

Global Health Outreach by United States Ophthalmology Residency Programs: Understanding of Host Country Systems-Based Practice

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ABSTRACT Introduction: For medical residents, global health outreach is the first experience of learning how to develop partnerships with foreign medical systems. The overall objective of this project was to develop an overview of global health programs in U.S. ophthalmology residencies. The investigation focused on characterizing the goals and services offered, the didactics taught to residents, and the program director's understanding of systems-based practice gained in the host country. Materials and Methods: An online survey was sent to all U.S. ophthalmology residency program directors. The two outcome measures of the study were characterization of global health outreach and didactics completed by U.S. ophthalmology residency programs and review of program director understanding of host country systems of care. Results: Twelve program directors of 117 (10.26%) answered the survey. 100% of programs from the Department of Defense responded. Countries served included Ecuador, Panama, Honduras, Dominican Republic, India, Tanzania, Nepal, Bhutan, Guatemala, Micronesia, Haiti, Mongolia, Bolivia. Sixty five percent worked at a free-standing public hospital. Many programs offered resident participation with only 41.87% giving residents ACGME credit. Most programs (91.67%) offered fewer than 5 hours of global health didactics. When program directors were asked about their knowledge of host country systems of care, most noted understanding of the hospital functions like the referral system, transitions of care, hospital funding, and medical supply chain, but not of the perception of patients with chronic or congenital ophthalmic diseases, host country general or ophthalmic medical education, patient research safeguards and host country malpractice system. Conclusion: From the small sample of program directors, Ophthalmology residency program global health outreach varies in faculty and resident participation, and in goals and services offered. In addition, there was a wide variation in ophthalmology program director understanding of host country systems of care.

INTRODUCTION

The 2018 Army Medicine Campaign Plan calls for the increased global health involvement through its goal to "Improve Joint and Global health Partnerships and Engagements."¹ One critical area is in resident graduate

medical education (GME), as global health outreach provides experience for medical residents to work side-by-side with physicians from other countries. From a military perspective, practicing in resource-limited and foreign language settings demands professionalism, trains communication, and leads to a deep understanding of systems-based practice.² This experience can lead to a better understanding of how to assess an Allies' military medical capacity and make suggestions on how to support theater Combatant Command strategies.

Besides the military benefits, global health outreach is commonly considered a highlight of residency clinical experience. Multiple studies in various fields of medicine²⁻⁶ have assessed global health opportunities during residency. Coombs et al.³ published an article describing current global health ophthalmology residency program outreach initiatives in terms of involvement of residents and staff and barriers to resident participation. One of the critical barriers they recognized was lack of Accreditation Council on Graduate Medical Education (ACGME) approval for international electives. Our study's goal was to add to this research by quantitatively and qualitatively characterizing the programs themselves, and the degree to which resident and staff participants learned about the systems and culture of healthcare

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in the host country. Serious consideration of the host health-care system would likely result in reciprocal reflection on the U.S. healthcare system; the understanding of systems of care is an ACGME core competency.

MATERIALS AND METHODS

A web-based survey was sent to all U.S. ophthalmology residency program directors via the Association of University Professors of Ophthalmology (AUPO) residency program director listserv. An initial email was sent in October 2017 and then three reminder emails were sent on a weekly basis over the month of October 2017. All participation was strictly voluntary. A 50% response rate was the goal. The survey data was collected through SurveyMonkey, Inc (www.surveymonkey.com; San Mateo, California, USA) and then analyzed quantitatively and qualitatively. Our study was approved by the Investigational Review Board (IRB) at Wilford Hall Ambulatory Surgical Center.

RESULTS

Global Health Outreach for Ophthalmology Residency Programs

Twelve responses from 117 ophthalmology programs were received. Four of the 12 program directors represented the four military ophthalmology residency programs. Countries served included Ecuador, Panama, Honduras, Dominican Republic, India, Tanzania, Nepal, Bhutan, Guatemala, Micronesia, Haiti, Mongolia, and Bolivia. Eight worked at a free-standing public hospital, three at a government sponsored medical center, two at a privately owned medical center, two at an American non-governmental organization

(NGO) and three at a remote rural location (church or school). The majority stayed one week (6) but the rest were in the host country for two weeks (2), three weeks (2) and four weeks (2).

A review of the number of faculty and residents was completed. The number of faculty per institution ranged from none (3), one (1), two (5), three (1), four (1), and greater than four (1). Resident participation ranged from none (2), one (2), two (4) and four (4). Resident participation was voluntary in seven or considered a rotation or elective with GME credit in five.

U.S. ophthalmology residency program global health didactics were reviewed, and available courses charted (Fig. 1). Two offered no didactics, nine offered 1–5 hours, and one 6–10 hours. In addition, the goals of and services offered during the global health outreach were reviewed (Figs 2 and 3).

Understanding of Host Countries' Medical System

The last section of the survey addressed the ACGME core competency of systems-based practice and its application into ophthalmology resident global outreach. Sixteen different areas of a host countries medical system were assessed by asking program directors to rate their understanding of how the host country health care system functioned (Fig. 4).

DISCUSSION

Firsthand experience of different global healthcare systems by ophthalmology residents provides an opportunity to learn about the unique cultural, educational and resource constraints for each country. The majority of respondents lacked

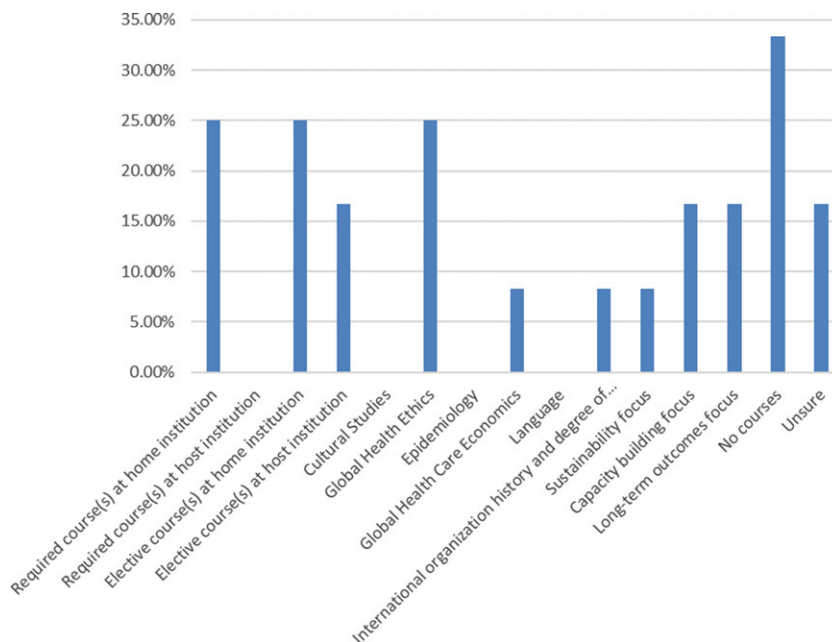


FIGURE 1. Global health didactics in ophthalmology residency programs.

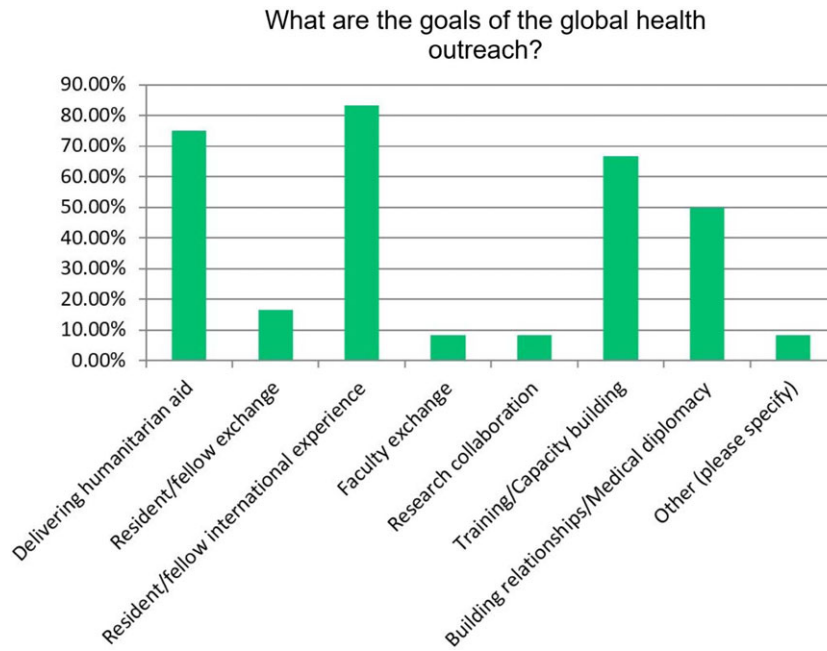


FIGURE 2. Goals of ophthalmology residency program global health outreach.

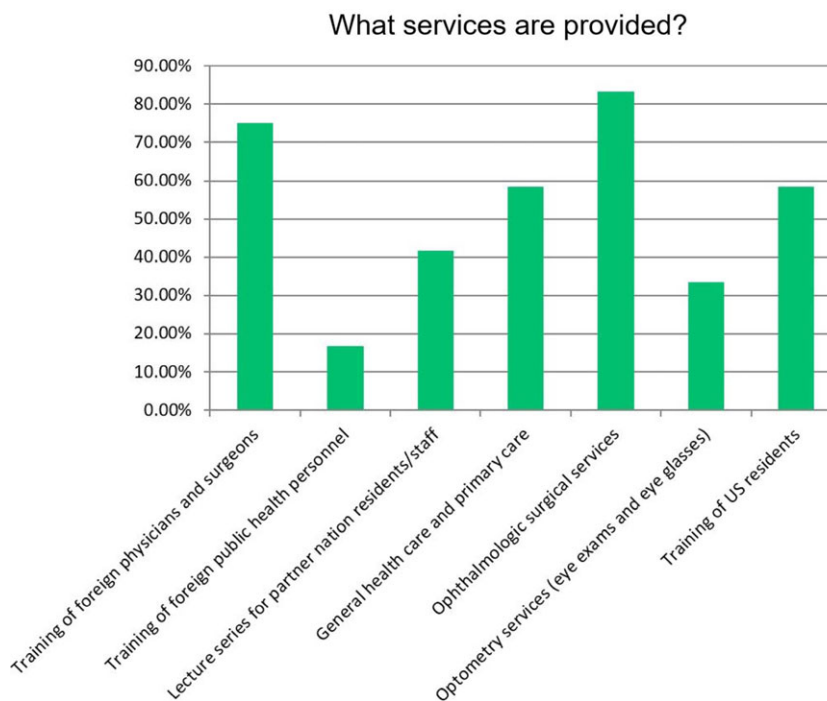


FIGURE 3. Services provided by ophthalmology residency program global health outreach.

global healthcare programs to provide these experiences. Ten out of the twelve residency programs with global health outreach programs included in this study had resident participation. About 40% of residents were given GME credit for their rotation. Currently, residents can receive credit for an international elective for up to a month, but surgical cases do

not count towards graduation requirements. Most programs claimed less than five hours of teaching, which shows a need for developing a dedicated curriculum for global outreach resident education. Global health teachings in residency programs were more commonly offered at the home institution and the most frequent subject was global health ethics,

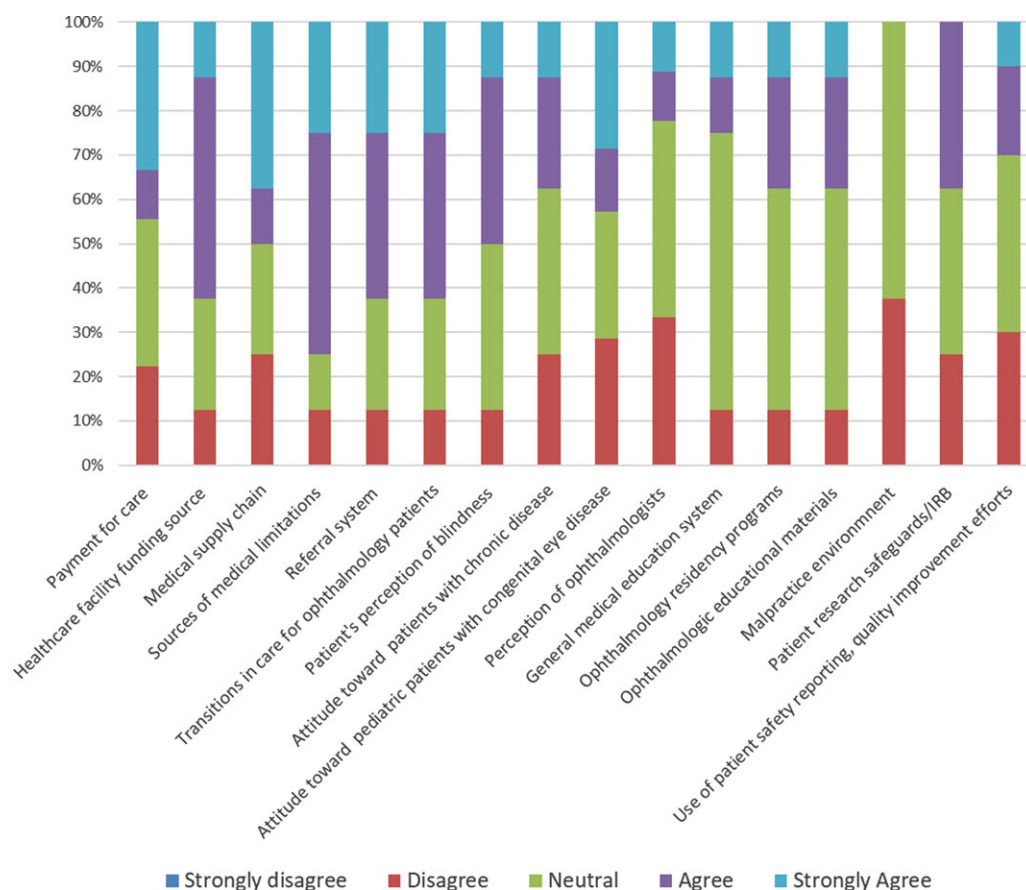


FIGURE 4. Understanding of host country systems-based practices by ophthalmology residency program directors.

which is illustrated in Fig. 1. This is an important topic to address especially considering many countries will question residents coming to their country to train rather than only allowing staff surgeons to operate.

Unfortunately, there are multiple barriers to resident participation in ophthalmology global health outreach: insufficient financial support, inadequate resident coverage at home and lack of ACGME approval for international electives.³ The military GME system is not immune to these barriers. Recently, an ophthalmology global health outreach to Panama was not funded. On the other hand, the Air Force GME recently funded an ophthalmology resident to attend a global ophthalmology fellowship. Through this education, the goal is to improve global health ophthalmology outreach. Further consideration from leadership in military GME to recognize and overcome these barriers is important.

Critical to the military operational mission, junior medical officers should be taught through global health outreach to understand foreign country systems of care. Systems-based practice is an ACGME core competency⁷ however, in the context of how other countries' practice, program directors lacked knowledge. Most program directors in our study noted understanding of the hospital functions like the referral system, transitions of care, hospital funding, and medical

supply chain. However, there was a surprising gap of understanding of the cultural aspects of ophthalmic care such as the perception of patients with ophthalmic diseases such as chronic ophthalmic disease like trachoma and pediatric patients with congenital disease. In addition, fewer than 50% of program directors noted that they understood the host ophthalmic education system. Finally, there was a poor understanding of patient safety with less than half of the respondents recognizing research safeguards or the IRB, and little understanding of the malpractice environment. This is ultimately the reason systems-based practice is a core competency, to encourage the development of physicians who will engage these systems as innovators and leaders.

There were multiple limitations to this study. The authors are aware of the low response rate of this survey. The results are not generalizable to all ophthalmology residency programs, nor are they likely to be representative of all programs. In addition, another limitation of this study was that it queries the program directors and not residents.

CONCLUSIONS

Global health outreach is critical for residency programs to develop medical officers that can meet the 2018 Army

Medicine Campaign Plan's goal to "Improve Joint and Global health Partnerships and Engagements."¹ There is a wide variation in global health outreach in U.S. ophthalmology residency programs regarding faculty and resident participation, and in goals and services offered. In addition, the striking discrepancy in program director understanding of 16 different categories of system-based practice demonstrates that this area needs greater emphasis in ophthalmology residency program global health outreach. As Global Health fellowships in Ophthalmology continue to expand, residency programs have significant opportunities to expand their influence outside the United States. Further studies should be considered to better understand the benefits of global health outreach in GME, and how to improve the integration of the various programs.

MEETING PRESENTATION

Abstract was presented at the World Ophthalmology Congress, Barcelona, Spain, June 2018.

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