

ORIGINAL RESEARCH

# Barriers to Global Health Training in Obstetrics and Gynecology



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## Abstract

**BACKGROUND** The Lancet Commission on Global Surgery includes obstetrics and gynecology as an area needing international strengthening in low- and middle-income countries. Despite interest, a majority of participants in US residency programs graduate with little exposure to global health or preparation to work abroad.

**OBJECTIVE** The aim of this study was to determine the level of interest of obstetrics and gynecology (Ob/Gyn) residents in gaining global health training and to identify perceived barriers to receiving training.

**METHODS** Residents in accredited Ob/Gyn programs were identified using a national residency database. The survey was online and anonymous.

**FINDINGS** A total of 278 residents completed the survey. A high level of motivation to participate in a global health elective was associated with interests in preparation for future global work, desire for activism in maternal health and social determinants of health, and becoming better informed on global health policy. Eighty-two percent of respondents stated they would participate in a global health curriculum if it were offered, and 54.8% would use their vacation time. There were associations between personal safety, family, lack of resources, and lack of interest from faculty and motivational level as perceived barriers. Eighty-one percent strongly agreed that scheduling conflicts and time constraints pose barriers; more than 80% either agreed or strongly agreed that funding such endeavors and a lack of mentorship are major deterrents to pursuing global health.

**CONCLUSIONS** Because resident motivation is clearly high and international need persists, we determined that most barriers to training abroad are related to the structure and budget of residency programs.

**KEY WORDS** global health training, residency, obstetrics, gynecology, Lancet Commission on Global Surgery

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## INTRODUCTION

The recent Lancet Commission on Global Surgery highlights obstetrics and gynecology as one of the surgical fields in which global strengthening is urgently needed.<sup>1</sup> Hung et al<sup>2</sup> describe global health training as a rising demand of obstetrician and gynecology trainees, yet a majority of residents graduate with little exposure to global health competency or preparation to work abroad. Opportunities to obtain global health training may be limited by the belief that surgical diseases are not considered public health concerns, and funding to boost education in this specialty has not been as robust as in other specialties.<sup>3</sup> However, the Commission has galvanized the medical community to reexamine the need for and high yield of surgery in global health, including obstetrics and gynecology, citing cesarean sections and hysterectomies among some of the core procedures needed.<sup>1</sup>

Many barriers exist that deter training US obstetricians and gynecologists to contribute to global health, including requiring trainees to uphold continuity clinical time, financial expenses, and lack of institutional support, for example. Another factor that may limit surgical experiences abroad may be institutional reticence to allow surgeons to leave their domestic roles because they are the hospital's "financial engines."<sup>4</sup> This study was carried out to determine the scope of desire for residents in obstetrics and gynecology (Ob/Gyn) to gain additional training abroad and to identify perceived barriers.

## METHODS

This was a cross-sectional study of all of all residents in Ob/Gyn Accreditation Council for Graduate Medical Education (ACGME)–accredited programs across the United States. An email was sent to program coordinators at each residency program containing a link to an electronic survey, which was then sent to residents. The survey was online and anonymously available through Survey Monkey. Residents were given 10 months to respond to the survey. A follow-up email was sent to all program coordinators after 6 months reminding residents to complete the survey. The research protocol was approved by the Institutional Review Board at University Hospitals, Case Western Reserve University. The survey contained 50 questions. Demographic data on respondents were collected. There were questions regarding individual residents' interest in

participating in global health opportunities during residency using Likert scales from 0–5 describing no interest to high interest, respectively. There were also questions regarding limitations to obtaining training and any options available to them through their program.

Fisher's exact test or  $\chi^2$  test was used to compare categorical variables. All variables were included in a multivariate analysis using logistic regression to identify factors associated with the level of experience in global health activities during residency and the level of motivation to pursue global health electives. All *P* values were 2-tailed, and statistical significance was accepted at *P* < .05. SPSS Statistics for Windows Version 21 (IBM Corp., Armonk, NY) was used for the analysis.

## RESULTS

A total of 278 respondents completed the survey. Demographics are listed in Table 1. Respondents

Table 1. Demographics	
Variable	Frequency
Level of Training	N = 278
PGY-1	35.3% (98)
PGY-2	20.9% (58)
PGY-3	24.8% (69)
PGY-4	19.1% (53)
No. of Resident in Each Class	N = 278
<4	9.4% (26)
4–7	61.9% (172)
7–10	25.2% (70)
11 or more	3.6% (10)
Age (y)	N = 278
<25	0%
25–29	65.1% (181)
30–34	27.7% (77)
>35	7.2% (20)
Gender	N = 278
Male	9.0% (25)
Female	91.0% (253)
Marital Status	N = 278
Single	43.5% (121)
Married	51.4% (143)
Domestic partner	4.0% (11)
Divorced	1.1% (3)
Widowed	0%
Children	N = 278
Yes	20.9% (58)
No	79.1% (220)

PGY, program year.

**Table 2. Exposure Abroad**

Family Living Outside of the United States	N = 274
Yes	36.9% (101)
No	63.1% (173)
Speak Another Language Besides English	N = 274
Yes	49.6% (136)
No	50.4% (138)
Volunteered Abroad in Medical School or Residency	N = 274
Medical school	63.9% (175)
Residency	1.1% (3)
Both	29.9% (82)
Neither	5.1% (14)
Worked Internationally in Medical School or Residency	N = 274
Medical school	47.4% (130)
Residency	1.1% (3)
Both	7.7% (21)
Neither	43.8% (120)

spanned all years of training and most (61.9%, n = 172) were in programs of 4–7 residents per year. A majority of respondents were aged 25–29 (65.1%), married (51.4%), and without children (79.1%). Reflective of the national trend in obstetrics and gynecology programs, 91.0 % (n = 253) of the respondents were women. When looking at cultural factors that may attract individuals to global health, it was found that most of the respondents did not have family abroad (63.1%, n = 173). Approximately half already spoke another language besides English (49.6%), and 63.9% had experience volunteering abroad as a medical student (Table 2).

Several questions were posed to the participants to help understand what draws residents to work abroad. Interest in maternal survival and improving maternal health and the social determinants of health (eg, poverty, gender) were the topics residents expressed the greatest interest in, followed closely by general preparation for international work and travel. Potential barriers to residents training abroad were listed to capture the perception of participants. Most were not particularly concerned for personal safety and most did not fear a lack of experience. However, 81.1% (n = 219) strongly agreed that scheduling conflicts and time constraints pose barriers to time abroad. Approximately 90% (n = 242) either agreed or strongly agreed that cost and funding are barriers, and 82.6% (n = 223) cited a lack of mentors and contacts as major deterrents.

Eighty-two percent (n = 224) stated that they would participate in a global health curriculum if it were offered in their program, and 70.0%

(n = 189) would prioritize a global health elective over other electives such as research or away rotations. Slightly more than 75% (n = 205) agreed that they would be more likely to participate in a global health elective if an attending from their institution traveled along as faculty. Many respondents agreed that they would still participate if they needed to finance the elective and travel expenses themselves. More than 54% (n = 144) would use their vacation time to participate, and the majority of respondents would still travel abroad if they could not count their cases toward ACGME requirements (84.5%, n = 228).

Bivariate analysis in relation to the outcome variable of actually obtaining experience in global health during residency did show scheduling/time constraints as a major barrier ( $\chi^2 = 17.265$ , N = 270,  $p < 0.001$ ). Age was also associated with global health experience ( $\chi^2 = 6.972$ , N = 274,  $p = 0.031$ ). The majority that had participated in a global health experience during residency reported to be between the ages of 30–34. However, only a small percentage actually did participate in a global health experience. All other variables did not show statistical significance.

Bivariate analysis in relation to the outcome variable of motivational level of participating in global health electives demonstrated an association in terms of interests in specific areas of global health (preparation for global work [ $\chi^2 = 33.338$ , N = 270,  $P < .001$ ], maternal survival [ $\chi^2 = 25.178$ , N = 270,  $P < .001$ ], social determinants of health [ $\chi^2 = 18.088$ , N = 270,  $P < .001$ ], and policy [ $\chi^2 = 17.284$ , N = 270,  $P = .002$ ]). Interest in research displayed a trend toward increased motivation ( $\chi^2 = 8.616$ , N = 270,  $P = .071$ ). In regard to specific barriers and association with motivational level, there was an association between personal safety ( $\chi^2 = 31.750$ , N = 270,  $P < .001$ ), family ( $\chi^2 = 11.318$ , N = 270,  $P = .023$ ), lack of resources ( $\chi^2 = 10.914$ , N = 270,  $P < .028$ ), and lack of interest from faculty ( $\chi^2 = 12.646$ , N = 270,  $P = .013$ ). There is a trend toward association in regard to bureaucracy/lack of interest from the program ( $\chi^2 = 9.113$ , N = 270,  $P < .058$ ). Additionally, there was an association between having children ( $\chi^2 = 4.56$ , N = 278,  $P = .033$ ), ability to speak another language ( $\chi^2 = 7.474$ , N = 270,  $P = .006$ ), the number of residents per class ( $\chi^2 = 8.996$ , N = 270,  $P = .029$ ) and level of training ( $\chi^2 = 9.168$ , N = 270,  $P = .027$ ). All other variables did not have statistical significance (Table 3).

**Table 3.  $\chi^2$  Analysis in Relation to Outcome Variables**

Dependent Variables	Outcome Variables			
	Having Global Health Experience		Level of Motivation in Pursuing Global Health Experiences	
	$\chi^2$	P	$\chi^2$	P
Age	6.972	.031	0.055	.973
Gender	0.511	.475	1.566	.211
Marital status	1.710	.635	2.589	.459
Having children	0.001	.980	4.560	.033
Current level of training	3.400	.334	9.168	.027
No. of residents in class	1.069	.784	8.996	.029
Family abroad	0.022	.883	1.059	.304
Other spoken language	0.219	.640	7.474	.006
Previous work abroad	—	—	2.689	.101
Preparation for global health	1.871	.760	33.338	.000
Interests				
Maternal survival	3.745	.442	25.178	.000
Social determinants	1.999	.736	18.088	.001
Research	1.243	.871	8.616	.071
Health policy	1.412	.842	17.284	.002
Barriers				
Personal safety	4.365	.359	31.750	.000
Scheduling conflicts	17.265	.001	2.198	.532
Family	2.571	.632	11.318	.023
Inexperience	5.343	.254	5.083	.279
Costs	4.470	.346	7.017	.135
Lack of resources	1.259	.868	10.914	.028
Lack of interest—faculty	3.400	.493	12.646	.013
Lack of interest—program	0.307	.989	9.113	.058

## DISCUSSION

Overall, our findings support the trend toward increased interest in global health training during residency. The high percentage of respondents with previous experience working abroad as medical students indicates early exposure to global health work. This exposure no doubt leads to ongoing desire to work abroad. A large proportion of Ob/Gyn trainees are willing to fund their own travel, forego case accreditation, and use their vacation or elective time for training abroad. Interestingly, a large proportion would like their faculty to be involved and to offer training abroad, indicating that programs with faculty with established appointments abroad are likely to attract more residency applicants. Despite the sacrifices trainees are willing to make, the primary barriers, unsurprisingly, are scheduling and funding.

Most barriers to training abroad during Ob/Gyn residency are changes that require programmatic adjustment. For example, one of the major barriers cited by participants is time. Short experiences may be enlightening for trainees but are unlikely to result in significant training or benefit to the host country. Therefore, longer electives and trips should be incorporated into residency scheduling. In addition, having one primary collaborating host country would allow for residents and faculty to visit throughout their four years of training and continue to build sustainable collaborative projects. At our institutions, for example, we have partnered with government hospitals in Lilongwe, Malawi, and Georgetown, Guyana. Faculty members are either working there long-term or travel there on a monthly basis, respectively. Both also have global health fellows living and working at the sites. When residents are able to coordinate an elective, they can participate in the pre-existing clinical partnership, reducing the risk of medical tourism. Other programs have also found that collaboration with a single institution leads to sustainable and ongoing global health opportunities.<sup>5,6</sup>

Our results also compliment the literature that has established the benefits of including global health training in residency. According to Taylor, individuals are seeking to fill gaps in their education, gain understanding about cultural competency, and fulfill altruistic ideals through global health experiences.<sup>7</sup> Hall et al<sup>8</sup> elucidate the benefits of incorporating global health into postgraduate training in the United Kingdom. They explain that learning about other health systems helps in making decisions within one's home system. Immigration has led to ethnically and culturally diverse patients with specific needs. Infectious disease knowledge is increasingly important with migrant populations, refugees, and transnational travel.<sup>8</sup>

Bissonnette et al<sup>9</sup> surveyed medical students after rotations in nonindustrialized countries and found that participants improved their clinical skills, were more cost conscientious, and experienced an increased awareness of public health and patient education issues. Other studies resonate on the broadened perspective that students experience that translates to their time back home as well in a sustained way.<sup>10–12</sup> Additionally, early global health experiences have been reported to influence residency selection and career decisions. In an emergency medicine survey, a majority of responding residents with previous international

health experience prioritized interviews at programs with international opportunities and ranked these programs higher.<sup>13</sup> Internal medicine programs have also reported applicants' preference for their program as a result of the global health opportunities.<sup>14</sup>

The primary weakness of this study is the small sample size. The responses indicate strong cohesion toward participating in global health training. Therefore, regardless of the low response rate, the large proportion of respondents very interested in global health represents a significant proportion of Ob/Gyn trainees.

If practitioners are not trained to work globally, the ability of American clinicians to contribute in the global arena will be limited. With increasing globalization, resident education programs also need to adapt accordingly. Funding continues to inhibit global work at all levels, especially for post-graduates, as their salary does not accommodate international travel expenses. With the overwhelming interest and demand for such work, as illustrated by the present study and others, as well as the general global need, programs desiring to broaden their training to include global health require systematic budgeting and training built into their curriculum.

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