

CLINICAL ARTICLE

Gynecology



A common curriculum in obstetrics and gynecology for medical students globally

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Abstract

Objective: Global variations in women's health outcomes, increased international migration, and an increase in the number of medical schools underpin the need for global standardization in obstetrics and gynecology curricula for medical students. However, there are currently no recommendations regarding the content of a common curriculum. The aim of this project was to agree the objectives for a common curriculum in obstetrics and gynecology for medical students globally.

Methods: The curriculum was developed and agreed by an international taskforce of obstetricians and gynecologists. Published curricula for medical students in a variety of regions globally were reviewed and discussed, and the objectives for a common curriculum in obstetrics and gynecology for medical students were agreed by consensus.

Results: The content of the proposed curriculum is classified into three domains: clinical skills, professional behaviors, and knowledge. The recommended curriculum covers health conditions that affect women globally in different social and cultural contexts, and addresses important global health issues of relevance to obstetrics and gynecology.

Conclusion: The methods and outcomes of a project by an international taskforce of obstetricians and gynecologists to develop a common curriculum in obstetrics and gynecology for medical students globally are presented. More work is required to identify ways in which the curriculum may be adapted to a minimum essential required curriculum in times of man-made or natural disasters. Achieving these will facilitate the intended long-term aims of this curriculum, to improve women's health outcomes globally.

KEYWORDS

curriculum, global, gynecology, international, medical, obstetrics, student, taskforce

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1 | INTRODUCTION

In 2020, 800 women died each day from preventable causes related to pregnancy and childbirth, with maternal mortality ratios varying from 4 per 100 000 live births in the Australia/New Zealand region to 545 per 100 000 in sub-Saharan Africa.¹ Also, more than 700 million people (9.1% of global population) travel between countries annually² and in 2019, about 18% of doctors on average across the Organization for Economic Co-operation and Development (OECD) countries had obtained at least their first medical degree in another country, up from 15% a decade earlier.³ There are also currently over 3800 medical schools in the world directory of medical schools, up from 2600 in 2014.⁴ These facts highlight three key challenges—wide global variations in women's health outcomes, increased international migration of doctors and patients, and an increase in the number of medical schools globally—which underpin the need for global standardization in obstetrics and gynecology (O&G) curricula for medical students.

There is also a need for medical doctors who are competent, motivated, and suited to current challenges such as globalization, climate change, environmental toxins, and pollutants. Additionally, the shift towards prevention and health promotion rather than just curative services, changes in disease profiling with a rise in non-communicable diseases, and the impact of emerging diseases like Ebola, Zika, COVID, and chikungunya are all significant factors to consider. Other important considerations include humanitarian crises, mental health, gender inequalities, health inequities, and the need for a collaborative, holistic, multidisciplinary, and multisector approach that incorporates health into all policies.

Despite previous work by organizations such as WHO⁵ and the World Federation for Medical Education (WFME)⁶ on global standardization in medical training, none has adequately addressed the content of curricula in O&G. Although there have been publications on detailed recommendations for the content of a global curriculum in surgery,⁷ oncology,⁸ and neuroanatomy,⁹ we did not find any on O&G for medical students. However, a 2022 study¹⁰ reviewed the recommendations on the content and duration of the curriculum for medical students in O&G by various national professional bodies and descriptions of the O&G curriculum from five university websites and identified marked variations in knowledge, skills, and competencies recommended for inclusion. The study recommended a core curriculum in O&G for medical students globally.

The aim of this project was to define the goals and objectives for a common curriculum in O&G for medical students globally.

2 | MATERIALS AND METHODS

This study was exempt from the institutional review board approval as it did not involve human subjects.

2.1 | Formation of the taskforce

Individuals previously involved in developing the O&G curriculum for medical students in different jurisdictions of the International Federation of Gynecology and Obstetrics (FIGO) were invited to be members of a globally representative taskforce (Table 1). The curriculum was developed and agreed by expert consensus as described in the section on curriculum development in this manuscript. Seven key individuals who were identified as stakeholders because of their involvement in the development of the O&G curriculum for medical students in different parts of the globe were initially consulted for their interest in becoming members of a globally representative taskforce to take the initiative forward. The selection of these individuals was based on their location in the different geographical FIGO regions and their expertise in medical education. AHK, IS, GC and CS responded to this initial appeal for members of the taskforce. However, this left some gaps in geographical representation, especially from Europe and North America.

An appeal was therefore made to FIGO's Education Communication and Advocacy Committee (ECAC) committee to nominate colleagues with expertise in medical education from the different FIGO regions, who would be interested in joining this initiative. Following this appeal, we received two formal nominations (WA and GG). The FIGO scientific program committee (FIGO SPC) had also linked us with AV-M (from the USA) to lead a joint breakfast with the expert session at the FIGO Congress in Paris, in October 2023. As we did not have a formal representative from North America or Europe on the international taskforce at the time, AV-M was approached about being a member of the taskforce and kindly consented. ME was invited to join the taskforce because of extensive experience with the O&G curriculum for medical students in the Middle East and PF agreed to represent Europe based on his previous similar roles in O&G education in the UK and at FIGO. HO was invited to join the taskforce as it was felt that it would be useful to have some insight from a trainee in O&G. Each of the taskforce members has extensive expertise in their corresponding medical schools.

2.2 | Curriculum development

2.2.1 | Discussion and consensus

A series of meetings on the Microsoft Teams platform, over the course of 5 months, from March to August 2023 were held, during which the curriculum was developed. Our approach started with reviewing already published O&G curricula for medical students and modifying and addressing gaps, through discussion and consensus to agree a common curriculum that covered the health needs of women across the globe. Some of the issues considered during the discussions included the need to ensure that women's health conditions unique to each of the different FIGO jurisdictions were covered, how best to reach a consensus, and which curriculum to start with.

TABLE 1 Members of the international taskforce that developed the core curriculum for medical students in obstetrics and gynecology globally.

FIGO region	Name, position, and institution
Middle East	1. Professor William Atiomo (Professor of Obstetrics & Gynecology, Mohammed Bin Rashid University of Medicine, and Health Sciences [MBRU], Dubai, United Arab Emirates [UAE]) 2. Professor Mutairu Ezimokhai (Professor of Obstetrics & Gynecology and Special Adviser to the President, MBRU, Dubai, UAE)
Europe	3. Professor Paul Fogarty (Professor of Obstetrics & Gynecology, Belfast, Ireland. Previous Senior Vice President [Global Health] of the UK Royal College of Obstetrics and Gynecology and previous member of the Education, Advocacy, and Communications Committee of the International Federation of Gynecology and Obstetrics [FIGO])
Africa	4. Dr Anne Kihara (current President of the International Federation of Gynecology and Obstetrics [FIGO]) 5. Dr George Gwako (Lecturer in Obstetrics & Gynecology, University of Nairobi, Kenya)
Asia	6. Professor Ian Symonds (Deputy Vice Chancellor, Academic and Professor of Obstetrics & Gynecology IMU University, Kuala Lumpur, Malaysia. Dean of Education Royal Australian and New Zealand College of O&G [RANZCOG])
Latin America	7. Professor Claudio Sosa (Professor of Obstetrics & Gynecology, Department of Obstetrics and Gynecology, University of Uruguay, Montevideo, Uruguay, and President, FIGO Sociedad Ginecologica del Uruguay)
Pacific/Australia	8. Professor Gabrielle Casper (past Chairman of the NSW State Committee of the RANZCOG and Head of the Department of O&G, School of Medicine, Sydney, The University of Notre Dame Australia)
North America	9. Dr Alla Vash-Margita (Associate Professor in Department of Obstetrics, Gynecology and Reproductive Sciences, Yale University School of Medicine, New Haven, Connecticut, USA)
Trainee representative	10. Dr Helena M. Obermair (Department of Obstetrics and Gynaecology, School of Medicine, Sydney, The University of Notre Dame, Sydney, New South Wales, Australia and Royal North Shore Hospital, Sydney, New South Wales, Australia)

2.2.2 | Curriculum framework

The taskforce deliberated on the ideal framework for the curriculum (topic-based, competency-based, problem-based, inclusion or exclusion of professional behaviors, use of chapters), scope for individual adaptation based on regional priorities in different geographical locations globally, members' preferences with respect to the templates reviewed/discussed, concerns about the level of detail provided in some of the curricula, a need or not to frame the starting document around entrustable professional activities (EPAs), and the option of structuring the document around the themes outlined in the "doctor as a medical expert domain" in the updated (2021) UK RCOG undergraduate curriculum.¹¹

2.2.3 | Review of existing curricula and global representation

A Google page was set up and members of the taskforce were made editors and allocated to investigate existing curricula (medical schools and professional bodies) for O&G medical students from their allocated regions, identify a preferred curriculum template, and provide a half-page summary describing the curriculum template and why it was their preference. They then uploaded the half-page summary as well as the relevant curriculum onto the Google page. The curricula discussed and reviewed by the task force was based on FIGO jurisdictions which had representation from each continent except Antarctica. These included those from the University of Uruguay, UK RCOG, RANZCOG, APGO, University of Nairobi,

the International Medical University in Malaysia, as well as available published O&G curricula for medical students, on the websites of all medical schools in Canada and the USA.

2.2.4 | Curriculum goals and objectives

Following the discussions and review of the curricula in O&G outlined in the previous sections, a decision was made by the taskforce to begin by merging the curricula of the APGO (excluding the components on osteopathy) and RANZCOG into one document, as these two documents together covered aspects in the other curricula. The list of topics, learning objectives and competencies in the merged list was then split into two sections (gynecology and obstetrics) and members of the taskforce were allocated to one of two groups (gynecology or obstetrics) to meet and collectively refine (exclude duplicates and address gaps) their allocated list.

Between July and August 2023, both groups met initially separately and then together as one to agree on the contents of a common curriculum as outlined in [File S1](#). Considerations during the discussions included agreement on a set of core, topics, skills, and professional competencies that could be taught to medical students in O&G clerkships focusing on clinical (in contrast to basic sciences) topics, as these had relevance to practice. The taskforce was also cautious about the amount of content recommended, mindful that medical schools in different geographical jurisdictions might need the flexibility to align their curricula to different outcomes or competency-based frameworks¹² applicable in their respective regions.

The international taskforce also decided not to include assessment tools (e.g., EPAs), in order to facilitate uptake as not all medical schools had developed or adopted EPAs specific to O&G for their medical students. The group was also mindful of topics with the potential for controversy because of religious and cultural differences. Informal external consultation was also sought from a public health physician following the development of the first draft of the curriculum, and the section on global health was changed to public health with the learning outcomes expanded to include, "how the WHO social determinants of health lead to disparities in women's health within and between countries," "the effect on women's health of the UN Sustainable Development Goals, including man-made and natural disasters and climate change," and "the importance of promoting health and preventing disease in women and babies." It was felt that public health was a better heading rather than global health as disparities could occur within a country.

The taskforce felt that the adopted approach of "social group process (committee, expert panel, taskforce, working group, etc.)" was consistent with published methodology⁶ used for the creation of global medical curricula in other disciplines.

3 | RESULTS

The detailed goals and objectives for the core curriculum for medical students in O&G globally, agreed by the international taskforce, are outlined in [File S1](#). The content of the curriculum was classified into three domains: clinical skills, professional behaviors, and knowledge/clinical reasoning.

3.1 | Gynecology

Clinical skills in gynecology included taking a gynecological history, performing a gynecological pelvic examination, and performing cervical cancer screening. The taskforce was mindful of the fact that opportunities for medical students to learn how to take a cervical smear on patients or a simulation task trainer, would be dependent on the geographical location of the university and the prevalence of cervical cancer in the country. The professional behaviors include utilizing professional guidelines to underpin O&G practice, having a chaperone for all gynecological examinations and procedures, and knowing how to access personal emotional support for themselves following exposure to a traumatic event in an O&G clinical setting.

Within the knowledge and clinical reasoning domain the taskforce considered it important for all medical students globally to be able to define, diagnose, investigate, and manage the range of gynecological conditions outlined in [File S1](#). These conditions were grouped under the following topics: general gynecology, early pregnancy, gynecological oncology, fertility sexual and reproductive health, urogynecology and pelvic floor disorders, perioperative care, violence against women and girls, ethics and legal issues related to gynecology, and global health. It was considered important

for medical students globally to understand the factors that lead to disparities in women's health, including man-made and natural disasters and climate change.

3.2 | Obstetrics

Similar domains as used in the gynecology aspects of the curriculum (clinical skills, professional behaviors, and knowledge/clinical reasoning) were applied to the obstetrics section. Clinical skills included history-taking and abdominal examination in pregnancy, identifying the deteriorating patient, blood pressure measurement, estimating gestational age, fetal growth, risk assessment in pregnancy, assessment and management of a patient in labor under supervision, assisting or conducting a normal vaginal birth under supervision, assessment and resuscitation of a newborn infant, and undertaking a postnatal maternal clinical review. The important professional behaviors included explaining the impact of socioeconomic problems, and violence and sexual abuse on pregnant women, demonstrating empathy for the mother in labor, communication, and multidisciplinary and professional care.

Within the knowledge and clinical reasoning domain, the taskforce considered it important for all medical students globally to be able to define, diagnose, investigate, and manage the range of obstetric conditions outlined in [File S1](#). These conditions were grouped under the following topics: preconception care, early pregnancy care, antenatal care, intrapartum care, a range of health conditions affecting the mother and baby, obstetric emergencies, postpartum care, and neonatal care to reflect the continuum of care. The taskforce also considered that it was important that medical students globally were able to demonstrate an understanding of the following public health issues—how the WHO social determinants of health lead to disparities in women's health within and between countries, the effect of the UN Sustainable Development Goals (including man-made and natural disasters and climate change) on women's health and the importance of promoting health and preventing disease in women and babies.

4 | DISCUSSION

This manuscript describes the development and results of the first common curriculum in O&G for medical students globally. It should help medical schools with the definition and harmonization of standards and improve the quality and safety of training in the discipline, which should ultimately lead to improved women's health outcomes globally. The skills, professional competencies, and knowledge recommended in this curriculum cover health conditions that affect women in different social and cultural contexts. It also allows for flexibility in emphasis, based on the women's health priorities in the geographical location of each medical school.

The international taskforce was mindful to ensure that recognition was given to global variations in disease, legal, and cultural contexts. For example, the recommendation on teaching medical students to perform a cervical smear recognized that the choice to

teach the skill using a model (part task trainer) or a patient would depend on the location of the university and the prevalence of cervical cancer in that locality. Similarly, teaching on cervical cancer screening, termination of pregnancy, gender identity, and the legal status of the fetus would vary depending on the location of the medical school. It was recognized that as a curriculum is a living document, new topics could be added or excluded based on evolving local and global health trends. The taskforce also chose not to focus on the pedagogy used, and to allow flexibility and creativity dependent on the preferences of the medical school.

When compared with the findings in a previous literature review¹⁰ on recommendations for goals and objectives for medical students in O&G globally, our taskforce's common curriculum covered broadly similar topics, but provided a more detailed listing of recommended learning outcomes. Additionally, when compared with the curricula of two medical schools we initially discussed during the curriculum development process, similar topics were covered. However, the common curriculum provides a more detailed listing of the recommended learning goals and objectives and additional learning goals and objectives in the new curriculum, including how the WHO social determinants of health lead to disparities in women's health within and between countries, as well as the effect on women's health of the UN Sustainable Development Goals, including man-made and natural disasters and climate change.

The strengths of this project are in the international representation of the taskforce and the comprehensiveness of the topics covered. The method (social group/committee) was also consistent with the most common method used to develop global curricula with alternatives being a Delphi process or modified Delphi approach.⁶ Kern's curriculum development framework¹³ describes six steps in curriculum development. These six steps are: (1) problem identification and general needs assessment, (2) targeted needs assessment, (3) goal and objective writing, (4) educational strategies, (5) implementation, and (6) evaluation and feedback. Within the context of Kern's framework, the arguments and references in the introduction of this manuscript constitute steps 1 and 2 and the work of our taskforce as described in this manuscript constitutes step 3. However, future work is required to address steps 4–6.

The limitations of our study include the exclusion of representation from some populous geographical areas such as China and Russia. Many taskforce members were affiliated with English-speaking universities, which may have limited the diversity of the group.¹⁴ Enhancing the diversity of the taskforce and allowing for more open enrolment and contributor selection would have enhanced the design of our study. However, the approach we used (peer selection) is a recognized method¹⁵ of choosing members of a curriculum development group. Curriculum development through social group and Delphi processes is also believed to run the risk of oversimplification and create conflict between the push for uniformity and diversity.¹⁶ However, it was not possible to determine the gold standard approach for developing global curricula due to the lack of data on the effectiveness of implementing curricula globally and the extent of curriculum adoption.⁶

In conclusion, this manuscript presents the methods and outcomes of a project by an international taskforce of obstetricians and gynecologists to develop a common curriculum in O&G for medical students globally. The skills, professional competencies, and knowledge recommended in this curriculum include health conditions that affect women globally in different social and cultural contexts. The curriculum allows for flexibility in emphasis, based on the women's health priorities of the geographical location of each medical school. However, more work is required to engage with a wider group of stakeholders (including patients) to evaluate its feasibility, aid implementation, and agree key metrics for evaluating its benefits. More work is also required to identify ways in which the curriculum may be adapted to a core (minimum essential required) curriculum in times of man-made or natural disasters to optimize cognitive load and facilitate learning. There will be a need for guidance from FIGO, the umbrella body that provides guidance on training in women's health, in taking this work forward. Achieving these will facilitate the intended long-term aims of this curriculum to improve women's health outcomes globally.

AUTHOR CONTRIBUTIONS

Initial conceptualization: WA, PF and ME. Developing and agreeing the curriculum: WA, GC, IS, HMO, GG, A V-M, CS, AK, ME, and PF. Writing of first draft of the manuscript: WA. Editing and revision of various drafts of the manuscript: WA, GC, IS, HMO, GG, A V-M, CS, AK, ME, and PF. Editing and approval of final draft for submission: WA, GC, IS, HMO, GG, A V-M, CS, AK, ME, and PF.

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CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that supports the findings of this study are available in the supplementary material of this article.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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