treatment (e.g. dental treatment) very difficult. Intravenous sedation is usually used to relieve anxiety, produce drowsiness and offer an amnesic effect. Some patients may have to be hospitalised the night before to have a sedative or hypnotic drug administered.

Sedation for these children must only be undertaken by SPs with experience in sedating children with special needs. It is often necessary to use deeper levels of sedation. It may be extremely difficult to judge the level of sedation, so adjustments in treatment protocols may be necessary. Careful monitoring of the airway is mandatory. These cases should therefore not be attempted by the single-operator SP and a dedicated SP should be employed.

9. Documentation required for procedural sedation and analgesia

Accurate documentation is crucial to protect the SP in case of legal challenges. If it was not written down, it never happened.

9.1 Before sedation

Documentation before sedation is aimed at obtaining information about the child, as well as providing information to the parent/caregiver.

Recorded information should include the following:

- *Valid informed consent to sedation and analgesia for medical or dental procedures (Section 4 and Appendix 3)*
- *Medical history questionnaire (Appendix 4)*

  A recently updated medical history questionnaire should be evaluated by an appropriately trained SP, preferably before the day of the procedure. This must be checked again on the day of the procedure and before the initiation of sedation, for possible changes in the child's condition. It is important that the child's weight, and if available height, be indicated on the questionnaire, as drug dosages in sedation are calculated according to the weight of the child. This will also ensure that obese children are flagged beforehand, so that SPs may make an informed decision on whether the child is fit for sedation outside of a hospital setting. Significant underlying medical disorders (e.g. URTI, allergies, sleep apnoea, and uncontrolled asthma or diabetes mellitus) should be asked about. The use of chronic medication, including over-the-counter medications, should be noted.

  The name, address and contact number of the parent/caregiver must be obtained and recorded. It is important to ensure that a responsible person will provide aftercare at home. If no-one is available, the sedation should be rescheduled.

- *Pre- and postsedation instructions (Appendices 8 and 9)*

  Pre- and postsedation instructions should be provided at the time when the procedure is scheduled. This will give the parent/caregiver enough time to formulate questions and to organise transport and aftercare as necessary.

  Information and instructions given to the parent/caregiver should include the aims, objectives and possible side effects of sedation. These should be provided both verbally and in written or printed form, and must be given to both the parent and the responsible caregiver. Parents/caregivers must be advised that oral sedatives must not be taken at home before sedation; all sedative drugs are to be administered at the facility where the sedation will take place.

  It is important to ensure that a responsible *adult* will accompany the child home and will be available for aftercare at home. If such a person is not available, the sedation must be postponed. Parents/caregivers must be advised to seek immediate help in case of vomiting, strange and unusual behaviour, or any other symptoms or signs that does not seem normal. Parents/caregivers should be instructed to look for any breathing difficulties. The intake of food or fluids must be introduced slowly and only when the child is fully awake. Medication must be administered as prescribed by the physician. The child must stay at home and rest quietly.

  Contact details of a physician, hospital and ambulance service must be included in the instructions, in the event of any procedure- or sedation-related adverse events during the first 24 hours after sedation.

- *Cover letter to the parent/caregiver (Appendix 10)*

  It is recommended that every parent/caregiver receive a cover letter confirming the date, time and location of the procedure. This letter may also give an indication of the estimated fee for the sedation. An explanation of the forms that the parent/caregiver must complete will ensure that everything is in place on the day of the procedure.

- *Preprocedural checklist (Appendix 11)*

  The aim of this document is to provide a final checklist before the start of the sedation process and procedure. This is of particular importance if the child was evaluated at an earlier consultation. A checklist is necessary to see if there has been any changes in the condition of the child that may affect the administration of sedation. The checklist must be completed and signed by the SP.

  The SP must ensure that the following information has been obtained and documented:

  - Details of the child, including ASA classification
  - Details of the procedure (elective or emergency)
  - The medical history questionnaire, which must be checked by the SP

- Confirmation that the child is fasted appropriately
- Confirmation that an adult will be responsible for aftercare at home
- History of previous sedation (i.e. failed sedation, previous airway problems and contraindications to sedation)
- Physical examination and evaluation of the child, including a focused assessment of the airway
- Details of chronic medication and whether the child took any medication on the day of the procedure (e.g. anti-epileptics, methylphenidate)
- Details of any prescribed presedation medication at the facility, with details of the prescribing practitioner, the person administering the medication and the time of administration.
- Confirmation that the facility, equipment, monitoring devices and drugs were checked for safe sedation practice (Appendix 2).

9.2 During sedation

9.2.1 Sedation monitoring flow chart

A sedation monitoring flow chart (Appendix 7) is a time-based document that must be completed during the procedure. This includes the name, age, weight and fasting status of the child, and the route, dose and time of administration of any drugs, including N_2O and O_2. The site of venous access and type and volume of intravenous fluids administered should also be recorded. Observations obtained from clinical and electronic monitoring should be shown at no longer than 10 minute intervals. Requests from the operator for deeper levels of sedation should be noted. Total dose of drugs given must be shown.

Adverse events and complications must be documented on the monitoring chart. Any resuscitation measures instituted, escalation of care, or hospitalisation must also be recorded. Adverse events can be classified as critical, standard or lesser adverse events (Section 1.4). Critical events warrant immediate reporting within sedation care systems (e.g. the sedation society) and automatic peer review for continuous quality improvement.

Any behavioural problems occurring during or after sedation must be recorded on the monitoring flow chart.

In the case of a single-operator SP, a record may be regarded as contemporaneous if it is made immediately after the procedure.

9.2.2 Sedation scoring systems

Monitoring the level of sedation should begin at the start of the sedation, be continued throughout the procedure and into the recovery period, until the patient is discharged from the facility.

Owing to the lack of an affordable, reliable and validated electronic monitor for level of sedation, clinical monitoring, using sedation scoring systems (Appendix 6), is mandatory. These are clinical tools used to monitor the level of sedation (Section 7.2).

These scoring systems are subjective and dependent on the interpretation of the SP. In older children, loss of verbal contact is an indication that the child is entering deep sedation. In young children who lack communication skills, it may be very difficult to determine the level of sedation. Children may drift into GA, without the SP realising it. At this level of sedation, children must get the same care as children under GA, with special attention to maintaining an unobstructed airway.

9.3 During recovery

9.3.1 Postsedation monitoring chart

After the procedure is completed, monitoring must continue until the child is fully recovered. Vital signs (blood pressure, heart rate, respiratory rate, oxygen saturation, level of consciousness and pain levels) must be measured and documented at regular intervals on a postsedation monitoring chart (Appendix 12).

9.3.2 Postsedation instructions

Postsedation instructions (Appendix 9) must be provided at the time when the procedure is scheduled, so the parent/caregiver may have sufficient time to organise transport, time off or another responsible adult to stay with the child for the remainder of the day.

9.3.3 Discharge scoring systems

Discharge scoring systems (Appendix 13) can be used to define and document a child's clinical state immediately before discharge. These include validated scoring tools such as the modified Aldrete scoring system and the Modified Post Anaesthetic Discharge Scoring System (MPADSS). Although the Aldrete score was not originally designed for use in ambulatory patients, it is commonly used to determine whether patients are ready for discharge from the postanaesthetic care unit. The MPADSS was designed to determine home-readiness after ambulatory surgery and not specifically for assessing patients undergoing PSA.

When using the modified Aldrete scoring system to evaluate the child, the score must be ≥ 9 before discharge from the recovery room can be considered. In addition, there must be no complications related to the procedure (e.g. bleeding or vomiting).

Although still widely used, the modified Aldrete scoring system has been largely superseded by the MPADSS as a tool to determine home-readiness. When using the MPADSS, patients are judged as fit for discharge when the score is ≥ 9 out of a maximum of 10.

It is no longer necessary for the child to be able to take fluids orally or pass urine prior to discharge. However, the parent/caregiver must be advised to contact the responsible physician if the child is unable to pass urine within 6–8 hours of discharge from the sedation unit.

9.3.4 Documentation after discharge

The physician must be satisfied that aftercare at home is optimal before the child is discharged. A responsible adult, who is capable of taking care of the child unaided, must accompany the child home after treatment under sedation. A dedicated and responsible adult should remain with the child for the rest of the day and the responsibility of this caregiver at home extends to ensuring that the child takes the normal prescribed medication and to contact the SP in the case of adverse events. Both the accompanying adult and caregiver should receive the telephone number of a medical practitioner, hospital and ambulance service in the event of any procedure- or sedation-related adverse events. Sedation must not be administered if an accompanying adult or caregiver is not available.

The parent/caregiver must be supplied with written and verbal information with regard to postdischarge activities. This is extremely important as it has medico-legal implications.

Patients residing in rural areas must spend the first 24 hours post-procedure within a reasonable distance of medical assistance, or must guarantee that they have access to a telephone in case of complications.

9.4 Other

9.4.1 Practice appraisal protocol

The aim of the practice appraisal protocol (Appendix 2) is to ensure that the inspection for accreditation of the facility is done by an appraised SP or equivalent body (e.g. SOSPOSA or the Council for Health Service Accreditation of South Africa [COHSASA]). The inspector must be satisfied that the appraised clinic, practice, rooms or facility meet the requirements for safe practice. The inspection investigates essential aspects such as governance, organisation, construction and equipment, as well as policies and procedures, including fire, safety, drugs, emergencies, staffing, training and unanticipated patient transfers in a practice setting to ensure patient safety and to reduce risk and liability to the SP.

9.4.2 Logbook

The SP must keep and complete a logbook of all cases done under sedation. Adverse incidents and accidents should be documented, as well as the date when, and institution or association where, these were reported. Logbooks are available on the SOSPOSA website for SPs to meet the requirements of safe practice and monitoring of children.

10. Safe sedation practice

It is beyond the scope of this document to review any specific sedation techniques in detail as the same drugs are not used for all procedures. These should be addressed by supervised clinical training as well as updating of knowledge and skills. A variety of sedation techniques are available and practitioners may offer a combination of techniques. The pharmacology of sedative, analgesic and dissociative drugs will also not be discussed.

The main factors determining the choice of a sedation technique for a child are as follows:

- The risk-to-benefit ratio of the technique.
- The characteristics of the child (ASA classification and risk assessment profile).
- The nature of the procedure being performed (painless or painful, major or minor).
- The use of a sedative only or sedative as well as analgesics, as necessitated by the procedure.
- The qualifications, skills and experience of the SP, specifically for paediatric sedation.
- The operator's understanding of sedation safety issues relating to children.
- The environment and clinical setting (premises, drugs and equipment).
- The availability of skilled staff to monitor and perform the procedure.
- The availability of skilled support staff to assist, should rescue be necessary.
- The requirement for prolonged sedation (especially since more procedures are being done outside of a hospital operating theatre).
- The relevant contraindications.
- The use of evidence-based techniques.

The choice of sedation technique must be appropriate according to both the needs of the individual and the procedural requirements. It is recommended that the simplest techniques are implemented where possible.

10.1 Principles of safe sedation practice

These principles are centred on the following:

- Appropriate patient selection and evaluation, with an emphasis on a focused airway examination.
- Only ASA I and II children qualify for sedation outside of a hospital operating theatre.