

BHARATI VIDYAPEETH UNIVERSITY

MEDICAL COLLEGE

PUNE – SATARA ROAD, PUNE – 411 043

SAP Simulation in Anaesthesia Series 12th May 2024

Report

Simulation Workshop Module 2: Paediatric Anaesthesia & Perioperative Emergencies.

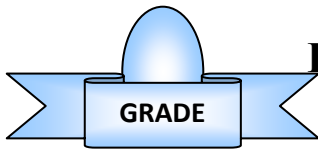
The simulation workshop was conducted on 12th May, 2024 as a part of 'Simulation in Anaesthesia' Series endorsed by the Society of Anaesthesiologists, Pune. The theme of the workshop was simulation in paediatric anaesthesia. Children are not small adults, demanding knowledge and skills, specific to the needs of paediatric anaesthesia. Often exposure to paediatric anaesthesia is limited during post graduate training. In professional practice, anaesthesiologists may not anaesthetise children on a regular basis. Managing paediatric emergencies demands a display of technical and non-technical skills that can be learnt and practised by simulation. To answer this perceived need for residents as well as occasional paediatric anaesthesiologists, the present program was designed.

The objective of the workshop was to provide a highly experiential and interactive learning experience. The program comprised of interactive discussions, hands-on training, and high-fidelity simulation scenarios using high technology manikins.

The workshop was attended by 24 participants consisting of postgraduate trainee as well as consultant anaesthesiologists. The Course Director was Dr Jui Lagoo and the faculty pool comprised of Dr Jui Lagoo, Dr Rajendra Patil and Dr Kalyani Patil as simulation facilitators.

The day started with a warm welcome and introductions. The first session was a video-based interactive discussion on principles of crisis resource management in anaesthesiology. This was followed by case-based discussions where each group was given a paper case (cleft palate, foreign body airway, muscle biopsy for suspected dystrophy, anaesthesia in MRI suit). The group discussed plan of anaesthesia management as a team which was later discussed in open forum, led by faculty. The next session was on neonatal resuscitation including discussion, demonstration and practice. This was followed by hands-on skill stations where the delegates learnt emergency skills of intra-osseous access, needle and scalpel-bougie techniques of crico-thyroidotomy as well as sono-anatomy scanning for caudal epidural space.

The afternoon session comprised of high fidelity simulation scenarios. The participants were first oriented to simulation set up, divided into teams and then participated in high fidelity simulation scenarios. They managed a variety of crisis situations related to paediatric anaesthesia namely laryngospasm at induction, intra-operative desaturation under general anaesthesia, intra-operative shock in trauma patient, local anaesthetic systemic toxicity and post-tonsillectomy bleeding in post-anaesthesia care unit. The scenarios were designed to cover the spectrum of anaesthetic considerations from pre, intra to post-operative period and infant to adolescent age group.



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Debriefing focussed on algorithm-based management as well as non-technical skills. The participants explored and analysed the reasons behind the events in a reflective manner and came up with solutions.

Performance of participants in pre-test & post-test: The average score was 3.08 in pre-test and 5.72 in post-test, with 26.4% increase in the score for knowledge assessment.

Feedback: 65.6% agreed that they have learnt an algorithmic approach to management of paediatric emergencies. 69.5% participants felt confident of managing paediatric perioperative emergencies, while 26.1% were neutral and 4.3% disagreed. 91.3% of participants thought they would be able to apply the knowledge and skills learnt, in clinical practice, 4.3% were neutral and 4.3% disagreed. 95.7% found the topics relevant for clinical practice, while 4.3% disagreed. Regarding adequacy of the workshop duration, 82.6% agreed, 13% were neutral while 4.3% disagreed. The facility was thought as appropriate and faculty were perceived interactive and approachable by 95.7%.

Suggestions: The participants have requested for frequent simulation workshops and have requested for obstetrics, BLS-ACLS, airway, PCUS and RA as well. There was a mixed response regarding the number of scenarios. Participants have suggested sharing of learning material well in advance.

Overall, the participants have highly appreciated the content, design, interactive nature and simulation-based learning.

Dr. Jui Lagoo
Prof. in EMD
Clinical Lead in Simulation.