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A HANDS-ON APPROACH: IMPROVING TRAINEE CONFIDENCE IN UTERINE INVERSION AND POSTPARTUM HAEMORRHAGE MANAGEMENT THROUGH LOW-COST SIMULATION

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Introduction: Uterine inversion is a rare but life-threatening obstetric emergency, with its precise incidence remaining unclear [1]. A Canadian case series by Baskett suggests an incidence of 1 in 3,127 deliveries [2]. Associated with considerable morbidity and mortality, prompt recognition and management are essential to improving maternal outcomes [1]. Given its rarity, exposure to this emergency may not occur until later stages of clinical training. We aimed to develop a skills-based session using low-cost simulation models to support obstetric trainees in managing acute uterine inversion and associated postpartum haemorrhage (PPH).

Methods: Four handmade uterine models were constructed from a mixture of felt, thread, velcro, cardboard, and wool. They represented key scenarios: inversion with adherent placenta, manual removal of placenta (MROP), atonic uterus for balloon tamponade, and a softly stuffed uterus for brace suture placement. Each model was integrated into a part-task pelvic trainer and used in a one-hour simulation session as part of an obstetric emergencies training day. Trainees (ST1–ST7) participated in small groups, facilitated by a registrar and consultant Obstetrician. The session included deliberate practice, structured discussions, and additional learning materials. Trainees completed all steps of uterine inversion management, MROP, and surgical control of PPH.

Results: Feedback was obtained from 15 participants (n=15). 93.3% (n=14/15) rated the uterine inversion and MROP session as excellent and appropriate to their training level. Confidence levels, measured on a 5-point Likert scale (1= not at all confident to 5 = completely confident), increased from a pre-session mean of 3.1 to 4.2 following the session. Post-session, 87% (n=13/15) reported being fairly or completely confident, compared to 40% (n=6/15) beforehand. Similarly, 80% (n=12/15) rated the PPH surgical skills component as excellent and suitable for their training level. Confidence levels rose from a mean of 2.9 pre-session to 4.1 post-session, with 80% (n=12/15) feeling fairly or completely confident post-session, again up from 40% (n=6/15).

Discussion: This low-cost, low-fidelity simulation, supported by expert facilitation, enabled participants to practice the management of a rare but critical emergency using a stepwise approach. Trainees across all grades reported improved confidence. While effective, the fabric models limited hydrostatic demonstration of the O'Sullivan technique. Future versions of the models will include enhanced anatomical features such as vasculature and adnexa to better simulate surgical procedures, including Huntington's manoeuvre and emergency hysterectomy. Overall, this session achieved its educational objectives, was well received, and offers a reproducible model for future training.

Ethics Statement: As the submitting author, I can confirm that all relevant ethical standards of research and dissemination have been met. Additionally, I can confirm that the necessary ethical approval has been obtained, where applicable.

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