

Title	Introducing outcome-based education in obstetrics and gynaecology training: Perspectives of trainees and trainers
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Publication date	2025-01-08
Original Citation	O'Sullivan, O. E., Leitao, S., Harney, S., Abdalla, M. E. and O'Donoghue, K. (2025) 'Introducing outcome-based education in obstetrics and gynaecology training: Perspectives of trainees and trainers', European Journal of Obstetrics & Gynecology and Reproductive Biology, 306, pp. 6-13. https://doi.org/10.1016/j.ejogrb.2025.01.003
Type of publication	Article (peer-reviewed)
Link to publisher's version	10.1016/j.ejogrb.2025.01.003
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Download date	2026-10-31 10:19:19
Item downloaded from	https://hdl.handle.net/10468/16901



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Introducing Outcome-Based Education in Obstetrics and Gynaecology Training: Perspectives of Trainees and Trainers

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Abstract:**Background and Aims:**

Outcome-based education (OBE) focuses on clearly defined learner goals, offering a structured framework to achieve competency. This study explores the perspectives of trainees and trainers in Obstetrics and Gynaecology (O&G) in Ireland regarding facilitators, barriers, and challenges to implementing OBE.

Methods:

A national cross-sectional survey was distributed to O&G trainees and trainers in Ireland. Responses were analysed using descriptive statistics and chi-squared tests, and qualitative thematic analysis.

Results:

A total of 151 trainees and trainers participated in the study. While 61.2% of respondents reported familiarity with the concept of OBE, only 22.4% accurately identified its primary focus on learner goals. Participants highlighted several key benefits of OBE, including the establishment of clearly defined goals and the development of competency in essential skills. However, significant challenges were also identified, such as the perception of unattainable goals for trainees and insufficient training facilities. Additionally, trainer engagement and the lack of allocated time for both trainers and trainees to attend training courses were recognized as major barriers to the successful implementation of OBE.

Conclusion:

OBE presents a promising educational framework for O&G training, with the potential to modernize and enhance learning outcomes. However, its successful implementation hinges on comprehensive education about its principles and benefits, substantial investment in educational facilities and resources, and the prioritization of training through dedicated and protected time for both trainees and trainers.

Keywords: Outcome-Based Education, Obstetrics and Gynaecology, Training Barriers, Educational Facilitators, Medical Education.

Statements and Declarations

OEOS and KOD are national speciality directors for Obstetrics and Gynaecology in Ireland.

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Synopsis:

Familiarity with the term "outcome-based education" does not equate to a full understanding of its principles or processes. Successful implementation demands strategic planning, robust engagement, and dedicated resources.

Introduction:

Over the last decade, medical training bodies across various jurisdictions and specialties have explored ways to ensure the adequacy and effectiveness of training programs [1-4].

Obstetricians and Gynaecologists in Europe have called for change, driven by evolving patient expectations and the changing climate of the specialty [5]. Recognizing these challenges, training bodies and medical educators emphasize transitioning from fixed-time training to a competency-focused system[6, 7].

Outcome-based education (OBE) uses clearly defined outcomes across knowledge, clinical skills, and communication, providing a structured framework to identify and assess required training standards [8, 9]. Achieving these goals necessitates formative and summative evaluations. The European Board and College of Obstetrics and Gynaecology (EBCOG) has established the pan-European curriculum 'EBCOG-PACT,' which outlines OBE standards, yet disparities in training outcomes and educational methods persist [1].

In mainland Europe, O&G training remains procedure-number dependent. Many trainees, due to reduced working hours under the European Working Time Directive [10, 11], increased documentation requirements [12], litigation fear [13] and medical advances, struggle to meet procedural quotas [10, 12-16]. These challenges, alongside the need for standardized international training [1, 17] can be addressed through OBE, which incorporates structured assessments and simulation training [5, 18].

In Ireland, the Royal College of Physicians of Ireland (RCPI) oversees curriculum development and postgraduate O&G training for doctors [19]. Higher specialty training (HST), following three years of basic specialty training (BST), spans 60 months, during which trainees record training activities. Annual assessments review electronic logbooks, mandatory forms, and trainer evaluations. The RCPI has begun implementing OBE across medical specialties, aiming to introduce it for HST in O&G by 2024.

Limited research exists on the perspectives of trainees and trainers regarding facilitators and barriers to implementing an OBE-based curriculum in O&G.

This national cross-sectional survey aimed to identify trainer and trainee perceptions of OBE facilitators and barriers, while also examining strengths and weaknesses of the current curriculum. These findings are intended to inform and guide OBE implementation in O&G.

Materials and Methods:

Survey development

The survey was developed based on literature on OBE [20-23], incorporating proposed facilitators and challenges, as well as input from the National Specialty Directors (NSDs) (OOS &KOD). It was piloted with a group of trainees and trainers to refine its content and structure. The final version (Appendix A) comprised 50 questions designed to capture views on the current curriculum and assessments, understanding of OBE, and perceived facilitators, challenges, or barriers to its implementation. A mix of open-ended questions, closed questions, and 10-point Likert scales was employed to gather comprehensive feedback. Ethical approval was granted by the Clinical Research Ethics Committee of the Cork Teaching Hospitals (ECM 4 I 14/02/2023).

Recruitment

The anonymized electronic survey was administered via Qualtrics (<https://www.qualtrics.com>) and distributed to all members of the Institute of Obstetricians and Gynaecologists (the professional body for O&G in Ireland), trainees enrolled with the RCPI (O&G division) and Obstetrics and Gynaecology departments nationwide. Participation in the survey was limited to medical doctors training in O&G (trainees) and clinical consultants in O&G who provide training to these trainees (trainers). A participant information leaflet outlined the study's details, aims, and the voluntary and confidential nature of participation. Consent was obtained through the first survey question. Reminders were sent at regular intervals over a one-month period to encourage responses.

Analysis

Descriptive analysis was conducted using SPSS v28 to examine participant characteristics, awareness, and perceptions of OBE, as well as views on facilitators and barriers to its adoption. Chi-squared tests were applied to explore associations based on role (trainer/trainee), highest level of education, and medical education background. Qualitative responses to open-ended questions were analysed using NVIVO (release 1.7.1), a software tool for qualitative research analysis [25]. An inductive thematic methodology [24]

was employed, with an initial coding framework developed by the lead researcher (OOS) and refined through collaborative reflexive discussions with a second researcher (SH).

Results:

Demographics: A total of 151 trainers and trainees participated, with 87 completing the survey in full (44 trainers and 43 trainees). All training grades and consultant work arrangements were represented (Table 1). Respondents worked in academic and clinical roles, including full-time, part-time, and flexible positions. While all consultants were categorized as trainers, only 80% were formally enrolled with the RCPI as HST trainers.

Educational achievements: Most participants (80.7%) had Medicine as their primary undergraduate degree, and 38.2% had no additional higher qualifications. A majority (72.5%) lacked formal qualifications in medical education. Detailed education and qualification information are outlined in Table 1.

Perceptions of OBE: While 61.2% of respondents reported familiarity with OBE, only 22.4% correctly identified it as a learner-focused educational approach (Figure1). Familiarity was higher among trainers (71.6%) compared to trainees (52.5%; $p<0.05$) (Table 2). Higher educational qualifications did not significantly impact familiarity or understanding of OBE. Participants with formal medical education qualifications demonstrated better awareness but not a deeper understanding of the concept (Tables 3-4).

Perception of current training model:

Only 8.2% of respondents felt the current HST curriculum met trainee needs, with criticisms including outdated content, excessive documentation, and insufficient surgical opportunities. Both trainers and trainees agreed on the need for curriculum (62.5%) and assessment (58.9%) reforms (Figure1, Table 2).

Reasons for reform included broadening the curriculum, addressing gaps in gynecological and non-technical skills, and mitigating the impact of reduced training hours. Many felt the current assessment process was overly formal and ineffective, calling for user-friendly, specific tools with constructive feedback (Tables 5-6). Most respondents (54.9% trainers, 73.6% trainees; $p<0.05$) agreed that 60 months was sufficient for training. Trainers were more supportive of formative assessments in the early years (64.4% vs. 46.5%) and summative assessments in later stages (84.4% vs. 62.8%; $p<0.05$).

Strengths of the current system included high-quality clinical work, diverse rotations, and experienced trainers, especially in Irish labor wards. Reported weaknesses included limited

gynecological training, geographic challenges with rotations, disengaged trainers, and overly rigid regulations (Tables 7-8).

Facilitators and barriers associated with OBE:

Key benefits of OBE included clearly defined goals (83.7%), achieving competency in essential skills (81.6%), and improved trainer-trainee interactions (65.3%). Barriers included unattainable goals for trainees (51%), inadequate facilities (55.1%), and insufficient time for trainers (64.3%) and trainees (61.2%) to attend training courses (Figure 2-6).

Participants noted that OBE could enhance care by producing highly trained clinicians (74.5%), improving service quality (59.2%), and boosting patient confidence (56.1%) (Figure 7). Challenges for service delivery included potential neglect of patient needs (27.6%) due to a focus on training goals (Figure 8).

Barriers to implementation included ensuring trainer engagement (80.6%) and addressing resource limitations and resistance to change (Figure 9). Other barriers included creating strategies for trainees failing to meet standards and balancing service provision with training goals.

Discussion:

This study provides valuable insights into the knowledge and perceptions of OBE among Obstetrics and Gynaecology trainers and trainees in Ireland. The findings underscore a substantial gap between familiarity with OBE and understanding of its principles. Many participants mistakenly equated OBE with competency-based education, which focuses solely on achieving competency rather than the broader learner-focused goals of OBE. Addressing these misconceptions will require targeted education and clear communication about OBE's principles and intended benefits to improve engagement and understanding [26].

The current training curriculum was broadly criticized as outdated and overly focused on technical competencies, with limited recognition of non-technical skills such as teamwork, communication, and leadership. OBE provides an opportunity to redefine the curriculum by incorporating both technical and non-technical goals, creating a more comprehensive and inclusive framework for training [4]. Effective tools for recording and tracking training activities, such as a user-friendly eLogbook, are critical to ensuring trainees and trainers can accurately document progress and identify areas for improvement. Without such tools, it is difficult to align training activities with desired outcomes.

Evaluation and assessments are key to ensuring learning goals are achieved [27]. The current system was described as overly formal and reliant on excessive documentation, failing to provide meaningful feedback or identify trainees who fall short of expected standards. Incorporating validated assessment tools, such as Objective Structured Assessment of Technical Skills (OSATs), offers a path forward. OSATs, which have been successfully applied in Obstetrics and Gynaecology training globally, provide both objective assessments and constructive feedback [28][29]. Additionally, assessments that evaluate non-technical skills are necessary to address critical gaps in areas such as teamwork and simulation-based learning.[30].

Participants also highlighted frustrations with the lack of formative and summative assessments in the current system. Trainers expressed strong support for introducing these assessments, as well as a formal final examination, to ensure trainees meet clearly defined standards before advancing. Divergent views between trainers and trainees on these assessments likely stem from differences in accountability and responsibility. While trainees viewed additional assessments as potential barriers that could prolong training time, trainers emphasized their role in identifying deficits and ensuring competency. Clear communication and collaborative goal-setting are essential to address these differing perspectives.[31].

Another critical issue raised was the insufficient time allocated to training and the barriers posed by heavy workloads. Trainees viewed the potential for reduced training time under OBE as a benefit but acknowledged that achieving this would require significant prior experience and streamlined learning pathways[32]. OBE offers an opportunity to optimize training by encouraging active learning and trainee motivation, which could offset some of the time constraints currently experienced [33] [34]. Addressing the lack of pedagogical training among trainers (72.5%) is essential, and partnerships with faculties of medicine or dedicated skills training centres could share teaching responsibilities. For example, training centres could provide workshops on tools like hysteroscopy and intra-uterine balloons, reducing trainers' workloads. Investments in simulation training, structured courses, and accessible materials are also critical to supporting a balanced and effective learning environment [35] [36] [37].

A major challenge to OBE implementation is the perceived disengagement of trainers, which participants attributed to factors such as increased workload, burnout, and fear of litigation. Addressing these issues will require a cultural shift within training institutions to prioritize

and formally recognize the critical role of trainers. Providing protected time for training, reducing administrative burdens, and increasing consultant numbers are practical measures to enhance trainer engagement and alleviate stressors[13, 39-41].[42][43]. Additionally, fostering a culture of mutual accountability between trainers and trainees is essential for the success of OBE [38].

Beyond structural challenges, this study highlights the need for robust institutional support for trainers. While the Royal College of Obstetricians and Gynaecologists (RCOG) recognizes the vital role of trainers in delivering high-quality education[44] healthcare employers must also formally acknowledge this contribution. Initiatives such as protected time for training and targeted trainer development programs would enable trainers to fully invest in their educational responsibilities, improving the overall quality of training and outcomes for trainees[45].

This study has several notable strengths. First, its national scope allowed for comprehensive input from trainers and trainees across diverse settings, providing a broad perspective on OBE implementation in Ireland. Second, the mixed-methods approach, combining quantitative data and qualitative thematic analysis, ensured a robust examination of both measurable trends and deeper insights into participants' views and experiences. These strengths enhance the study's validity and relevance to ongoing discussions on medical education reform.

Despite these strengths, the study also has limitations. First, the survey relied on self-reported data, which may introduce response bias, particularly regarding participants' understanding of OBE. In addition, the participants chose to respond to the survey leading to the potential of selection bias. Second, the participant pool was limited to trainers and trainees within Ireland, potentially constraining the generalizability of findings to other contexts with differing training structures. Finally, although open-ended responses provided valuable qualitative data, the use of additional methods, such as interviews or focus groups, could have offered more detailed insights into the perspectives of both trainers and trainees.

Conclusion:

While OBE offers a promising framework to modernize training in O&G, its successful implementation hinges on addressing key barriers, including trainer engagement, resource allocation, and assessment reform. By fostering a collaborative culture, investing in

educational resources, and clearly communicating the benefits of OBE, training bodies can align the goals of trainers and trainees and ensure meaningful improvements in training quality.

Author Contributions:

OEOS study design, data collection, interpretation, paper writing and editing

SL data interpretation, paper writing and editing

SH study design and data collection

MEA study design

KOD study design, paper writing and editing

Funding:

No funding was received for this paper

Conflict of interest:

OEOS and KOD are national speciality directors for Obstetrics and Gynaecology in Ireland.

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