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## EBCOG position statement – Simulation-based training for obstetrics and gynaecology during the COVID-19 pandemic

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### ABSTRACT

The specialty of Obstetrics and Gynaecology has been on the forefront of introducing simulation in post graduate education for the past two decades. Simulation training is known to enhance psychomotor skills and is considered an important step in the transition from classroom learning to clinical practice. Training on simulators allows trainees to acquire basic skills before getting involved in day to day care in real life situations. Clinical circumstances around the COVID 19 pandemic have highlighted the key importance of simulation training in delivering post graduate curriculum.

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The use of simulation in training is not new to obstetrics and gynaecology, with modern curricula often containing simulation components in combination with clinical experience [1]. However, the value of simulation as a training tool has gained additional salience as social distancing requirements, and limitations on the movement and interactions between people, have further limited training opportunities..

In the “Project for Achieving Consensus in Training (PACT)”, published in 2018, EBCOG has defined simulation training as an important pillar of a well-rounded obstetrics and gynaecology training system [2].

Two primary benefits of simulation training were highlighted:

- 1 Trainees are much more self-assured when they enter the operating room as they are more confident that they have acquired the necessary knowledge and skills;
- 2 Expert mentors do not lose time teaching basic skills, can receive proper assistance from trainees and can focus more on the procedures at hand;

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### The patient receives care from properly trained trainees

These benefits about the use of simulation for training have become even more relevant during and in post-COVID environments. Foremost, simulation can and should be used to practice using recommended infection prevention and control protocols for COVID-19 in gynaecological and obstetric medical situations [3].

For the foreseeable future, trainees are also likely to face increased limitations in direct patient care and opportunities to travel for continuing and peer-educational opportunities. This can be mitigated by introducing simulation training, which can remain in place post-COVID to support continued high-quality training across geographic and socio-demographic lines to address existing discrepancies in women's healthcare between EU Member States.

Simulation training is known to enhance psychomotor skills and should be considered an important step in the transition from classroom learning to clinical practice. With an eye towards maintaining a high-standard of training across Europe, simulation-based training should be expanded to support the learning of a wide variety of skills, from basic tool handling to pathology identification and to performing different procedures. It can also be used to support the core skills described in the "Project for Achieving Consensus in Training (PACT)", including transvaginal and transabdominal ultrasound, diagnostic and therapeutic hysteroscopy and laparoscopy, open surgical training such as suturing, placement of IUD, as well as subspecialty skills (e.g. embryo transfer).

Doing so will benefit both the doctor in training and the patient as "research has repeatedly demonstrated that use of virtual simulation is an effective teaching method that results in improved student learning outcomes" [4].

Using a simulator protects both the trainee and patient from unforeseen complications and offers the additional benefit of letting the trainee practice as often as necessary to reach proficiency.

Additional benefits of simulation during Covid and post COVID include:

- 1 Supporting spatial and temporal social distancing to keep everyone safe. Online and remote training allows for training to continue off site. Physical simulators can easily be organized to support the necessary social distancing between users, either by placing the simulators further apart or by only allowing sequential use, with simulators being cleaned between uses [5].
- 2 Filling gaps in surgical training and preventing skills degradation caused by the education impacts of COVID-19; "simulations have been shown to be effective in preventing decay and teaching new technical skills to novice learners who have delayed the initiation of their training" [6].
- 3 Mitigating the unequal learning impacts on certain trainee populations. The impacts of COVID-19 on training vary widely depending on geographic location. Simulators along with well-defined training standards can help facilitate pan-European knowledge exchange, particularly while free movement and patient access are restricted.

However, simulation training has also some drawbacks, particularly under COVID-19 circumstances:

- 1 Simulation equipment and models are expensive and are not universally available in those areas in Europe where they are most needed.
- 2 Physical simulators need COVID-19 proof disinfection before and after use, for which they might not be designed. Adequate instructions need to be given by the manufacturers.
- 3 As simulators will not universally be available, trainees might need to travel to institutes where they can train. Such displacements might be difficult in COVID-19 times
- 4 Lastly and not in the least, simulation training is usually done in groups, which might not be possible during COVID-19 time, further limiting access.

It is entirely possible for COVID-19 to catalyse positive change in medical training. The presence of a global pandemic has sped up the adoption of simulator-supported medical education and is leading us down a training pathway which will ultimately be beneficial in the long term.

### Declaration of Competing Interest

*Disclosure: the primary author of this piece is employed by a simulation company. However, all efforts have been made to avoid bias and focus on the education benefits of simulation without emphasizing any particular type or brand of simulation.*

Dr Tahir Mahmood, Professor Nuno Martins, Professor René H. M. Verheijen have no conflict of interest to declare.

This position statement has been approved by the officers group of EBCOG and Council of EBCOG on 28<sup>th</sup> November, 2020.

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