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Title: A novel approach to safe sedation and medical emergency training

Introduction

The Intercollegiate Advisory Committee for Sedation in Dentistry (IACSD) published national standards for the provision of conscious sedation (CS) in dentistry in 2015. One aspect of the standards focuses upon the skills and training required to manage sedation related emergencies and the need for regular in-situ team practice. The Oral Surgery Department at King's College Hospital alone treats approximately five thousand patients annually with CS.

Aims

We aim to address the continued agenda of CS quality improvement and patient safety in the multi-professional team through the development of a specialised high fidelity training course.

Methods

The dental safer airway and sedation for non-anaesthetists (D-SASNA) course was developed and delivered by a multidisciplinary team. This was structured to include skills workshops exploring emergency drug protocol and delivery, airway assessment and management, CPR and defibrillation and the manual handling of compromised patients to the level expected for demonstration of Intermediate Life Support. This was followed by high-fidelity simulation scenarios performed in-situ with faculty debrief and discussion of technical and non-technical skills. Delegates comprised a mixed group 28 Dentists and dental nurses.

Course performance was evaluated through pre and post course surveys. Responses were confidential and randomised, collecting opinion and beliefs using a mixture of open-ended and closed responses. 5 point semantic confidence and agreement satisfaction scales were used, mapped to the "Generic Learning Outcomes" as outlined by the report of the IACSD.

Results

The response rate was 100% (n=28). In all domains, including both knowledge and practical skills, subject confidence levels increased from pre to post course surveys. Knowledge and critical understanding increased from a pre course mean of 3.58 to 4.46 post course. Similarly, intellectual skills mean confidence increased from 3.71 to 4.55 and mean practical skill confidence from 3.52 to 4.41. When considering specifically the confidence of sedation related complication management, mean confidence increased from 3.13 pre course to 4.25 post course.

Conclusions

In situ training utilising high-fidelity equipment and specialised skills stations is able to improve the confidence of all team members in the provision of safe CS and management of sedation related emergencies. Ad hoc simulated emergency "testing" is required to evaluate the effectiveness of the programme in ongoing team performance.