

REVIEW ARTICLE

Gynecology

ACGME Milestones in global health: Need for standardized assessment of global health training in obstetrics/gynecology residency

Gianina M. Monestime¹ | Isabelle Baird² | Andrei Rebarber³ | Taraneh Shirazian¹

¹Division of Global Women's Health, Department of Obstetrics and Gynecology, NYU Grossman School of Medicine, New York, New York, USA

²University of Chicago, Chicago, Illinois, USA

³Maternal Fetal Medicine Associates, New York, New York, USA

Correspondence

Taraneh Shirazian, Division of Global Women's Health, Department of Obstetrics and Gynecology, NYU Grossman School of Medicine, 530 First Avenue, New York, NY, 10016, USA.
Email: taraneh.shirazian@nyulangone.org

Abstract

Collective interest in global health training during US obstetrics/gynecology (Ob/Gyn) residency has grown over the past decade. The benefits of participation in global health electives have been well described. This review seeks to determine what literature exists regarding the use of Accreditation Council for Graduate Medical Education (ACGME) Milestones in Ob/Gyn residency as an assessment tool to evaluate global health programs. The PubMed database was searched from July 14, 2020 to August 20, 2021, using six search phrases: "global health curriculum(s) and ACGME"; "international health and ACGME"; "global health and Ob/Gyn residency"; "international health and Ob/Gyn residency"; "global health and Ob/Gyn residents"; and "global health curriculum(s) and Ob/Gyn residency." Publications that described global health programming outside of residency, within other medical specialties, and/or at non-US institutions were excluded from this review. In total, 259 publications resulted from the preliminary search. Five articles described US global health residency training in Ob/Gyn in some capacity. Only one publication described a specific global health elective and its evaluation with respect to ACGME Milestones. Despite growing popularity of global health electives among residency programs, few are assessing the educational value of these offerings using ACGME Milestones or describing these efforts in the literature.

KEYWORDS

ACGME Milestones, educational value, global health electives, global women's health, program evaluation and assessment, residency training

1 | VALUE OF GLOBAL HEALTH TRAINING IN RESIDENCY

Global health training opportunities in residency programs have been established for more than 20 years, with well-documented educational benefits to trainees.^{1,2} These benefits include improvement in the resident's ability to utilize resources conservatively and

to address and treat patients from diverse socioeconomic and racial/ethnic backgrounds.^{2,3} Additionally, global health training in residency programs has been shown to be instrumental in establishing a career-long awareness of issues pertaining to health equity, social determinants of health, and health disparities.^{2,4,5}

Global health training and recognition of these aforementioned issues become especially important during obstetrics/gynecology

(Ob/Gyn) residency training. Unique to the Ob/Gyn specialty, health disparities related to maternal mortality, gynecologic health, and reproductive choice represent one of the greatest health divides in the globe.⁶ From the obstetric perspective, nearly 95% of maternal deaths worldwide occur in low-resource countries, with very few occurring in high resource countries such as the USA and Europe.⁷ These disparities in maternal mortality are largely a result of differential access to skilled health professionals and medical resources in these areas.^{7,8} Furthermore, many of the maternal deaths that occur in low- and low middle-income nations are preventable and are secondary to infection, hypertensive disorders of pregnancy, and obstetric hemorrhage.⁹ From the gynecologic perspective, disparities are also highlighted by conditions such as cervical cancer. Cervical cancer is a condition that is now considered to be largely preventable in the USA with the advent of HPV vaccination and routine screening. However, each year more than half a million women are diagnosed with cervical cancer worldwide.¹⁰ Furthermore, approximately 300 000 women die annually from cervical cancer across the globe.¹⁰ It is estimated that 90% of these deaths occur in low- and low middle-income nations that either lack or have poor access to standardized screening and HPV vaccination programs.¹⁰ Disparities in women's health across the globe highlight the obvious gap between the rich and the poor and further emphasize the need for rigorous global health training in US Ob/Gyn residency programs.

In recent years, research has shown that interest in global health electives and training has risen among Ob/Gyn residents, with 96.3% of residents in a recent survey rating global health as "very" or "somewhat important".⁵ In another survey, 82% of residents responded that they would participate in a global health curriculum if it were offered.⁶ Although the number of Ob/Gyn residency programs that offer formal global health training has reportedly increased, with 80% of residencies in 2018 offering global health training programs (compared with 17% in 2013), the majority of these opportunities (60%) are limited to elective rotations in the third or fourth year of residency and may create barriers to resident involvement, especially among residents seeking a fellowship.^{2,12,13} Despite more widely available opportunities reported in 2018, 44% of trainee respondents in a 2017 survey reported having to arrange the global health electives for themselves and 36.4% of trainee respondents reported having to participate in a non-credited global health experience during designated vacation time.^{5,12} Only 18% of trainee respondents had the opportunity to participate in a global health elective that was offered by their residency program.⁵ In addition to widely variable experiences in accessing global health opportunities, residents cited time constraints, lack of mentorship, and lack of funding as perceived barriers to pursuing global health electives abroad.⁴

Until the recent COVID-19 global pandemic, the value of global health training within residency training programs has been somewhat overlooked. The global and national reactions to the current pandemic have highlighted the undeniable reality that we are living in a globalized society where global health is local health.¹⁴ What was once a distant global health issue early last year is now an active

threat to US public health and safety, which requires proactive intervention and attention from US national organizations, such as the Centers for Disease Control, Federal Drug Administration, and National Institutes of Health, in addition to major pharmaceutical drug companies and medical experts across the country.¹⁴

The COVID-19 pandemic is predicted to have profound negative and long-lasting impacts on women's health globally. It is estimated that an additional 12 200 maternal deaths will occur in 118 low-income countries across the globe within a 6-month period due to reduced healthcare coverage during the COVID-19 pandemic.¹⁵ Furthermore, access to necessary reproductive and perinatal care, food insecurity, substandard hygiene and sanitation, and limited financial means will continue to be affected by the current global circumstances.¹⁶ In fact, the economic consequences of COVID-19 are predicted to disproportionately affect women globally, as women are more likely than men to leave the workforce in order to serve as primary caretaker of children and sick relatives, in a time of school closures and social distancing.¹⁷ The long-term consequences and health disparities facing women as a result of COVID-19 will play out in clinical scenarios around the world and will inevitably require the proactive and forward-thinking efforts of Ob/Gyn trainees and practitioners globally.

The current global pandemic has underscored the importance of rigorous global public health training in US Ob/Gyn residency programs. Part of what determines the rigor and value of training activities in US residency programs is alignment with the well-established (ACGME) Milestones. Most recently updated in 2015, the ACGME Milestones in Obstetrics and Gynecology provide a framework of 28 milestones that are designed to assess trainee progress in terms of six broad physician competencies, including patient care, medical knowledge, systems-based practice, practice-based learning, professionalism, and interpersonal and communication skills.¹⁸ These milestones have been designed with the intent of being purposefully broad, allowing residency programs across the nation the flexibility to meet these competencies utilizing various methods. The sole constant among ACGME guidelines remains the need for clinical experiences to occur "under the guidance and supervision of qualified faculty members" who provide meaning and context to patient interactions encountered by trainees.¹⁸ With this understanding, our aim is to determine how current published global health training electives within US Ob/Gyn residency programs align with the described ACGME Milestones.

2 | GLOBAL HEALTH PROGRAM EVALUATION IN US RESIDENCY PROGRAMS

The PubMed database was searched from July 14, 2020 to May 31, 2021, to identify literature that discussed ongoing global health training efforts within US Ob/Gyn residency programs. The following six search phrases were utilized: "global health curriculum(s) and ACGME"; "international health and ACGME"; "global health and Ob/Gyn residency"; "international health and Ob/Gyn residency"; "global health and Ob/Gyn residents"; and "global health

curriculum(s) and Ob/Gyn residency.” The publications that resulted from this preliminary search were then reviewed for content specific to Ob/Gyn global health resident education at US institutions. Publications that described global health programming outside of the residency setting, within other medical specialties not including Ob/Gyn, and/or at institutions outside of the US were excluded from this review (see Figure 1). A preliminary search using the six search phrases above yielded 259 publications. Of 259 publications, five described global health training in Ob/Gyn at US institutions in some capacity. Upon further review, only one publication of the five described a specific global health training experience that was designed and evaluated with respect to ACGME Milestones and physician competencies.

Luckett et al.³ describe a specific global health elective through the Harvard Beth Israel Deaconess Medical Center (BIDMC)

- the Botswana Harvard AIDS Institute Partnership (BHP) at the Scottish Livingstone Hospital in Botswana. The authors describe an emphasis on partnership with host medical facilities and on the need for standardization of evaluation criteria used by residency programs for global health electives abroad. The global health elective itself was offered to trainees in postgraduate years (PGY) 2, 3, and 4. In this experience, trainees were able to perform minor and major gynecologic surgeries, serve as surgical educators, and design a didactics curriculum for the local medical interns in Botswana - all under appropriate faculty supervision.³ In keeping with ACGME guidelines, the BHP program designated a full-time Ob/Gyn faculty member at the hospital, whose role focused on providing clinical care, leading capacity-building efforts of local health providers, and supervising the clinical elective for US Ob/Gyn trainees.³

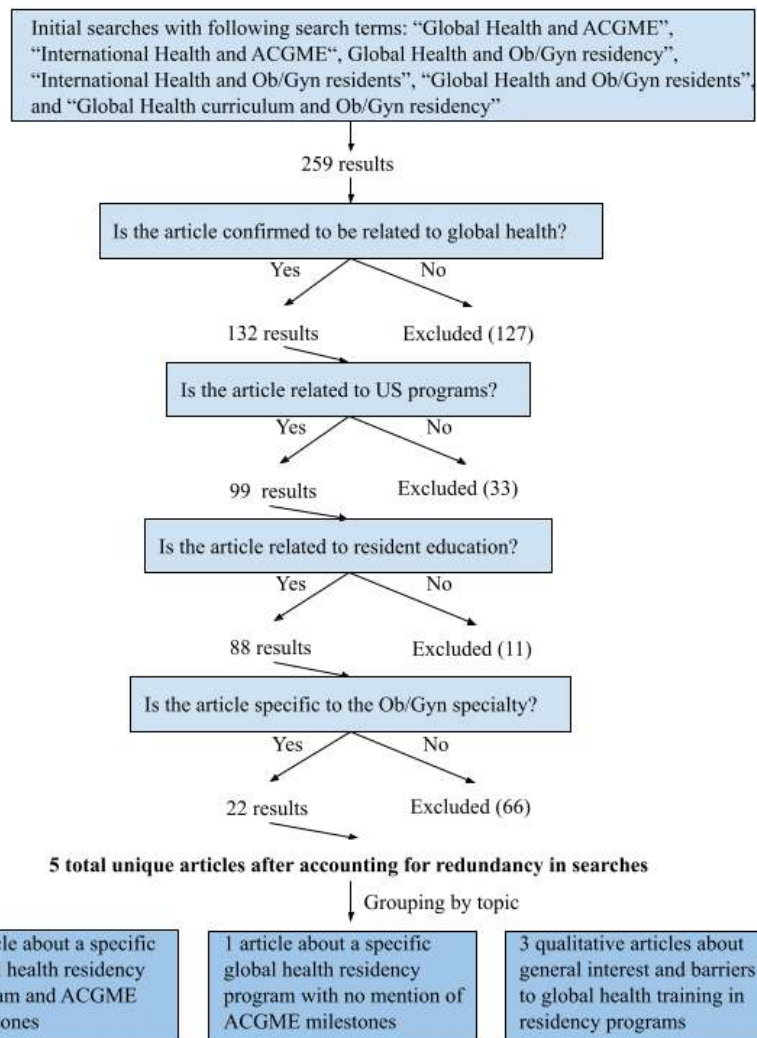


FIGURE 1 Visual mapping of literature review and identification of relevant articles. Four search phrases were utilized to identify publications relevant to global health training in US obstetrics/gynecology (Ob/Gyn) residency programs. In total, 259 publications were identified in the preliminary search. Publications were subsequently excluded if they did not discuss content related to global health training within US Ob/Gyn residency programs. Five publications met this criteria. After accounting for exclusion criteria, only one publication discussed specific global health experience and its evaluation with respect to Accreditation Council for Graduate Medical Education (ACGME) Milestones

Lockett et al.³ also describe a program evaluation process in which residents were provided an opportunity to both give and receive feedback at the midpoint and the end of the elective with faculty supervisors. Additionally, all residents were asked to complete an online anonymous survey about their experience. Resident performance was then evaluated using the ACGME Milestones framework, as well as the Association of Professors of Gynecology and Obstetrics (APGO) Committee on Global Health's competency-based objectives. Authors specifically cite the BHP elective as fulfilling six ACGME competencies and 11 ACGME Milestones related to the following: antepartum, intrapartum, and postpartum care; obstetric and gynecologic technical skills; ambulatory gynecology; patient safety and advocacy; self-directed learning; quality improvement; and effective communication with patients and other health-care providers. Overall, the authors call for the evaluation of current global health elective opportunities and standardization of this evaluation process using established standards for postgraduate training in Ob/Gyn.

The remaining four publications that describe global health training of US Ob/Gyn residents were largely qualitative in nature. In the first, colleagues at the University of California-San Francisco Ob/Gyn residency training program propose a mandatory, integrated curriculum designed to care for vulnerable patient populations.⁴ They describe a 4-week global experience during PGY 3 at the Makerere University College of Health Sciences in Kampala, Uganda. A detailed description of this global health opportunity does not remark on methods for future evaluation of this program, using ACGME residency milestones or other formal objective criteria for assessing clinical utility of the program.

Two of the remaining four publications both closely examine issues of perceived interest in and barriers to global health training among medical students and residents in Ob/Gyn.^{11,19} Cost of travel and accommodation, lack of time to coordinate experiences abroad, and inaccessibility of global training sites are among some of the barriers identified by Ob/Gyn residents in these publications. These publications do not remark on specific global health training programs.

The fourth, and final, publication investigates factors that influence participation in global health experiences during Ob/Gyn residency.¹¹ Additionally, this final publication further explores the impact of this participation on long-term career planning.² Similar to the previous articles, this publication does not remark on any specific global health elective or its evaluation.

3 | IMPORTANCE OF STANDARDIZED ASSESSMENT

In the last decade, the body of literature supporting global health training and its subsequent benefits has grown. However, based on the paucity of published data on the use of ACGME Milestones to evaluate global health electives, very few programs are evaluating their current global health offerings using formal, objective

criteria. The current evaluation methods utilized to assess global health training programs are largely qualitative in nature and based on personal accounts, rather than established standards for graduate medical education. It is time that we begin to critically appraise the educational quality of global health electives, using the ACGME Milestones in Obstetrics and Gynecology as an objective tool for such appraisal.

The ACGME Milestones provide a framework through which US trainees may be evaluated in terms of clinical acumen, surgical skill, and interpersonal and multidisciplinary communication. They represent one of the many standards by which US senior trainees are judged in terms of readiness to enter into independent clinical practice as an Ob/Gyn. Given the significance of the ACGME Milestones, standardized evaluation using these benchmarks may increase and improve the perceived value of global health programs that are able to demonstrate fulfillment of and adherence to these milestones. Perceived educational value becomes integral when seeking institutional and departmental support for global health programs in terms of securing on-site faculty supervision, financing resident accommodations, and sustaining partnerships with host institutions. In general, program evaluation and assessment using ACGME Milestones will also provide a means of measuring and comparing trainee performance, identifying program weaknesses or opportunities for improvement, and justifying the existence of such global health training programs. There are undeniable benefits associated with the standardized evaluation of global health electives offered in US Ob/Gyn residency programs.

The COVID-19 global pandemic has already begun to and will continue to disproportionately affect women's health across the globe.^{15,16} Because of this, the current pandemic has also underscored the importance of cultivating civic-minded and globally conscious women's health advocates and Ob/Gyn physicians. One way in which we may achieve this is through the development of clinically relevant, rigorous global health programs and standardized evaluation of these programs by both US residency programs and their global partners, using ACGME Milestones in Obstetrics and Gynecology. The standardized assessment of global health programs will be mutually beneficial for both US and global trainees in ensuring these experiences are worthwhile, in terms of acquisition of clinical and technical skills. In the midst of a global pandemic, we are living in a time where global health is local health. We must invest in robust and valuable global health training today in order to lay the foundation for long-term improvements in global women's health in the future.

CONFLICTS OF INTEREST

The authors have no conflicts of interest.

AUTHOR CONTRIBUTIONS

GM performed the literature review and wrote and revised all drafts of the manuscript prior to submission. IB performed the literature review and wrote the preliminary draft of the manuscript. AR offered substantial revisions of the manuscript prior to submission. TS

conceptualized designed and edited the review article and gave final approval prior to submission.

REFERENCES

- Drain PK, Holmes KK, Skeff KM, Hall TL, Gardner P. Global health training and international clinical rotations during residency: current status, needs, and opportunities. *Acad Med*. 2009;84(3):320-325. doi:10.1097/ACM.0b013e3181970a37
- Patel S, Diouf K, Schantz-Dunn J, Nour NM. Impact of funded global health electives on career development of residents in a U.S. obstetrics and gynecology program: a cross-sectional survey. *BMC Med Educ*. 2019;19(1):103. doi:10.1186/s12909-019-1536-8
- Luckett R, Barak T, Anderson S, et al. Promoting health equity through purposeful design and professionalization of resident global health electives in obstetrics and gynecology. *J Surg Educ*. 2019;76(6):1594-1604. doi:10.1016/j.jsurg.2019.05.019. Epub 2019 May 31.
- Whetstone S, Autry M. Linking global health to local health within an Ob/Gyn residency program. *AMA J Ethics*. 2018;20(1):253-260. doi:10.1001/journalofethics.2018.20.3.medu1-1803
- Stagg AR, Blanchard MH, Carson SA, Peterson HB, Flynn EB, Ogburn T. Obstetrics and gynecology resident interest and participation in global health. *Obstet Gynecol*. 2017;129(5):911-917. doi:10.1097/AOG.0000000000001965
- Bibbo C, Shirazian T. Maternal mortality: the greatest health divide in the world. In: Shirazian T, Gertz E, eds. *Around the Globe for Women's Health*. Springer; 2013:1-19. doi:10.1007/978-1-4419-8258-2_1
- World Health Organization. Maternal mortality. <https://www.who.int/news-room/fact-sheets/detail/maternal-mortality>. Accessed January, 2021.
- Ganchimeg T, Ota E, Morisaki N, et al. WHO Multicountry Survey on Maternal Newborn Health Research Network. Pregnancy and childbirth outcomes among adolescent mothers: a World Health Organization multicountry study. *BJOG*. 2014;121(Suppl 1):40-48. doi:10.1111/1471-0528.12630
- Althabe F, Moore JL, Gibbons L, et al. Adverse maternal and perinatal outcomes in adolescent pregnancies: the Global Network's Maternal Newborn Health Registry study. *Reprod Health*. 2015;12(Suppl 2):S8. doi:10.1186/1742-4755-12-S2-S8. Epub 2015 Jun 8
- Denny L, Oaknin A, Jingran A, Cohen PA. Cervical cancer. *The Lancet*. 2019;393(10167):169-182. doi:10.1016/S0140-6736(18)32470-X
- Pope R, Shaker M, Ganesh P, Larkins-Pettigrew M, Pickett SD. Barriers to global health training in obstetrics and gynecology. *Ann Glob Health*. 2018;82(4):625-629. doi:10.1016/j.aogh.2016.09.004
- Trivedi S, Haddad LB, Narvaez J, et al. A comprehensive evaluation of obstetrics and gynecology residencies' global health training programs. *Obstet Gynecol*. 2018;132(5):1143-1151. doi:10.1097/AOG.0000000000002935
- Hung KJ, Tsai AC, Johnson TRB, Walensky RP, Bangsberg DR, Kerry VB. Scope of global health training in U.S. obstetrics and gynecology residency programs. *Obstet Gynecol*. 2013;122(5):1101-1109. doi:10.1097/AOG.0b013e3182a9c1c8
- Hinchman A, Ali D, Goodwin BW, Gillie M, Boudreaux J, Laborde Y. Global health is local health: a multidisciplinary perspective of COVID-19. *Ochsner J*. 2020;20(2):123-133. doi:10.31486/toj.20.0059
- Roberton T, Carter ED, Chou VB, et al. Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study. *Lancet Glob Health*. 2020;8(7):e901-e908. doi:10.1016/S2214-109X(20)30229-1. Epub 2020 May 12.
- Akseer N, Kandru G, Keats EC, Bhutta ZA. COVID-19 pandemic and mitigation strategies: implications for maternal and child health and nutrition. *Am J Clin Nutr*. 2020;112(2):251-256. doi:10.1093/ajcn/nqaa171
- Wenham C, Smith J, Morgan R. Gender and COVID-19 Working Group. COVID-19: the gendered impacts of the outbreak. *Lancet*. 2020;395(10227):846-848. doi:10.1016/S0140-6736(20)30526-2. Epub 2020 Mar 6.
- The Accreditation Council for Graduate Education. The Obstetrics And Gynecology Milestone Project. Accessed December, 2020. <https://www.acgme.org/Portals/0/PDFs/Milestones/ObstetricsandGynecologyMilestones.pdf?ver=2016-04-04-151917-043>.
- Nathan LM, Banks EH, Conroy EM, et al. Global health training in US obstetrics and gynaecology residency programmes: perspectives of students, residents and programme directors. *Postgrad Med J*. 2015;91(1082):685-691. doi:10.1136/postgradmedj-2014-133144. Epub 2015 Oct 27.

How to cite this article: Monestime GM, Baird I, Rebarber A, Shirazian T. ACGME Milestones in global health: Need for standardized assessment of global health training in obstetrics/gynecology residency. *Int J Gynecol Obstet*. 2022;157:522-526. <https://doi.org/10.1002/ijgo.13914>