

## Safer Procedural Sedation for Endoscopy: No More learning by Osmosis

Cate McIntosh<sup>1, 2</sup>

1. Hunter New England Skills & Simulation Centre, John Hunter Hospital, Newcastle, Australia
2. Department of Anaesthesia, Intensive Care & Pain Management, John Hunter Hospital, Newcastle, Australia

### Aim

To evaluate a 2-day simulation based procedural sedation course implemented as phase 1 of a 4-part program for endoscopists with pre-existing experience (>1000 episodes) in sedation.

### Background

A Tripartite Working Group has formulated a guideline that supports the safe use of propofol and other sedatives by non-anaesthetists.<sup>1</sup> In this context, a 2-day course was developed under the auspices of the Tripartite Group with the support of the Greater Metropolitan Clinical Taskforce.

### Methods

The course comprised written materials, group discussions and experiential activities including immersive team based simulation and 'pause and discuss' simulation.<sup>2</sup>

A needs analysis (individual simulation based behavioural assessment) conducted at the start of the course allowed content to be tailored and pitched for individual participants.

Evaluation methods consisted of questionnaires (before and after knowledge, attitudes, perceptions of mastery; reactions to the course), a simulation based behavioural assessment, post-course interviews and a 3 – 6 month follow up interview.

### Key Findings

2 courses, 24 participants (16 gastroenterologists, 1 GP anaesthetist, 7 endoscopy nurses)

Overall usefulness rated as 5.0 (SD = 0; 5-point scale 1 = poor to 5 = excellent)

<b>Airway Management</b>	Baseline (seconds)	Post-course (seconds)	P value
Time to deliver at least 2 effective breaths	170	69	0.00041

Duration of desaturation < 90%	196	65	0.00004
--------------------------------	-----	----	---------

Major themes from post course interviews included a sense of amazement that sedation training traditionally occurs via osmosis despite the risks of procedural sedation, a new found appreciation of the importance of being prepared for when things go wrong and a recognition that such training needs to be mandatory for all procedural sedationists and ongoing, not a once-off event.

Acceptance of immersive simulation based team training (including the principles of Crisis Resource Management) was extremely high despite participants having no previous exposure to this educational technique.

4 months from pilot course, 1 course graduate has completed Phase 4 (workplace based assessment) and 6 graduates have entered Phase 3 (supervised practice).

A Sedation Board of Management, with representation from the Gastrointestinal Society of Australia (GESA), has been appointed by ANZCA Council to manage procedural sedation courses. Further courses for endoscopists with preexisting experience in sedation are planned, initially in Queensland and Victoria, and ultimately across Australia and New Zealand. Subsequently, courses for endoscopy trainees and refresher courses for endoscopists will be developed and implemented.

#### Conclusion

A 2-day immersive simulation based course has heightened risk awareness in endoscopists and improved their preparedness to manage sedation complications, in particular apnoea.

#### References

1. ANZCA PS9, 2009
2. Hogan, Flanagan & Marshall, 2008