

Continuous education in sedation: The importance of training and updating the sedation practitioner

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JA Roelofse,¹ C Lapere,² W Botha³

INTRODUCTION

The number of office-based surgery cases for minor and major surgical procedures under sedation has increased dramatically over the last few years. This emphasises the importance of providing safe procedural sedation and analgesia to patients in this setting. Physicians providing sedation need to be trained and to update their knowledge and skills regularly according to contemporary sedation guidelines.

Keywords: Training, office based sedation, guidelines

DISCUSSION

Over the last few decades, there has been a dramatic increase in the amount of office based anaesthesia or sedation due to the rise in major and minor surgical procedures performed outside the traditional setting. This includes: physicians' offices, dental offices, procedure suites, e.g. endoscopic suites, imaging facilities, emergency departments, other inpatient hospital settings and ambulatory surgical day centres.¹

Goodchild *et al* comment on the recent 2016 update of the Sedation Guidelines of the American Dental Association is to the effect that we need to raise the bar of safe sedation without creating barriers for access of care.² They further say that previously outdated guidelines cannot continuously account for the constant changing variables – our patient population who are presenting for, and expecting, safe sedation.

Benefits of office-based sedations are numerous and include convenience, patient satisfaction, scheduling flexibility as well as a major increase in cost-effectiveness. However, it may not be appropriate for all practitioners

or patients. Concerns about office-based surgery and anaesthesia are based on many factors.³ These include whether the facilities meet the requirements for safe practice, the provision of back up in case of medical emergencies, the ability of the practitioner to rescue and a lack of support personnel.

When setting up an office-based service, the physicians involved as well as the staff must be committed and enthusiastic to develop a culture of teamwork, safety and continuous quality improvement.⁴

Worldwide there have been many attempts to unify sedation guidelines nationally, and on internationally agreed standards. These updated guidelines attempt to clarify contentious issues such as the use of continuous expired carbon dioxide monitoring, as well as the level of training that practitioners should have to be able to conduct office based sedation safely.¹

Research suggests that equipment and facilities should meet the requirements for safe practice and personnel should be properly trained and accredited. Safety check lists have also been devised to improve patient outcomes.⁵

Structured sedation protocols aimed at incorporating safety principles have been widely implemented and shown to successfully reduce morbidity of office-based sedation.¹ Procedural sedation, especially for paediatric patients, has serious associated risks.⁶

Practice recommendations are based on the well-known fact that even if a deeper level of sedation was not intended, the sedation of any patient may present a continuum on which a patient can be more deeply sedated than intended, and therefore at risk of respiratory depression, apnoea, loss of protective reflexes, and cardiovascular instability.⁷

Practitioners performing office based sedation need to understand that the specific setting generally lacks immediate backup. Even if medical services are requested immediately in cases of emergency, the sedation practitioner is responsible for life-support measures while awaiting that back up.¹

Some studies suggest that these skills are best maintained with frequent simulation and team training.⁸ Rescue techniques require specific training and skills.

1. **James A Roelofse:** MB.ChB, MMed, PhD, Dip NDBA (USA). Professor University of the Western Cape, Visiting Professor, University College London.

2. **Cherese Lapere:** MB.ChB, DipPEC, DA(SA), PDD. Sedation Practitioner.

3. **Will Botha:** MB.ChB, PG Dip Sedation. Sedation Practitioner, Sedation Solutions, London.

Corresponding author

James A Roelofse:

Private Bag X1, Tygerberg 7505. Tel: 021 937 3085, Cell: 083 458 2427. E-mail: jar@sun.ac.za

Competency with emergency algorithms, especially of the airway, is fundamental for safe sedation and successful patient rescue.⁹ The American Academy of Pediatrics published their newest guidelines in 2016 and suggest that practitioners who administer moderate sedation to pediatric patients, as well as their support personnel, need to be trained in providing life-support, such as is offered in the PALS (pediatric advanced life-support) course.

What can sedation practitioners currently use as guidelines and training opportunities to keep updated and appropriately trained to administer safe sedation and able to manage known complications?

SOSPOSA is a special interest group of the South Africa Society of Anaesthesiologists (SASA) as well as a member of the International Federation of Dental Anaesthesiology Societies (IFDAS). Every year, several conferences and opportunities are presented, in which practitioners can partake.

SASA and SOSPOSA offer sedation refreshers courses at their annual conferences and the post-graduate Sedation Certificate is another training opportunity for practitioners. Advanced life support courses such as PALS and ACLS, as well as basic life support for supporting staff can be completed at various facilities across the country. International conferences are also opportunities when practitioners can be updated in their sedation knowledge, skills and gain Continuing Professional Development (CPD) points. A part-time Postgraduate Certificate course over a year is also available for training in sedation.

Internationally, various part-time post-graduate courses are available as well as regular conferences from motivated sedation societies when clinicians have access to continuous education and training. The Academy of Medical Royal Colleges in the United Kingdom (UK) states in their most recent manifest "Safe Sedation Practice for Healthcare Procedures" that the "ultimate responsibility" lies with the sedation providers to ensure that they have adequate training to know the risks involved and how to respond to these situations.¹⁰

In the UK both the Royal College of Anaesthetists and the Society for the Advancement of Anaesthesia in Dentistry (SAAD) support the concept of training in sedation, and the regular update of knowledge and skills.

All evidence in the research points to the importance of a better culture of safety in the ambulatory setting.³ The 2015 SASA guidelines point out that adverse events occur mostly due to facilities not meeting the requirements for safe practice, to inadequate monitoring, to the inability of the practitioner to manage complications and rescue the patient, as well as to the premature discharge of patients.¹¹

Practitioners need to ask themselves whether they are capable of managing a patient's airway and ventilation should the level of sedation inadvertently become deeper than planned.¹⁰ The ability to rescue a patient has a major impact on the outcome of the adverse event. Practitioners providing sedation must be well trained in both sedation and emergency medical care and be prepared to rescue or manage a serious medical emergency.¹²

CONCLUSION

Bitar *et al.* conducted a study which considered the safety and efficacy of anaesthesia and sedation in 4778 consecutive plastic surgery cases. They concluded that appropriate accreditation, safe anaesthesia protocols and proper patient selection constitute the basis for safe and efficacious office-based outpatient surgery.¹³

Guidelines, training and protocols remain the cornerstones of providing a safe sedation service.¹³

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