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Perspectives on Global Health amongst Obstetrician Gynecologists: A National Survey

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Received Date: May 13, 2015, **Accepted Date:** June 19, 2015, **Published Date:** June 30, 2015.

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Abstract

Objective: To characterize contemporary attitudes towards international healthcare of women amongst board-certified obstetrician-gynecologists.

Methods: A questionnaire was mailed to members of the American College of Obstetricians and Gynecologists. Respondents were stratified by interest in global health.

Results: Two-hundred-two (50.3%) of surveys were completed. 76.6% of respondents endorsed interest in global health while 25.1% had experience providing healthcare abroad. Knowledge of contributors to morbidity and mortality was poor with only 29% of questions answered correctly. Personal safety was the primary concern of respondents regarding time abroad (47.6%), and most identifying two weeks as an optimal period of time (44.6%) to spend abroad. The majority (60.8%) cited hosting of local physicians in the United States as the most valuable service to developing a nation's health care provision.

Conclusion: Despite high interest in global health, experience, knowledge, and willingness to spend time abroad were limited. Concerns surrounding personal safety amongst respondents dovetail with the belief that training local physicians in the US provides the most valuable service to international healthcare efforts. Though this approach alleviates security concerns, it brings its own challenges. Given that need is often highest in areas of unstable security; this concern represents a challenge to increasing involvement of Ob-Gyns in global women's health.

Keywords: Global health; Ob-Gyn; International women's health

Introduction

With information technology making the world more accessible, there has been an increasing international focus towards healthcare-particularly issues of women's health. Of the eight Millennium Development Goals identified by the United Nations, three pertain directly to the provision of healthcare for women. Many of the remaining goals can be indirectly impacted by improved access to care for women [1]. Given the central importance of women's health in global health, Obstetricians and Gynecologists (Ob-Gyns) are uniquely poised for a substantial role in the provision of healthcare on an international level.

Ob-Gyns not only possess unique knowledge to achieve goals such as reduction of maternal and childhood mortality, but they have the surgical skill-set required to affect change. Many problems related to communicable disease have been tackled through public health means, but interventions for surgical diseases in low- and middle-income countries (LMICs) remain untouched [2]. Hemorrhage and sepsis remain the leading causes of maternal mortality internationally, followed by complications from pregnancy-induced hypertension, obstructed labor, and abortion complications [3].

Data surrounding available providers is scarce, but estimates suggest that there are approximately 0.13 to 1.57 trained Obstetricians per 100,000 members of the population in these LMICs [4]. Despite unclear numbers of trained international Ob-Gyns, international health interest amongst United States medical students and residents continues to rise [5]. The lack of skilled surgeons internationally, coupled with the growing interest in global women's health among current trainees, highlights the need for mentorship from board-certified Ob-Gyns to facilitate global health involvement. Despite the clear need for Ob-Gyns to participate in global health, little is known about the current role played by Ob-Gyns in international healthcare. We undertook this study to better characterize the knowledge, attitudes, and practices of board-certified American Ob-Gyns towards global health.

Materials and Methods

A 39-item questionnaire was developed through the American College of Obstetricians and Gynecologists (the College). Participants received initial notification of the survey via an e-mail containing a direct link to the electronic survey. Participants who had not completed the electronic survey after five mailings received up to three paper mailings containing a cover letter, questionnaire, and a prepaid envelope for survey return.

Participants were a sample of 400 College fellows and junior fellows in practice. All participants were members of the College's Collaborative Ambulatory Research Network (CARN). CARN was developed to increase response rates for College Research Department studies while maintaining a participant pool representative of practicing College members [6]. The questionnaire included demographic questions, questions regarding interest in global health, past participation in global health activities, as well as knowledge-based questions about women's health issues around the world. Institutional Review Board approval was obtained from the College and CARN members give consent for participation in surveys.

Descriptive statistics were used to report the demographic characteristics and responses of the cohort. Group differences in responses were assessed with T-tests or χ^2 tests as appropriate. The data were analyzed using Statistical Analysis Software (SAS), Version 9 (Copyright 2002-2008, SAS Institute, Inc). A *p-value* of < 0.05 was considered statistically significant.

Results

Two-hundred-two surveys were returned for a total response

	Physicians (n = 202)
Age (mean years, SD)	55.3 ± 9.6
Years in practice	23.5 ± 9.3
Gender (% Female)	52.0%
Interested in Global Health	71.2%
Experience in Global Health	25.1%
Race	
White/European American	82.1%
Black/African American	5.6%
Asian/Pacific Islander	7.2%
Other/More than one	5.1%
Clinical Practice Setting	
Solo/Private Practice	19.9%
Partnership/Group Practice	45.8%
Multi-specialty Group	15.9%
University full time	10.0%
Other	8.4%
Practice Location	
Urban, inner city	13.4%
Urban, non-inner city	27.2%
Suburban	36.1%
Town of 5,000-50,000	17.8%
Rural/Other	5.5%
Specialty	
General OB/GYN	78.7%
Gynecology Only	12.4%
Other	8.9%
Specialist/Generalist	
Specialist	34.5%
Generalist	33.0%
Both	32.5%
Annual Deliveries	
< 1,000	20.1%
1,001-2,500	30.7%
2,501-5,000	37.0%
> 5,000	12.2%

Table 1: Participant Demographics.

rate of 50.5%. There were respondents from 41 of the United States. Table 1 presents the overall demographic characteristics for respondents. There were no statistically significant demographic differences between those with either interest or experience in global health and those without.

Respondents were asked about their attitudes towards global health. When asked to define the term, 55.1% stated global health related to any healthcare provided abroad while 29.1% broadened the definition to include any underserved area, including those in the United States. The majority of Ob-Gyns reported an interest in global health (71.2%) and amongst those with interest, 76.6% expressed interest in providing medical care overseas. Altruism (53.6%) motivated the majority of these providers, with "life experience" being the second most common motivator (40.2%). Other less frequent answers motivating the decision to volunteer included travel (0.89%), research (0.89%), and other unspecified reasons (4.5%). Regarding a practical period of time to spend abroad, the majority of those with interest identified two weeks as optimal (44.6%) followed by one week (30.4%). Just over 16% of respondents selected one month as the ideal time followed by a minority selecting longer time periods of three months (5.4%), six months (1.8%), and one year (1.8%) as ideal.

Table 2 presents some of the attitudes of survey respondents towards global health stratified by interest and experience in global health. Even in the absence of a desire to volunteer, most respondents would either donate money or cover clinical duties without pay so that a colleague could travel abroad. Interest or experience in global health was more likely to generate supportive actions (Table 2). When asked to rank what factors about a country would impact the decision to work abroad, 47.6% ranked personal safety as the primary concern. Those with interest or experience in global health were slightly less likely to prioritize this concern though this number did not reach statistical significance (43.2% versus 35.6%, respectively, $p = 0.07$ for both). Degree of urgency was the second most common concern, followed by availability of healthcare, language, and level of poverty.

Responding Ob-Gyns reported government and local administrative obstacles and lack of infrastructure as the primary impediments to improving medical care in underserved countries. Cost, geographic isolation, and cultural resistance were identified as additional barriers to successful provision of women's health care in a developing setting. Those with experience in global health were more likely to prioritize infrastructure as a barrier (34.5% versus 53.2%, $p = 0.001$) and less likely to prioritize cost (19.1% versus 8.51%, $p = 0.03$). Notably, 60.8% of respondents identified hosting or training local medical personnel in the United States as the most valuable service to the development of a nation's health care provision. Despite interest in global health, only 25.1% of respondents had volunteered overseas. Additional responses identified medical volunteerism, financial donation, and donation of medical equipment as most important to successful implementation of global health programs.

Respondents answered 13 knowledge-based questions about obstetrics and gynecology in an international setting. Most respondents reported moderate knowledge of global health

	Overall	Physicians with Interest		Physicians with Experience	
			p value		*p value*
Willing to Donate Money	62.2%	68.9%	0.003	73.5%	0.06
Willing to Cover for Colleague	68.9%	72.2%	0.04	85.4%	0.005
Factor Most Influencing Decision to Volunteer					
Level of Poverty	3.8%	3.7%	0.13	4.4%	0.79
Availability of Healthcare	18.9%	20.9%	0.34	24.4%	0.29
Degree of Urgency	24.9%	26.9%	0.18	26.7%	0.77
Language	4.9%	5.2%	0.91	8.9%	0.15
Personal Safety	47.5%	43.3%	0.07	35.6%	0.07
Largest Impediment to Providing Global Health					
Geographic Isolation	6.2%	5.9%	0.53	8.5%	0.46
Lack of Infrastructure	34.5%	38.2%	0.30	53.2%	0.001
Local Administrative Obstacles	36.6%	36.0%	0.81	27.7%	0.15
Cultural Resistance	3.6%	3.7%	0.86	2.1%	0.52
Cost	19.1%	16.2%	0.27	8.5%	0.03
Most Valuable Service					
Medical Volunteering	23.7%	22.7%	0.85	31.1%	0.15
Financial Donation	9.7%	9.4%	0.51	2.2%	0.05
Donation of Medical Equipment	5.9%	5.5%	0.46	0.0%	0.05
Hosting Local Personnel in United States	60.7%	62.4%	0.54	66.7%	0.38

Table 2: Respondent Attitudes on Global Health.

(49.2%), with 37.2% reporting poor knowledge of the subject. On average, participants answered only 29% of knowledge-based questions correctly. When asked to rank the five leading causes of maternal mortality worldwide, 69.5% correctly identified hemorrhage as the leading cause. Similarly, 69.1% of respondents correctly recognized hemorrhage as the primary cause of maternal death in Africa. Only 35.6% of Ob-Gyns correctly identified sepsis as the second-leading cause of worldwide maternal mortality. The majority of Ob-Gyns (53.5%) identified unsafe abortion as the fifth cause of maternal mortality when it is, in fact, the third leading cause.

When queried about specific rates of maternal and neonatal mortality, the majority of respondents underestimated these rates. For instance, 27.0% correctly identified the maternal mortality rate in Somalia as 1000 per 100,000 births. However, 66.7% of respondents underestimated this rate with responses ranging from 10 to 500 per 100,000 births. Similarly, 28.2% recognized the correct neonatal mortality rate in Somalia of 5,000 per 100,000 births though the majority (71.8%) of respondents underestimated the rate. When asked how many women are living with unrepaired obstetric fistulae worldwide, only 13.0% correctly reported 3,000,000. Most Ob-Gyns (79.1%) underestimated the burden of this condition with estimates ranging between 500,000 and 2,000,000.

Discussion

This survey of board-certified Ob-Gyns investigated the knowledge of providers related to women's global health and queried the attitudes and practices regarding provision of care in LMICs. Overall interest in global health and providing care overseas was high, but experience was limited by practical considerations such as personal safety, socioeconomic barriers, and time away from work. General knowledge of topics related to international women's health was limited and tended to underestimate the geographic burden of disease. Though knowledge patterns did not vary based on experience or interest, attitudes towards limitations to practicing global health was significantly affected by provider experience. These data characterizing the relationship of practicing Ob-Gyns to the field of global health reveal important considerations for those interested in global women's health.

Most respondents expressed interest in global health in general and in providing healthcare overseas, specifically. The majority of Ob-Gyns cited altruism as the driving factor for this decision though many expressed practical concerns about working abroad. With this in mind, it is not surprising that 60% of respondents identified hosting or training local medical personnel as the most valuable service to develop a nation's healthcare infrastructure. Though Ob-Gyns recognize this as a viable solution to overcome many of the practical barriers to providing care for women overseas, it is not without its challenges.

The concept of the physician "brain drain" has been well-described in both the medical and surgical arenas of global health [7]. A significant proportion of surgeons who migrate from LMIC on a temporary basis end up staying in US at an estimated cost to their country of origin of $32,926 to $127,221 per physician lost [8,9]. Alternative strategies to training local physicians without removing them from the population that they serve have been successful. The Ghana postgraduate obstetrics and gynecology collaborative residency training program reversed the retention rate of local Ob-Gyns from 10% to 100% as last reported 14 years after its implementation [10]. None of the Ob-Gyn programs that provide opportunities for US residents to visit LMICs offer a reciprocal spot to local trainees, and the extent to which these programs offer local training from visiting faculty is not known [11]. Outside of the infrastructure of existing partnerships, exportable teaching modules have attempted to improve access to care through local education of providers on more basic knowledge and procedural skills [12]. Such strategies represent opportunities for service and training of local personnel that interested respondents, without succumbing to the pitfalls of draining local resources.

In addition to the aforementioned needs of international learners, interest in global women's health is growing domestically as well. Despite the demand amongst US trainees, many respondents indicated that practical concerns such as length of time away and personal and professional obligations limited their current ability to practice globally. These same respondents, however, indicated that they would consider pursuing these opportunities later in their career. This desire to delay global health involvement until later in one's career is in contrast to the growing demand for mentorship and training amongst US medical students and residents early in their training [13]. Currently, only 17% of US obstetrics and gynecology residency programs offer residents activities in global health-a low number compared to the percentage of General Surgery or Internal Medicine residencies offering international opportunities to trainees [11,14,15,16]. The interest in global health amongst US trainees will likely continue to grow as demonstrated by the expanding medical student participation in international opportunities [17,18,19]. Recent statements from the Association of Professors of Gynecology and Obstetrics indicate that there is a focus on developing international opportunities in Ob-Gyn for medical students and cite the need for oversight and mentorship as essential components of these programs [6]. This growing need for mentorship for US undergraduate and graduate trainees coupled with the desire of the majority of Ob-Gyns to pursue international experiences later in their careers represents an exciting opportunity. Practicing Ob-Gyns could work in tandem with programs for trainees to share their expertise on a global scale.

Despite limitations in pursuing these opportunities, interest in international women's health amongst practicing Ob-Gyns is high. Knowledge of patterns and burden of disease, however, is surprisingly limited. Though Ob-Gyns were aware of general causes of maternal mortality such as hemorrhage, the role of sepsis and unsafe abortion were underestimated.

Interpretation of our data is restricted by a few important limitations. Like any survey, our study is subject selection bias in that those with no interest in global health were less likely to complete the survey. With that in mind, our survey had similar response rates to other studies administered through the College's CARN and those with similar subject matter. Our study reveals important preferences about practical directions for future Ob-Gyn focused global health programs from the perspective of U.S.-based providers. The absence of corresponding attitudes from practicing Ob-Gyns in these LMIC leaves ideas regarding programmatic implementation somewhat incomplete. Any ethical program would undoubtedly take these opinions into consideration before embarking on a new international opportunity [20]. Furthermore, though useful for data analysis, the rigid multiple-choice and ranking nature of the survey precludes respondents the opportunity to supply innovative ideas in the approach to women's global health that a more qualitative approach could provide.

Despite these limitations, this survey is the first to investigate practicing Ob-Gyns' knowledge, attitudes, and practices regarding women's global health. Though the high levels of need and interest may be limited by practical barriers, chances for involvement exist. The recognition of the importance of training local providers coupled with the short duration of time respondents would be

willing to spend abroad highlights the need for partnerships in training through innovative techniques. An unfortunate finding of our study is the role that personal safety plays as a barrier to providing healthcare abroad given that the areas of greatest need are often in areas of uncertain security. This survey highlights the need for more targeted research in this arena for implementation of successful programs integrating US Ob-Gyns into the realm of global women's health.

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Received Date: May 13, 2015, **Accepted Date:** June 19, 2015, **Published Date:** June 30, 2015.

Citation: Easter SR, Raglan GB, Little SE, Schulkin J, Robinso JN (2015) Perspectives on Global Health amongst Obstetrician Gynecologists: A National Survey. Women Heal Int 1(2): 106.