

High-Fidelity: Life-like Learning or a Learning Obstacle? Cost-effective simulation for emergency registrars.

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Objective

Resuscitative hysterotomy significantly improves outcomes for pregnant women beyond 20 weeks gestation in case of maternal collapse and, hence, is a part of emergency registrars' curriculum. However, organizing an expensive hands-on training session is not always feasible. In response, a cost-effective medium-fidelity model was developed for this purpose. The aim was to enhance the knowledge of resuscitative hysterotomy among emergency registrars and to increase their confidence in performing this procedure through hands-on training.

Design

The PROMPT mannequin served as the foundation for creating the model for this session. Materials such as faux leather, foam, footballs, balloons, dolls, and thread were utilized to construct the model for practical exercises. The total additional cost of the session was £35.



Simulation suite, Royal Berkshire NHS trust.

Method

Pre-reading materials were emailed to all participants, and the pre-briefing presentation including a video demonstration was delivered. A simulated scenario of maternal collapse was conducted, culminating in resuscitative hysterotomy, allowing all participants to engage in hands-on practice, with the model quickly refreshed between sessions. Two training sessions were conducted with an interval of 6 months and attended by 19 participants. The feedback from both sessions demonstrated that registrars found that training has enhanced their confidence in resuscitative hysterotomy.

Discussion

While the potential integration of high-fidelity animal models, such as pig models, could be considered, it is likely to be cost-prohibitive. Studies have shown that fidelity does not necessarily determine the outcomes of simulation; in fact, fidelity may be inversely related to team performance¹. Emphasizing learning objectives through the clarity and functionality of the simulator (psychological fidelity), rather than solely focusing on realism, could be beneficial in bridging this gap². Substantial performance improvement relies on repetitive simulations rather than singular occurrences. The cost-effectiveness of this session enhances the feasibility of conducting it more frequently, which would not be possible with pig models.

Conclusion

This teaching session represents a simple, cost-effective approach to increasing awareness of resuscitative hysterotomy among emergency physicians, with the potential for more frequent repetition to consolidate learning.

References

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