## Supplemental Digital Content 2: Study description and themes

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| **Author** | **Participants** | **Description of training** | **Theme(s)** |
| Hamman *et al.* 38 | Teams from the Obstetric Unit and the NICU[[1]](#footnote-1). | Simulation of emergency cesarean section [[2]](#footnote-2) using a patient actor, mannequins and debriefing sessions based on video-recordings. | Simulation-based training (team-training, in situ)  Simulators (high-fidelity) |
| Minehart *et al.* 41 | Obstetricians and anesthesiologists. | Simulation of cesarean section 2 with complications in anesthesia and maternal cardiac arrest using a mannequin. Video-recording of simulations. | Simulation-based training (team-training)  Simulators (high-fidelity) |
| Kurrek *et al.* 30 | Obstetricians, anesthesiologists, nurses, family doctors. | Simulation of four obstetric emergencies using a full-scale mannequin. Video-recording of simulations. | Simulation-based training (team-training  Simulators (high-fidelity) |
| Lipman *et al.* 31 | obstetricians, nurses, anesthesiologists and neonatal staff | Simulation of perimortem section using a mannequin. Introductory slide presentations and cognitive aid poster. Video-recordings of simulations. | Classroom-based learning (lectures)  Simulation-based training (in-situ, team-training)  Simulators (high-fidelity) |
| Fuhrmann *et al.* 32 | All members of the labor and delivery team. | Simulation of emergency cesarean section 2 using patient actor and a baby-mannequin. Introduction lecture and debriefing. | Simulation-based training (team-training)  Simulators  Classroom-based learning (lectures)  Assessment (programme/intervention, learners) |
| Sorensen *et al.* 33 | All members of the labor and delivery team. | Simulation of two obstetric emergencies using patient actor and a high-fidelity simulator. Debriefing sessions and video-based, cased-based and lecture-based teaching sessions. Individual assessment using multiple choice test, and video-based assessment of team-performance. | Simulation-based training (in-situ, team-training)  Classroom-based learning (lectures)  Simulators (high-fidelity)  Assessment (programme/intervention, learners)  E-learning/videos |
| Marzano *et al.* 34 | All members of the labor and delivery team. | Simulation of twelve obstetrics emergencies using a high-fidelity mannequin. Briefing/debriefing, didactics and online-material and survey-based evaluation. | E-learning  Simulation-based training (team-training, in-situ)  Simulators (high-fidelity)  Classroom-based learning (lectures)  Assessment (programme/intervention, learners) |
| Lipman *et al.* 35 | Obstetricians, nurses, anesthesiologists. | Simulated emergency cesarean section2 drill using a mannequin. Debriefing sessions. | Simulation-based training (in-situ, team-training)  Simulators (high-fidelity)  Assessment (programme/intervention, learners) |
| Fransen *et al.* 12 | Gynecologists, midwifes, residents and nurses from obstetric departments. | Simulation of six obstetric emergencies, based on MOET3 guidelines, using high-fidelity simulator and mannequins. Introductory briefing with video, debriefing and feedback on crew resource management. Video-recording of simulations. Assessment of team performance and medical technical skills (checklist). | Simulation-based training (team-training, technical, in situ)  Simulators (high-fidelity)  Assessment (programme/intervention, learners)  E-learning/videos |
| Siassakos *et al.* 7 | All midwifes obstetricians and anesthetists from a maternity unit. | Simulation of emergency cesarean section2 using patient-actor and models. Structured feedback on clinical, teamwork and communication using standardized checklists and validated scales. | Simulation-based training (in situ, team-training, technical)  Simulators  Assessment (programme/intervention, learners) |
| Rajakumar *et al.* 40 | Residents and nurses from from gynecology and obstetrics and anesthesiology. | Simulation of umbilical cord prolapse and cesarean section using a high fidelity mannequin and nurse actors. Debriefing session and feedback on technical and non-technical skills. Assessment of nontechnical skills using a global rating scale/checklist. | Simulation-based training (team-training, technical, in situ)  Simulators (high-fidelity)  E-learning/videos  Assessment (programme/intervention, learners) |
| Johanson *et al.* 25 | Obstetricians and gynecologists | Course on obstetric emergencies (MOET[[3]](#footnote-3)).  Introductory lectures, skills practice using models, volunteers and mannequins, assessment and feedback on performance. Nurses and anesthetists were available to encourage a team approach. | Classroom-based learning (lectures)  Simulation-based training (technical, team-training)  Simulators  Assessment (programme/intervention, learners) |
| Fisher *et al.* 28 | Maternal Fetal Medicine (MFM) attendings and fellows. | Simulation-programme in maternal cardiac arrest using high-fidelity simulator and hospital staff actors. Workshop with didactics, debriefing. Pre-and post-simulation including assessment using checklist. | Simulation-based training (technical. team-training)  Simulators (high-fidelity)  Assessment (programme/intervention, learners) |
| Iitani *et al.* 39 | Medical staff | Simulation training aimed at reducing the decision to delivery for emergency cesarean section. Identification of obstacles implementation of solutions. | Simulation-based training (team-training, in situ)  Assessment (programme/interventions) |
| Vellanki *et al.* 26 | Medical students in obstetrics/gynecology rotation | Formal lecture and demonstration in cesarean section2 on a mannequin, supervised training on an obstetric simulator and self-assessment of confidence. | Classroom-based learning (lectures)  Simulators (intermediate to high-fidelity)  Simulation-based training (technical)  Assessment (programme/intervention) |
| Dijkman *et al.* 42 | Obstetricians, anesthetists and emergency physicians | Course on obstetric emergencies (MOET3). Description of course is lacking. Online search describes course as including on-line component and face-to-face course including lectures, skills stations, workshops, scenarios and assessment. | E-learning/videos  Classroom-based learning (lectures)  Simulation-based training (technical)  Assessment (programme/intervention) |
| Adams *et al.* 18 | Residents in obstetrics | Simulation of maternal cardiac arrest resulting in cesarean section2, using a mannequin modified to be able to perform cesarean section2. Debriefing, individual testing and scoring of group performance. | Simulation-based training (technical, team-training)  Simulators (high-fidelity)  Assessment (programme/intervention, learners) |
| Duff 19 | Residents in obstetrics | Orientation programme in obstetric on basic obstetrical skills including surgical skills.  Lectures/didactic, practical instruction, assessment, interactive small group seminars, use of anatomical models, audiovisuals and flip-charts, practical, supervised training using plastinate/plastic models and surgical, supervised training on formalin preserved placentas and pigs in anesthesia | Classroom-based learning (lectures)  Assessment (learners)  Simulators (high-fidelity, low-fidelity)  Simulation-based training (technical) |
| Heider *et al.* 27 | Family medicine residents | Introductory didactic teaching followed by clinical, supervised training including feedback and assessment. | Classroom-based learning (lectures)  Clinical training  Assessment (programme/intervention, learners) |
| Fok *et al.* 20 | Trainees in obstetrics and gynecology | Clinical training. First assisting cesarean sections2, then performing cesarean section2 supervised, and finally assessed before performing cesarean section2 independently | Clinical training  Assessment (learners) |
| Oberai *et al.* 29 | Practicing generalists | Didactic classroom teaching sessions and teaching in the surgical theatre. | Classroom-based learning (lectures)  Clinical training |
| York *et al.* 21 | First year residents in obstetrics | Training of cesarean section using an online module with texts, audios, videos, animations, self-testing and feedback combined with clinical, supervised training. | E-learning/videos  Clinical training  Assessment (learners)  Simulation-based training (technical) |
| Maswime, Buchmann 22 | Interns and registrars in obstetric departments | Clinical training by observation and supervision. A few hospitals also used videos. | Clinical training  E-learning/videos |
| Vousden *et al.* 23 | Doctors in obstetrics and gynecology | Training of three delivery scenarios with increasing difficulty on a cesarean section2 simulator. | Simulators (high-fidelity)  Simulation-based training (technical)  Assessment (programme/intervention) |
| Deganus 43 | - | Foam/latex models for training technical skills. | Simulators (low-fidelity)  Simulation-based training (technical) |
| Berglund *et al.* 36 | Obstetricians, neonatologists, midwifes, paediatrics, nurses, paediatricians and anesthesiologists. | Effective Perinatal Care (EPC) programme: Didactic, interactive two-week training including clinical activities, practical sessions in the in the labor and birth rooms, hands on training in real situation and a team approach to maternity care, and a follow-up EPC. | Simulation-based training (team-training)  Clinical training  Assessment (programme/intervention) |
| Sloan *et al.* 24 | Obstetricians | Competency-based course on Life Saving Skills and refresher training in performing cesarean section. | Assessment (programme/intervention) |
| Kayongo *et al.* 37 | Pharmacists, nurse-midwifes, doctors, operating room personnel, lab technicians and watchmen. Not specified whom that received cesarean section training. | Comprehensive programme.  Competency based training of EmOC teams in management of deliveries and complications including curriculums, team-training and supervision of individuals. Not specified which part of the programme that involved cesarean section training. | Simulation-based training (team-training)  Clinical training  Assessment (programme/intervention) |

1. Neonatal Intensive Care Unit [↑](#footnote-ref-1)
2. Cesarean section [↑](#footnote-ref-2)
3. Managing Obstetric Emergencies and Trauma [↑](#footnote-ref-3)