

Peer-led teaching for novice anaesthetists; developing a regional teaching programme

Ethlinn Patton, Emma Lowe, Lucy McDermott, Sophie Stanley, Victoria Stokes

Manchester Foundation Trust, North Western Deanery

Background

Beginning anaesthesia training presents a uniquely steep learning curve, which can be daunting for many novice anaesthetists. With a large amount of complex information to assimilate from multiple resources^[1], the basics can be overlooked.

Peer teaching is an integral part of medical education, which has been shown to have benefits for both students and peer-teachers, namely increased retention and improved academic performance^[2,3]. We used our own recent experience of starting anaesthetics to develop a regional peer-teaching programme for novice trainees, to run over one afternoon as part of the deanery's new starter tutorial course. Topics covered included pre-operative assessment, basic pharmacology of induction and emergency drugs, orientation of the anaesthetic machine and ventilation modes, emergence from anaesthesia and common post-operative problems, and mannequin intubation practice.

Methods

Five post-IAC CT1 anaesthetic trainees developed the teaching programme; working together to obtain key stakeholder investment, design the teaching schedule and materials, and deliver the session for trainees in the region across a single afternoon, within the first month of the novice period. An initial session was delivered to a test group in February 2023, and the contents were modified based on feedback received. The peer teaching programme was then delivered regionally for the August 2023 (n=36) and February 2024 (n=25) intake of trainees. Pre- and post-teaching surveys used 10-point Likert scales to assess trainee confidence across a range of ten domains, and to gather feedback on their experiences of peer-led teaching. Consent was obtained for any quotations included.

"The sessions were extremely informative and useful; trainees who have just done the same programme we are embarking on are ideally placed to address our gaps in knowledge, anxieties and concerns."

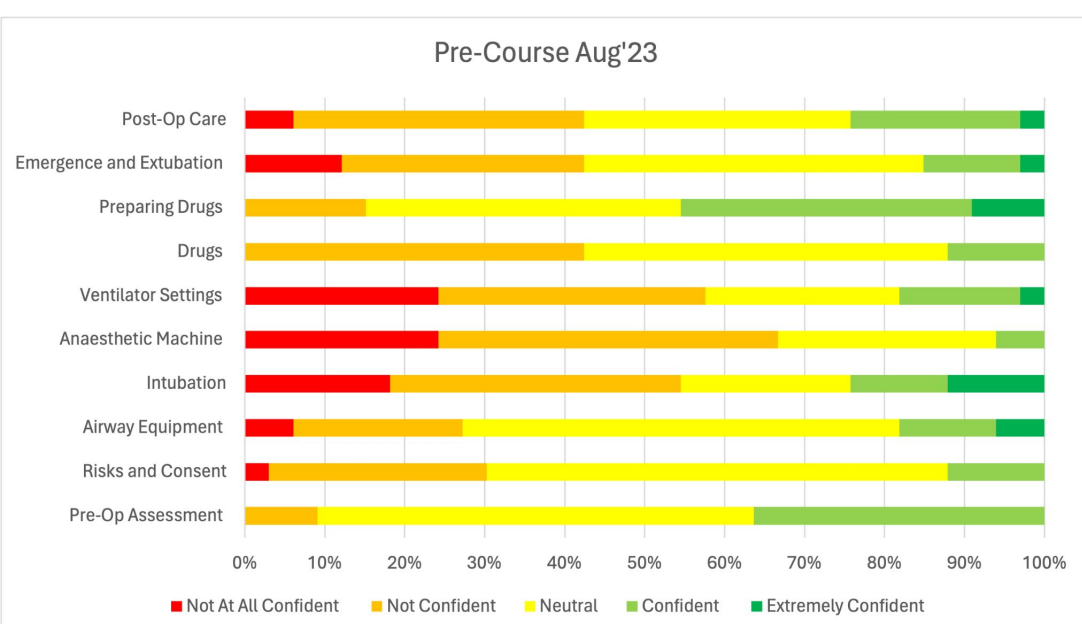


Figure 1a- August 2023 pre- course survey of trainees confidence levels

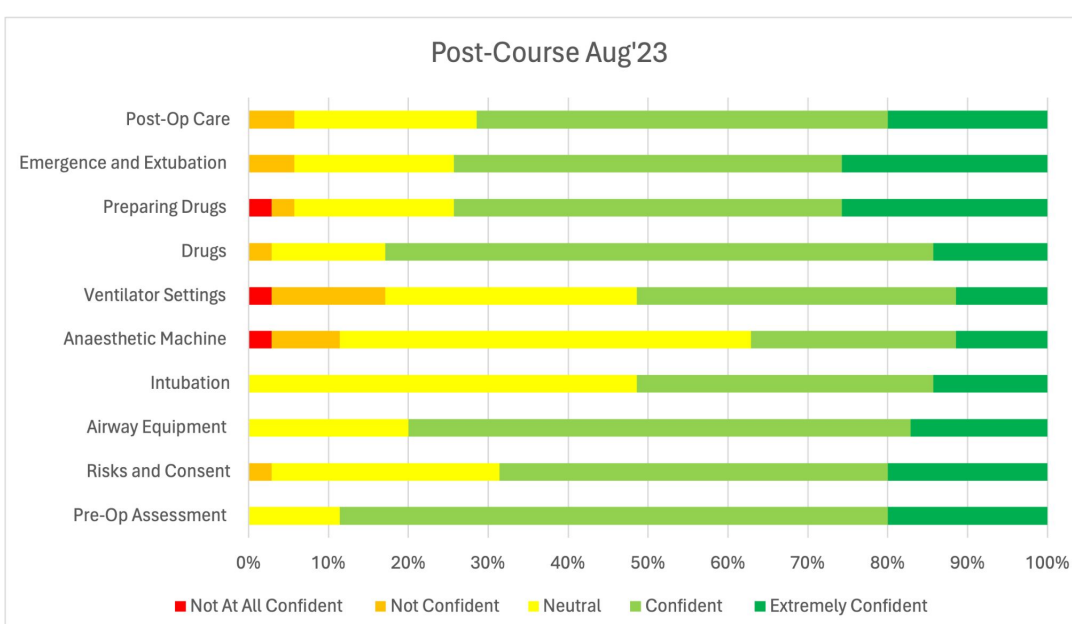


Figure 1b- August 2023 post- course survey

Results

For both the August and February sessions, there were increases in the average confidence level across every domain seen in the post-teaching surveys despite slightly different pre-teaching values. Baseline differences may reflect teaching session timing within the IAC period (week three for Aug 23 cohort, week one for Feb 24) or participant background and experience. In particular, anaesthetic machine orientation and ventilation modes, intubation and familiarity with airway equipment saw some of the largest increases across both sessions. This was reflected in the feedback from participants, summarised by one trainee's comment that it was *"Great to practice intubation. I feel much less anxious about trying on an actual patient now."*

Notably, feedback from trainees was consistently positive. The only improvements suggested related to the timing of the session within the IAC period (preferring earlier) and facilities (more space required). We are planning to address these points in future sessions. Many commented that peer-led teaching helped to cultivate a low pressure environment, which therefore facilitated discussion. Some of the feedback received is outlined in box 1 and box 2 below.

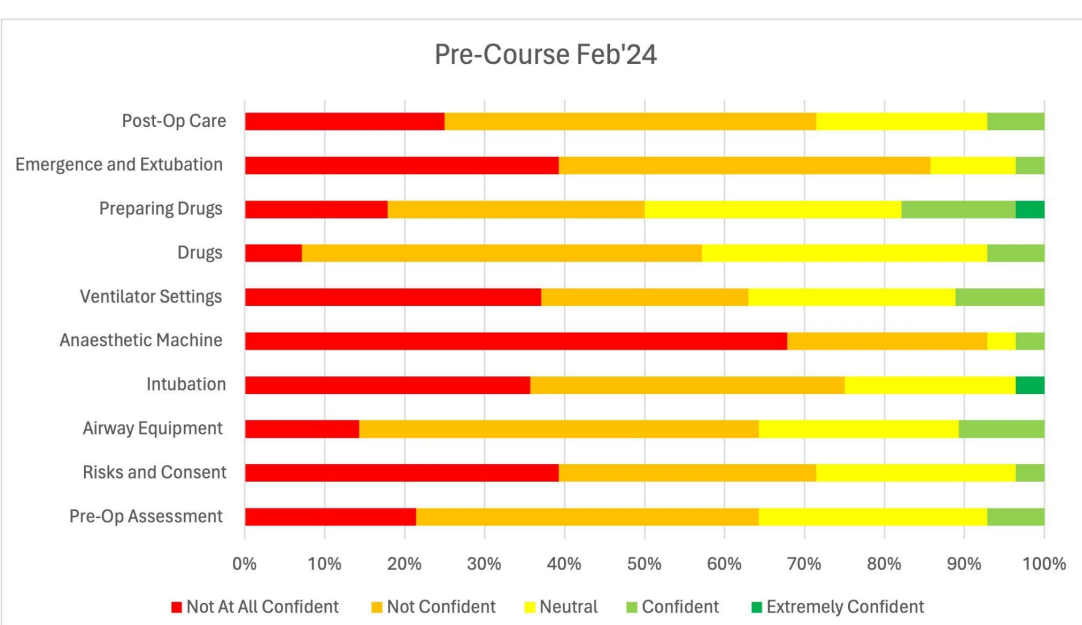


Figure 2a- February 2024 pre- course survey of trainees confidence levels

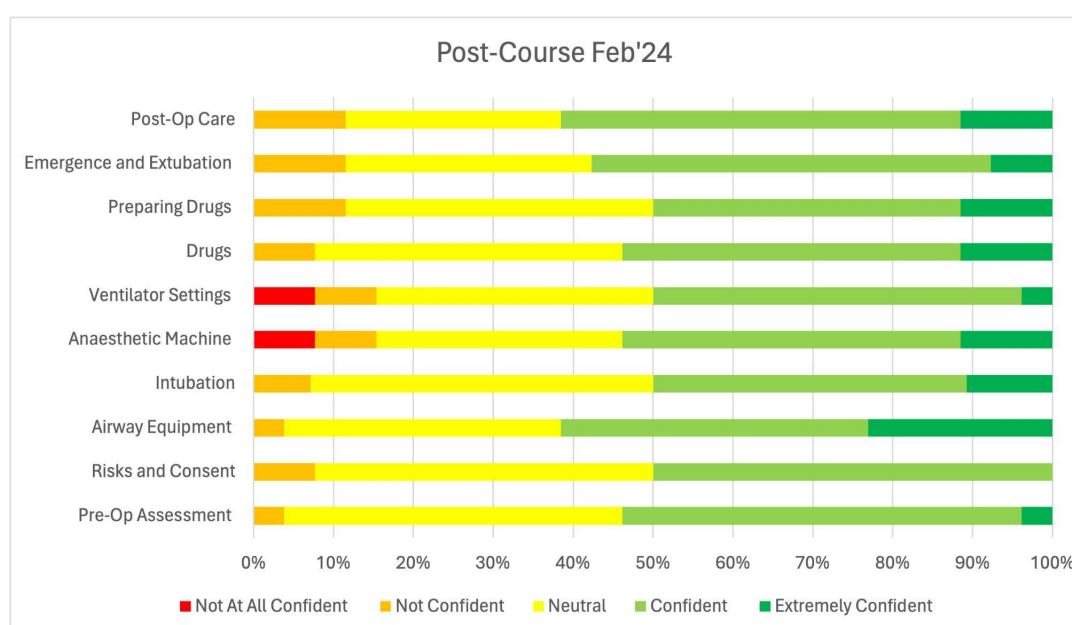


Figure 2b- February 2024 post- course survey

"Peer teaching from those who have just come through this year is extremely useful."

"Really useful to learn practical knowledge needed for the day to day job. Useful to have CT teaching as they remember how daunting it is to start anaesthesia."

"What a fantastic session. The teaching was focused on the basic and key aspects of starting out as a CT1 novice. It ... made me feel more confident for the IAC content. Very enthusiastic teachers in a low pressure environment."

"Really good to get practical teaching delivered to a digestible level at this stage of training, fantastic session overall!"

Box 1. Trainees experiences of the peer- teaching session

"Useful to have trainees to teach as they can provide useful tips and tricks."

"I really enjoyed the day, and think the near-peer style works really well. There were lots of useful, practical tips on how to get started in anaesthetics and the team were very approachable."

"Great teaching, knows what we need to know, safe space for questions and practical techniques"

"Pitched at the perfect level for new starters to anaesthetics, all the speakers clearly knew/remembered what it was like to be a total novice to anaesthetics, and were really reassuring and affirming in the way they delivered the content. Thank you so much!!"

Box 2.

Conclusion

We have demonstrated the benefit of peer-led teaching during the induction period for novice anaesthetists. The feedback obtained highlights that the low pressure environment generated by peer-led teaching means that these sessions are beneficial in addition to consultant led teaching in the novice period. We have created a succinct teaching programme which can be passed on to junior trainees in the future, ensuring a cost-effective and sustainable initiative.

Acknowledgements

The authors would like to thank the North Western Deanery leadership team for their support in facilitating this teaching programme, and the trainees who provided feedback and consented to use of their quotations.

References

- [1] RCOA Novice Guide <https://www.rcoa.ac.uk/documents/novice-guide/introduction>
- [2] O'Shaughnessy S M. Peer teaching as a means of enhancing communication skills in anaesthesia training: trainee perspectives. Ir J Med Sci. 2018; 187(1):207-213.
- [3] Brierley C, Ellis L, Reid E R. Peer-assisted learning in medical education: A systematic review and meta-analysis. Med Educ. 2022; 56(4):365-373.