

ORIGINAL RESEARCH

The Need for Formal Surgical Global Health Programs and Improved Mission Trip Coordination



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Abstract

BACKGROUND There is a dire need for more surgical services as part of improving global health. Conditions treatable with surgery account for 11% of the global burden of disease, with a disproportionate burden affecting low- and middle-income countries (LMICs). Less than 6% of the world's operations are performed in LMICs, with relief organizations performing nearly 250,000 operations annually in LMICs in addition to each country's domestic surgical capacity. Currently, surgical needs are not adequately met by the existing patchwork of federal and nongovernmental organizations' surgical services and surgical mission trips. Improving coordination between mission trips may have synergistic benefits for maximizing the efficacy of the individual trips and improving the overall quality of care.

OBJECTIVES To establish whether cooperation between surgical mission trips can lead to operational efficiency and to identify obstacles to cooperation.

METHODS In order to establish the veracity of cooperation translating into efficiency and to identify obstacles that prevent cooperation, a 50-question survey was created (see Supplement 1). The survey was sent to surgical program directors of the 147 major surgical programs in the United States and Canada with a follow-up telephone survey of 18 randomly selected programs.

FINDINGS The survey response rate was 14%. Although 90% of respondent programs mount at least 1 mission trip per year, only one-third confirmed the existence of global health or surgical global health programs at their institution (33%). There was significant interest in cooperating with programs at other institutions (80%). When asked why they do not communicate with humanitarian aid organizations doing similar work, 53% of respondents reported a "lack of knowledge of how to find similar organizations to mine doing similar work." An additional 21% of respondents were "unaware that coordination is possible."

CONCLUSIONS A minority of respondent surgery programs host formal, organized surgical global health programs with a structured leadership based at academic medical centers. Although most institutions have individuals leading international humanitarian missions to LMICs, these leaders do not function in an integrated fashion with their departments, institutions, or other academic medical programs. The majority of respondents were interested in coordinating their surgical trips with other groups. Respondents suggested the creation of a central database that would allow trip organizers to share information about upcoming trips, site logistics, and personnel or supply needs.

KEY WORDS Global Health, Surgery, Humanitarian Aid, Mission Trip, Coordination

No outside funding was used in supporting the design and conduct of the study; collection, management, analysis, and interpretation of the data; and preparation of this study. Neither author has any potential conflicts of interest to report.

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INTRODUCTION

It has been estimated that conditions treatable with surgery account for 11% of the global burden of disease and more than 25 million disability-adjusted life-years.¹ The burden of these diseases disproportionately falls on low- and middle-income countries (LMICs). Overall, it is estimated that more than 67% of the world's population do not have access to safe, affordable surgical care² and only between 3%–6% of the world's operations are performed in LMICs.^{3,4} In many LMICs, surgical services are concentrated in cities and only available to those citizens who can afford them.⁵ A recent *Lancet* Commission, Global Surgery 2030, has been tasked with proposing strategies to improve surgical services and access to surgical care around the world, particularly in LMICs with the greatest need.⁴ These strategies are aimed at improving the local infrastructure, including didactic education and surgical care being outside providers. Several studies have reported that surgical care can be delivered in a cost-effective manner in small hospitals⁶; however, the current burden of disease in LMICs is not being adequately managed by the patchwork of surgical services supported by federal governments, international nongovernmental organizations (NGOs), and limited-resource surgical humanitarian aid “mission trips.” It is estimated that relief organizations perform nearly 250,000 operations per year in LMICs.⁷

Thousands of organizations provide medical and public health services around the world. These include religious organizations, academic medical centers, relief groups, United Nations affiliates, and military health brigades. Although most groups collaborate in some way with the host governments, there is no formal system for coordinating between groups. In the absence of protocols that encourage intergroup cooperation, various models have emerged for delivering surgical care in resource-poor countries.

The abundance of international health care NGOs has undoubtedly led to overlapping efforts in certain geographic areas. Considering the burden of disease and the general lack of surgical capacity, maximizing the efficacy of NGOs' surgical efforts is of the utmost importance. Kingham et al postulate that improved coordination between medical mission trips may have synergistic benefits for maximizing the efficacy of the individual trips and improving the overall quality of care.⁸

METHODS

The failure of communication and cooperation between surgical NGOs is suspected to be a significant contributor to the lack of efficiency and efficacy of many humanitarian missions. To identify obstacles to cooperation, a survey of surgical programs based at academic medical centers was performed. The 50-question survey consisted of both Likert Scale and free-response question types. It was sent to surgical program directors of the 147 major surgical programs in the United States and Canada. A follow-up telephone survey of 18 randomly selected programs was also conducted. Both surveys were performed with exemptions from the Icahn School of Medicine Institutional Review Board.

RESULTS

Of the 147 surgical program directors contacted, 21 directors or their designees completed all or part of the survey (14% response rate). Although 90% of respondent programs mounted at least 1 humanitarian aid trip per year, only one-third of all respondents positively confirmed the existence of global health or surgical global health programs at their institution (33%). Faculty members organized the vast majority of mission trips without administration input (86.7%). For trips organized by faculty members, the faculty was responsible for the choice of site (86.7%) and for contacting the host site (94.7%). The faculty was also responsible for identifying the medical activities at the host site (63.2%) and for establishing relationships with the host and other NGOs (57.9%). Of the 18 programs contacted for the follow-up telephone survey, only 3 programs (16.7%) had a formal global health entity, reflecting a similar proportion to the positive response rate of the entire initial survey (14.3%). For full results, see [Table 1](#).

Among respondents, there was significant interest in cooperation (80%). More than half (53.8%) indicated that they lacked knowledge of how to accomplish this. When asked why they do not communicate with other NGOs or humanitarian organizations, 53% of respondents said they had a “lack of knowledge of how to find similar organizations to mine doing similar work.” An additional 21% of respondents said they were “unaware that coordination is possible.” For full results, see [Table 2](#).

When asked which barriers have the greatest impact on preventing coordination, respondents

Table 1. Surgical Trip Characteristics

	Yes	No	n
Does your surgical department have a global health program?	13	26	39*
Does your institution have a global health program?	10	11	21
Are inquiries made of other NGOs doing service at the chosen site?	6	14	20
Do you establish what work has already been done at that site?	12	7	19
Have you shared information regarding your global health program or surgical missions with another NGO or institution?	9	9	18

NGO, nongovernmental organization.
* Total responses: n = 39 (initial survey: 21, telephone follow-up: 18).

cited “credentialing, safety, credit for training experience...mismatch of logistic support and surgical talent,” as well as the lack of an “organized structure through which to share information.” One respondent wrote, “Barriers include not insulting the host nation, finding out what is available so it is not replicated, making sure that a local training program is not adversely affected, and finding out actual data as opposed as to what people think are the needs.” It is difficult to quantify the actually percentage each of these barriers contributes in each LMIC. The culture, history, resources, experience, and host communication contributed to which and how much each of these barriers affects the coordination possible for each site and nation.

Describing possible solutions that may enhance NGO coordination, respondents suggested a national registry that will allow trip leaders to list

Table 2. Surgical Trip Coordination

Why do you not communicate with other NGOs or humanitarian organizations?	Responses (n = 13)
Lack of knowledge of how to find organizations doing similar work	7
I am unaware that coordination is possible	3
I do not think it would be helpful	2
My work is unique and cooperation would not enhance my efforts	1
It is too difficult to make contact with other organizations	1
I am not interested in cooperation	0

NGO, nongovernmental organization.

need-based requests for individual trips, the development of self-sustaining solutions that will be able to continue after foreign advisors have left, and establishing a global surgery fund that will be supported by and work in conjunction with major NGOs, such as the Bill and Melinda Gates Foundation and the Clinton Foundation.

DISCUSSION

Despite efforts to address overwhelming global surgical needs, organizations providing these vital services rarely work in concert. This leads to duplicated efforts, inefficient allocation of resources, and, at worst, competition between groups for limited donor resources and physician volunteers. Academic medical institutions are often involved in supporting and fielding surgical trips abroad; however, they are often negligent in identifying and specifically addressing the surgical needs in the LMICs in which they have launched missions.

A finite example of excessive duplication of resources was observed in Haiti after the earthquake in 2010. Each institution that provided services on the ground in Haiti came with the very best intentions. However, there was little coordination between the institutions, and there was no organization of services between the institutions to maximize their effectiveness. There was too much overlap of teams, creating wasted resources at the locations where the teams established their bases. On the other hand, the situation was significantly better managed during the Philippines tsunami, where the American College of Surgeons received direct feedback from surgeons on the ground and informed all the institutions desiring to send teams either to not go or to focus on something other than direct relief when they were on the ground. This direction allowed for collaboration among the teams to go to the sites where they were actually needed. This type of coordination has occurred only in disaster settings and certainly is not happening in capacity-building programs or nonemergency mission trips.

Our survey found that the majority of respondents from academic surgical programs are interested in coordinating their humanitarian trips with other trips from other institutions or NGOs. Multiple respondents suggested the creation of a central database that would allow trip organizers to share information about upcoming trips, site logistics, and personnel or supply needs. This would be a

multispecialty database traveling to all LMICs, actually mimicking the type of capability the American College of Surgeons' Operation Giving Back database provides.

One of the most surprising findings of this survey is the limited number of formal, organized, NGO-like global health surgical programs with structured leadership based at academic medical centers. Although most of these institutions have individuals who lead international humanitarian aid trips to developing countries, these leaders and groups are not functioning in an integrated fashion even within their own departments or institutions, and certainly not with the cooperation of similar entities from other medical centers.⁹ The reasons for this lack can only be surmised. However, competition for resources, including money and equipment, academic ego, available time, and committed personnel, plays some part.

The authors believe that surgical departments without a formal global health training program are losing a potentially outstanding chance to expose their residents to the realities of surgery in the developing world. Without a formal platform, it is difficult for faculty to launch medical missions for delivering direct patient care and training health care personnel in the developing world. The widespread creation of organized global health programs would allow for training of students, residents, and faculty, as well as training in-country health care personnel with an eye toward to creating sustainable surgical solutions. Such programs would provide a structure for fundraising and planning for international missions. Ultimately, we hope that established programs could communicate with other global health programs to improve the cooperation and coordination of international humanitarian aid trips sponsored by different institutions.

Operation Giving Back, an American College of Surgeons databank for international service, is a comprehensive resource designed to help surgeons find missions and locales that best match their expertise and interests. This is a very admirable endeavor that links surgeons to a databank of projects that are ongoing or will be providing services in LMICs. However, this is limited by the voluntary nature of the data entry as well as the knowledge of the site by surgeons who might be interested in international missions. The site primarily attracts general surgeons with general surgery experience or a subspecialty of general surgery. A better model would interface all surgical trips, including those

promoted by the other societies, like those for orthopedics and ophthalmology. It would link its activities with university-based global health programs, encouraging them on a monthly basis to share information about their global surgery activities. This would ultimately be extended to all surgery departments across the country. The Internet is a powerful tool of communication. Monthly electronic newsletters to all surgical departments requesting the information about their activities would be a beginning of gathering information that would hopefully decrease many of the redundancies that now exist.

The resources needed to accomplish this would be significant. A private or federal grant might be sought to accomplish recruiting the funds necessary to support such a project. The goods produced by delivering coordinated international service, which included the host nations having access to the accrued information, would make the program more than worthwhile. This type of information would allow us to learn from each other about our activities and also learn what activities have been more, and sometimes less, successful. For all these reasons it appears that a national surgical database documenting all our efforts, both successes and failures, would be of benefit to the people we serve in LMICs and also to ourselves.

Our study was limited by the low survey response rate; however, the telephone follow-up survey verified the survey's initial findings. It is possible that many of the surgery programs that did not respond host formal global health training programs, but we believe this to be unlikely considering the small number of formal programs among all survey respondents.

CONCLUSIONS

The global need for more efficient, effective, and beneficial surgical care is clear. Long-term solutions, such as training local providers and pairing academic centers with counterparts in LMICs, are vital to the creation of sustainable programs that address the root causes of the problem. Coordinated humanitarian missions can act as a bridge toward developing sustainability while providing exceptional surgical experiences for the operating teams and surgical patients. Having groups work together at specific sites to develop and execute programs on a continuous basis will fill in the gaps while sustainable program infrastructure is developed. However, for the foreseeable future, in the absence of any

intervention, surgeons will continue to organize surgical mission trips, mostly in isolation. Improving coordination between groups will allow for improved patient care, better patient follow-up, and superior long-term outcomes.

ACKNOWLEDGMENTS

Special thanks to Robert Fallar for his statistical analysis, Dr. Michael Marin for his support, and Dr. Nils Henning and the entire Global Health Program at the Icahn School of Medicine at Mount Sinai.

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