

## Perspective Piece

### Bidirectional Exchange in Global Health: Moving Toward True Global Health Partnership

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**Abstract.** Although there has been rapid growth in global health educational experiences over the last two decades, the flow of learners remains overwhelmingly one directional; providers from high-resourced settings travel to limited-resourced environments to participate in clinical care, education, and/or research. Increasingly, there has been a call to promote parity in partnerships, including the development of bidirectional exchanges, where trainees from each institution travel to the partner's setting to learn from and teach each other. As global health educators and steering committee members of the Association of Pediatric Program Directors Global Health Pediatric Education Group, we endorse the belief that we must move away from merely sending learners to international partner sites and instead become true global health partners offering equitable educational experiences. In this article, we summarize the benefits, review common challenges, and highlight solutions to hosting and providing meaningful global health experiences for learners from limited-resourced partner institutions to academic health centers in the United States.

#### BACKGROUND

Global health (GH), the study, research, and practice that prioritizes achieving equity in health for all people,<sup>1</sup> has undergone rapid growth in medical training programs at U.S. institutions.<sup>2,3</sup> As emerging best practices have advised that GH programs in high-resourced settings be developed in collaboration with limited-resourced partners,<sup>4</sup> many U.S. institutions have formed partnerships with academic programs, hospitals, health centers, and communities internationally.<sup>5,6</sup> Despite the growing number of these partnerships, the flow of learners remains primarily unilateral, as the majority of GH experiences described in the literature have focused on logistics and outcomes of sending learners from high-resourced settings to limited-resourced partners.

More recently there has been increased focus on promoting parity in partnerships, including the development of bidirectional exchanges where learners from both institutions experience medicine in each other's environments.<sup>4,7–9</sup> Here, we summarize reported benefits of hosting learners from limited-resourced settings, identify common challenges, and highlight successful solutions based on a review of the literature and experience overseeing bidirectional exchange of learners.

#### BENEFITS OF BIDIRECTIONAL EXCHANGE

**Strengthen ethical partnerships.** The benefits of bidirectional exchange are summarized in Table 1 and are discussed in further depth below. By providing in vivo context for partners, bidirectional exchange improves collaboration and program development by strengthening understanding of partner resources and approaches and allowing ongoing needs assessments.<sup>10</sup> Additionally, bidirectional exchange supports

academic parity and the shared model of learning from each other rather than one partner being relied on as the teacher in the relationship.

**Allow for education of global workforce.** Globally there are severe shortages in medical training programs, most often in countries with the greatest burden of disease.<sup>11</sup> Hosting learners from limited-resourced countries can offer important training and experiential opportunities not available in the home country. Where international rotations for learners from high-resource settings have been shown to enhance medical knowledge, strengthen interpersonal and communication skills, and promote personal and professional development,<sup>12–14</sup> similar and additional benefits occur for learners from limited-resourced settings rotating at high-resourced institutions. Rotations in high-resourced health systems expose learners to subspecialty knowledge, medical technology, and management and treatment of complex conditions. Additionally, learners may be exposed to different approaches of patient and family-centered care, safety quality improvement strategies, and medical education.<sup>7,15</sup> By immersing rotators in a different training environment, learners can also acquire skills in nondidactic teaching, case presentations, learner-centered education, faculty mentorship, performance improvement, and in giving and receiving feedback.<sup>7</sup>

**Empower trainees to be agents of change at their home institutions.** Just as international rotations shape learners traveling from high- to-limited resourced settings,<sup>12–14,16</sup> participating in rotations in high-resourced settings can have lasting impact for learners from limited-resourced settings. An evaluation of an interprofessional 4-week U.S. fellowship found that partners incorporated medical knowledge, improved cross-cultural awareness, and teaching strategies at their home institutions.<sup>17</sup> In another collaboration, junior faculty from the limited-resourced partner receive subspecialty training at the U.S. partner institution and return with essential knowledge and as recognized subspecialists.<sup>18</sup> In another bidirectional exchange program, residents described becoming advocates for change in their home

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TABLE 1

Benefits of bidirectional exchanges of learners within global health partnerships

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Strengthens ethical partnership
Allows for ongoing needs assessment in a richer context of the partnership
Supports learning from each other avoiding the risk of a promoting a false teacher/student paradigm
Supports education of the global workforce
Can offer opportunities for knowledge and skill acquisition not available in learner's country
Provides exposure to a different model of teaching and patient care
Empowers trainees to be agents of change in their home institutions
Encourages opportunities for novel approaches to clinical, educational, and systems based approaches to be implemented at home institution
Improves educational opportunities at hosting institution
Visiting learner provides host institution with insights and alternate alternate approaches to care
Supports formation of new collaborations in research and education
Improves understanding of culture and health system at partner site and thereby can improve experience of future learners traveling to partner institution

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institution seeking more simulation teaching, instituting a morning report, and disseminating knowledge acquired to their peers and to faculty.<sup>7</sup>

#### **Improve training and opportunities at hosting institutions.**

In addition to striving for academic equity among partners, we have found hosting learners from limited-resourced partner intuitions often provides direct benefit to host institutions. Rotators can provide cost-effective management insights, demonstrate the importance of physical examination, expand the differential diagnosis, and offer novel treatment suggestions. Engaging rotators in clinical and educational discussions offers the opportunity to share experience of practice in limited-resourced settings.

Short-term, personal connections can be built on to continue educational efforts using technology such as teleconferencing, social media, and online communication for sharing medical knowledge. The interpersonal ties among learners and between rotators from limited-resourced partner institutions and host faculty mentors may also lead to long-term educational and research collaborations.

### CHALLENGES TO BIDIRECTIONAL EXCHANGES

**Hosting trainees.** Despite best efforts to minimize burden, hosting learners involves time, logistic support, curriculum development, language and cultural interpretation, and mentorship. As bidirectional exchanges are rare, the burden of hosting learners is currently inequitably borne by the partner in the limited-resourced setting. Although partners generally view hosting learners positively, challenges for the host include decreased clinical efficiency due to time preparing and supervising rotators to incorporate them into local health-care teams.<sup>10,19,20</sup>

Strategies to minimize challenges during GH experiences for rotating learners from high-resourced settings have been developed.<sup>4,21</sup> These include clear communication about the learning objectives, expertise, and scope of practice of learners. Additionally, best practices for GH rotations involve

preparation of rotators, which may include teaching language, culture, and medical knowledge to learners before departure, reflection, and debriefing on return.<sup>22-25</sup> Sending programs often provide rotators with logistic support including housing, health and safety training, and evacuation insurance.<sup>26,27</sup> A similar well-developed approach should be developed when high-resourced institutions host learners from limited-resourced partners. Although sparse, there exist examples in the literature of successful curricula and logistics to hosting international learners. These include strategies to provide meaningful clinical experiences and overcome licensing/medical clearance hurdles.<sup>7,15</sup>

Notably, many U.S. institutions have strict observership criteria limiting the ability of visiting learners to have hands on encounters with patients. While this may be perceived as a limitation to providing meaningful clinical experiences for visiting learners, many of the successful exchanges described observership experiences paired with participation in educational experiences ranging from involvement in case conferences to participating in a weekly simulation curriculum.<sup>7,15,28</sup>

#### **International partner barriers to sending learners.**

Funding may be a major barrier to sending learners from limited-to-high resourced institutions.<sup>9,29</sup> A lack of financial support may limit these rotations to only those able to self-fund their travel, housing, and other expenses.<sup>28</sup> For trainees or junior faculty who are actively working to support themselves, the loss of income during their time away may be an additional financial burden.<sup>18</sup> Examples of successful bidirectional exchange cite varied models of financial support including philanthropic support, stateside fundraising, or use of departmental funds.<sup>7,15</sup>

It is important to ensure that bidirectional exchange is desired by the limited-resourced partner, as those institutions sending rotators may be further sacrificing skilled providers in an environment where human resources are already constrained. It is also important that the sending institution be involved in determining the learner that would most benefit from the rotation and be of most benefit to the institution on return. Depending on institutional goals some partners may wish to send junior faculty, nurses, or other staff rather than trainees or students.

Engaging both partners early in the planning of bidirectional exchange of learners has proven to be successful. In a collaboration between academic health centers, health professions faculty spent 2 weeks at the U.S. institution and 2 weeks at their partner African institution to better understand one another's programs and discuss goals and objectives for educational experiences, opportunities for collaboration, develop learning activities, and anticipate challenges for learners.<sup>17</sup> Having administrators and faculty gain insight from participating in an exchange may further improve the experience for future rotators by exposing previously unforeseen challenges and insights.

**Fear of brain drain.** A barrier to hosting rotators from other countries may be the concern of promoting brain drain, defined as the loss of human resources due to emigration often from less resourced locations to more heavily resourced environments.<sup>30</sup> Although there does appear to be some evidence that medical students who participate in these exchanges may be more likely to consider pursuing further training outside of their home country,<sup>28</sup> follow-up of international residents, fellows, and junior faculty rotating to the

United States found that these international rotators did return to work in their home country.<sup>7,15,18</sup> It is possible that individuals who are further into training and/or a career path may be less likely to set aside those gains to work clinically elsewhere. Being mindful of brain drain should not result in limiting opportunities for international partners, but rather should increase the resolve to collaborate on strengthening infrastructure and developing resources with international partner institutions.

#### CALL TO ACTION TO MAKE BIDIRECTIONAL EXCHANGES PART OF GH

**Partnerships.** There has been continued strengthening of best practices to support sending learners from high-resourced institutions for GH educational experiences, but less attention to supporting the flow of learners from limited-to-high resourced partners. Bilateral exchange programs described in the literature make it evident that providing meaningful experiences for rotators from limited-resourced settings is feasible, with predictable obstacles that are surmountable, and with valuable outcomes for both partners. Learners from high-resourced settings have been shown to benefit professionally and personally from GH rotations, and reciprocal educational experiences should be offered to learners from partner institutions.

We must expand from merely having international sites where we send our students and trainees for GH learning experiences to becoming true partners with equitable programs. Bidirectional exchange paves the way to provide collaborative, mutually beneficial educational offerings for both partners. We believe all GH partnerships should discuss implementing bidirectional exchange for their learners. While the research to date has supported the benefits of bidirectional exchange, better understanding of the value, pitfalls, and best practices in hosting international rotators is needed. This can only be achieved if more high-resourced institutions support equitable GH educational experiences consistent with the principles of GH partnership.

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