programs being the most common. More than half of these programs completed the study questionnaire; approximately 80% of these programs met the study definition of a global health fellowship. Slightly more than half of the programs had graduated fellows, which suggests that a large proportion of programs were relatively new. Most of the programs provided clinical, research, and teaching opportunities, including in resource-limited settings. Most graduates did not go on to work in resource-limited settings.

The recent sizable expansion of global health programs at academic institutions in the United States and in other high-income countries likely has a number of drivers. Awareness of and interest in addressing global health disparities has grown. Global burden of disease estimates highlight the unacceptable levels of illness and death borne by populations in low-resource areas.² Large national and international efforts such as the US Global Health Initiative and the Global Fund bring considerable resources to combat prominent health problems such as HIV, malaria, tuberculosis, and child and maternal health. Students

increasingly demand global health training, often with experiences in resource-limited settings.³ Many universities have responded by establishing initiatives, institutes, centers, or offices for global health that coordinate training programs, provide service opportunities, and promote participation in research on global health issues.⁴

As academic global health programs expand, it is important to take stock of who benefits from them and who is burdened,⁵ and whether the programs are achieving their articulated goals. Although providing education, training, and direct experience working in global health is *sine qua non* a goal of such programs, other goals are often assumed, if not clearly articulated. Arguably, an essential goal is that benefits accrue to the host institutions, settings, and communities. This seems especially important when there are disparities of health and wealth between the sending and host settings. Nonetheless, it is critical to recognize that global health training can inadvertently pose a range of potential pitfalls. For example, patients in host countries may benefit from the attention of appropriately prepared fellows, but language and cultural barriers, lack of familiarity with management approaches in low-resource settings, and placing responsibilities on inadequately prepared and supervised trainees may create harm.^{6,7}

Trainees may have a variety of motivations for joining global health training programs, ranging from altruism, self-interest, and the desire to experience the exotic. However, trainees may find that their experiences are unsatisfactory in a range of ways,⁸ and this might place them at increased risk both within and outside health care settings.⁹ It is also possible that academic institutions in high-income countries reap a range of benefits, including but not limited to attracting the best students, who may demand global health experiences, and access to grant and philanthropic funds.

At the same time, the partner institutions in low-resource settings may be increasingly burdened by the demands of hosting and teaching additional trainees. By definition, health care services in resource-limited settings are often understaffed and overextended. Some of the activities associated with hosting trainees may detract from the provision of safe and effective health care. Furthermore, mentors in host countries may have less time for local

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trainees because of the time and attention expended hosting foreign trainees.⁵ In some instances, global health training programs are unidirectional, in that they fail to offer opportunities for local students to access training opportunities at the partner institution.¹⁰ Recommendations¹¹ and training modules¹² are in place to encourage global health training programs to be mutually and reciprocally beneficial. However, the extent to which such recommendations have been implemented is not yet clear. The network of programs established by the study by Nelson et al¹ provides a means to begin exploring these issues.

Designing approaches to measure the extent to which global health training programs are achieving their goals can be challenging. For instance, what level of continued engagement in global health by graduates of global health fellowship programs is desirable, and how should it be measured? Nelson and colleagues¹ chose to measure the proportion of graduates from the surveyed fellowship programs working predominantly in resource-limited settings and found that only a small proportion (28%) were doing so. There are likely to be a range of reasons for this outcome. A mismatch between trainee motivations and the realities of working in low-resource settings could be a factor. Working in a poor area may not be as glamorous as it might appear from a distance, and altruism is not necessarily durable.¹³ One important function of global health training programs could be to help trainees determine that a career in global health is not right for them. It is also possible that graduates and their mentors fail to identify suitable opportunities to work in low-resource settings or that a clear career path is not apparent. Nevertheless, given limited resources and opportunities for training, future research should focus on the identification of characteristics of trainees and programs that lead to careers in global health. Similarly, the academic global health community must promote and support the development of career paths for its graduates.

The challenges associated with building a global health workforce willing to engage with problems firsthand have parallels in other health areas. For example, programs to increase the health workforce in rural and remote parts of high-income countries not only integrate rural and remote experiences into training programs, but also select trainees from rural and remote backgrounds who are more likely to return after their training.¹⁴ Furthermore, a balance must be struck between training persons from high-income countries in global health and supporting the training of

those in low- and middle-income countries where training needs are enormous and largely unmet.¹⁵ After all, trainees in low- and middle-income countries are already working within their culture and language. Design of bidirectional global health training programs¹⁰ in concert with attention to the possible adverse consequences associated with workforce migration from low-resource to high-resource countries may help to achieve an appropriate balance.¹⁶

Understanding and answering questions around the benefits and burdens of global health training programs and assessing the extent to which they are achieving their goals will be essential to their long-term success and health legacy. The online public database established by Nelson et al, if sustained, will be an invaluable resource for exploring these questions and for ensuring that global health training programs achieve their potential for addressing global health problems.

References

- 1 Nelson BD, Izadnegahdar R, Hall L, Lee PT. Global health fellowships: a national, cross-disciplinary survey of US training opportunities. *J Grad Med Educ.* 2012;4(2):184–189.
- 2 Lopez AD, Mathers CD, Ezzati M, Jamison DT, Murray CJL. Global burden of disease and risk factors. Disease Control Priorities Project. New York, NY: World Bank and Oxford University Press; 2006.
- 3 McAlister CC, Orr K. A student's plea for global health studies in the medical school curriculum. *Clin Invest Med.* 2006;29:185–186.
- 4 Merson MH, Page KC. The dramatic expansion of university engagement in global health: implications for U.S. policy: a report of the CSIS Global Health Policy Center, 2009. http://csis.org/files/media/isis/pubs/090420_merson_dramaticexpansion.pdf. Accessed January 12, 2012.
- 5 Crump JA, Sugarman J. Ethical considerations for short-term experiences by trainees in global health. *JAMA.* 2008;300:1456–1458.
- 6 DeCamp M. Scrutinizing global short-term medical outreach. *Hastings Cent Rep.* 2007;37:21–23.
- 7 Harris JJ, Shao J, Sugarman J. Disclosure of cancer diagnosis and prognosis in Northern Tanzania. *Soc Sci Med.* 2003;56:905–913.
- 8 Al-Samarrai T. Adrift in Africa: a US medical resident on an elective abroad. *Health Affairs.* 2011;30:525–528.
- 9 Wilkinson D, Symon B. Medical students, their electives, and HIV: unprepared, ill advised, and at risk. *BMJ.* 1999;318:139–140.
- 10 Miranda JJ, Garcia PJ, Lescano AG, Gotuzzo E, Garcia HH. Global health training: one way street? *Am J Trop Med Hyg.* 2011;84:506.
- 11 Crump JA, Sugarman J; Working Group on Ethics Guidelines for Global Health Training (WEIGHT). Ethics and best practice guidelines for training experiences in global health. *Am J Trop Med Hyg.* 2010;83:1178–1182.
- 12 Johns Hopkins Berman Institute of Bioethics, Stanford Center for Innovation in Global Health. Ethical challenges in short-term global health training. <http://ethicsandglobalhealth.org/>. Accessed January 12, 2012.
- 13 Jones R. Declining altruism in medicine: understanding medical altruism is important in workforce planning. *BMJ.* 2002;324:624–625.
- 14 Walker JH, DeWitt DE, Pallant JF, Cunningham CE. Rural origin plus a rural clinical school placement is a significant predictor of medical students' intentions to practice rurally: a multi-university study. *Rural Remote Health.* 2012;12:1908.
- 15 Mullan F, Frehywot S, Omaswa F, Buch E, Chen C, Greysen SR, et al. Medical schools in sub-Saharan Africa. *Lancet.* 2011;377:1113–1121.
- 16 Stilwell B, Diallo K, Zurn P, Vujcic M, Adams O, Dal Poz M. Migration of health-care workers from developing countries: strategic approaches to its management. *Bull World Health Organ.* 2004;82:595–600.