

## EDUCATION

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**NOVEL HIGH-FIDELITY SURGICAL SIMULATION EDUCATIONAL PROGRAM (SSEP) – A SYSTEMS-BASED APPROACH FOR ENHANCED PATIENT SAFETY**

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**Background and aim:** Increased pressures within the NHS, shortened learning hours and disruptions caused by the COVID-19 pandemic has significantly impacted surgical training. Current courses focus on single training levels, but errors occur through systemwide failures [1]. We developed a SSEP targeting cross specialty and team-based patient management, focused on clinical knowledge and skills, cognitive simulation, leadership and human factors based upon real life events to optimize training in a system that lacks time and exposure.

**Methods:** A six-month pilot program was designed with monthly sessions, attended by surgical nurses, junior doctors and consultants, covering common surgical scenarios mapped to the ISCP curriculum [2], and topics highlighted through local clinical governance. Immersive interactive sessions were delivered by a dedicated consultant led education team to provide a mixed reality environment for each simulated scenario. Faculty encompassed emergency, anaesthetic and surgical consultants to facilitate realistic multidisciplinary team working. The professional identity and grade of participants were maintained during each simulation to ensure sessions were representative of real-life events with a clear mutual goal to improve knowledge and skills to transpose into safer patient care at all levels of seniority. Sessions combined simulated scenarios with structured teaching, clear learning objectives, detailed peer feedback and opportunity for juniors to complete work-based assessments with consultants. Senior trainees benefited from participation in the design and delivery of sessions providing opportunities to strengthen their leadership skills. We recorded participants pre- and post-simulation confidence, and knowledge, were measured using 5-point Likert scale feedback forms, and multiple-choice questionnaire (MCQ) paper respectively.

**Results:** Two-paired T analysis showed statistically significant improvements in participant confidence across all 4 simulations (Table 1-70). Participants also received statistically significant higher scores in the post-simulation MCQ test compared with their pre-simulation scores ( $4.07 \pm 0.53$ ,  $4.43 \pm 0.26$ ,  $p = 0.02$ ,  $n = 14$ ) at the 95% confidence interval. Limitations included variable attendance due to service needs and strikes.

**Conclusion:** Our SSEP is an effective strategy for the improvement of trainees' confidence and knowledge in managing challenging surgical scenarios, which actively contributes to the development of skills for clinical practice. Evaluation of long-term knowledge retention is necessary. Our ambition is to develop the program as a quality improvement project (QIP) that implements learning from

significant events and demonstrate improved outcomes in these domains. We endeavour to embed this simulation training across the region.

**Ethics statement:** Authors confirm that all relevant ethical standards for research conduct and dissemination have been met. The submitting author confirms that relevant ethical approval was granted, if applicable.

## REFERENCES

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## EDUCATION

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**EVALUATION OF A CO-PRODUCED SIMULATION BASED PERINATAL MENTAL HEALTH PROGRAMME**

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**Background and aim:** NHS England's Long-Term Plan for Mental Health highlights need to develop PNMH services and train staff ensuring service user involvement [1]. Women experiencing PNMH disorders often initially present to non-specialist healthcare professionals (NSHCP), meaning that they need specific training in assessment and management of PNMH disorders. A co-produced and co-facilitated simulation-based training programme in perinatal mental health was developed in 2019 by Sussex Partnership Specialist Perinatal Service in conjunction with University Hospital's Sussex Simulation team.

**Primary Aim:** Evaluate self-reported changes in confidence and competence of learners attending perinatal mental-health (PNMH) simulation training across multiple domains relating to assessment and management of PNMH problems. **Secondary Aims:** Evaluate impact of service user co-facilitation on PNMH simulation training; Assess whether participant demographics reflect training's target professional groups.

**Methods:** Service User Consultants (SUCs) were employed as faculty members and trained in simulation facilitation alongside professional faculty. Scenarios were developed in a multidisciplinary workshop, and aligned to the Health Education England (HEE) Competency framework in PNMH. Courses were co-facilitated by a Perinatal Psychiatrist and SUC. Data on participants' confidence and knowledge across the competency framework domains was collated using a survey monkey questionnaire, pre and post-course.

**Results:** 242 responses were collected from participants from more than ten different staff groups e.g. junior doctors, (18%), health visitors (17%) & midwives (26%). Participant confidence improved significantly across all training domains. 93.5% of participants graded contribution of SUCs either useful or very-useful. 99.2% found the simulation training useful or very-useful, with all participants agreeing their future practice would consequently change.

**Conclusion:** The simulation-based training programme increased confidence and understanding of NSHCPs from