Appendices

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Appendix 1:
Basic equipment and drugs for procedural sedation and analgesia in adults

All equipment should be checked regularly and stored in a cupboard.

Devices to administer oxygen and assist with ventilation	
Oxygen and oxygen tubing	Oxygen source must be reliable and able to provide at least 90% oxygen via a self-inflating positive pressure delivery system at 15 L/min for at least 60 minutes
Oxygen flow regulator	
Nasal prongs	
Venturi masks	To deliver 40% oxygen
Nebuliser and mask	
Self-inflating resuscitation bag with reservoir	
PEEP valve	
Catheter mount	

Airway devices and equipment	
Face masks	Selection of sizes
Laryngeal mask airways or similar supraglottic devices	Sizes 3–5
Range of cuffed endotracheal tubes	Sizes 5–8
Laryngoscope set	Two handles with long and standard blades, and spare batteries and bulbs
Water-soluble lubricant	
10 ml syringe for inflation of pilot balloon	
Tape or equivalent to secure endotracheal tube	
Oropharyngeal airways	Sizes 3–5
Nasopharyngeal airways	Sizes 6 mm and 7 mm
Stylets/introducers	Appropriately sized for endotracheal tubes
Magill forceps	

Monitoring equipment	
ECG monitor and cardiac defibrillator	With conductive paste, chest paddles and razor
Pulse oximeter	
Blood pressure monitoring device	Non-invasive, with appropriately sized cuffs
Stethoscope	
Thermometer	
Blood glucose testing device	
Selection of test tubes for blood biochemistry and full blood count	
Capnograph	Nasal prongs with capnography line strongly recommended, but not compulsory

Equipment with which to gain intravenous access	
Gloves	
Tourniquet	
Sterile gauze pads	
Alcohol skin wipes	
Intravenous cannulae	18–22 gauge
Sterile needles	
Assortment of syringes	1 ml – 50 ml
Sharps container	
Tape or equivalent to secure intravenous cannulae	

Equipment for the accurate infusion of drugs and fluids	
Infusion pumps	Intravenous fluid administration for simple sedation
Syringe drivers	Drug administration in advanced sedation
Intravenous administration sets	Must be compatible with infusion pumps
Stickers for labelling syringes	
Drip stands	
Intravenous fluids	Crystalloids and colloids

Hardware and miscellaneous equipment	
Source of suction	Including connection tubing
Suction catheters	Including catheters for suctioning endotracheal tubes, and Yankauer-type suction nozzles
Therapeutic heat source	
Cardiac arrest board	
Appropriate lighting	
Operating surface that can be tilted	
Urinary catheters	
Nasogastric tubes	
Means of summoning emergency assistance	
South African Resuscitation Council algorithms	Basic and advanced life support
Procedural documentation	

Recommended emergency drugs
Naloxone
Flumazenil
Adrenaline (at least 10 ampoules)

Atropine or glycopyrrolate
Ephedrine or phenylephrine (or other alpha-agonist)
Lignocaine
Glucose 50%
Hydrocortisone, methylprednisolone or dexamethosone
Promethazine (or other H_1-antagonist)
Nitroglycerine spray
Aspirin
Salbutamol
Suxamethonium
Intralipid
Calcium-channel blocker e.g. nifedipine
Beta blocker e.g. esmolol
Selective alpha 1 adrenergic and non-selective beta-adrenergic receptor blocker e.g. labetalol

Reversal agents i.e. flumazenil, naloxone

Specific antagonists must be immediately available where a sedation practitioner administers opioid analgesics and/or benzodiazepines for PSA, regardless of the route of administration.
Reversal agents may be used for depression of ventilation/breathing to restore spontaneous breathing.
Naloxone is used to reverse opioid-induced respiratory depression.
Flumazenil is indicated to reverse benzodiazepine-induced respiratory depression.
After reversal, the patients must be monitored for a longer period of time in the recovery room to prevent re-sedation.