

Short title: The anaesthesia record

1. Purpose

The aims of the guideline are to:

- 1.1 Encourage best practice in the management and care of patients and define the standards.
- 1.2 Guide the development and review of anaesthesia records to ensure they capture critical and relevant information.
- 1.3 Provide guidance to all practitioners administering general anaesthesia, sedation, or regional blocks, in documenting and recording the episode.
- 1.4 Provide guidance in relation to the storage, availability, and security of records.

2. Scope

This guideline is intended to apply to all instances:

- 2.1 Where general anaesthesia, sedation, and/or regional blocks are administered for therapeutic or diagnostic procedures.
- 2.2 Of monitored care as defined in *PS19(A) Position statement on monitored care by an anaesthetist*.

The guideline is not intended to apply to procedures where small doses of local anaesthesia are the sole medications administered to perform the procedure.

3. Definitions

Anaesthesia includes general anaesthesia, sedation, regional analgesia/anaesthesia.

Anaesthetist refers to practitioners who are registered as specialists in anaesthesia with either the Medical Board of Australia or the Medical Council of New Zealand, trainees of ANZCA, and specialist international medical graduates. For all other practitioners administering sedation the term sedation provider should be substituted.

Regional block refers to administration of local anaesthesia to block sensations in a select region of the body.

Digital record refers to any record stored in computers or other digital storage devices irrespective of whether it was generated manually, electronically, or by imaging.

4. Background

The anaesthesia record documents a patient's journey through the perioperative period and their care and is an essential part of the patient's medical record.¹ It needs to contribute to the patient's clinical

management² as well as to their future care with regard to future anaesthesia but also to assist multi-disciplinary teams during the postoperative phase and beyond.³

Primarily, the anaesthesia record serves the purpose of documenting the clinical management of any patient's care as well as guiding management. It is also a record of drug administration and as such must comply with the relevant Australian and New Zealand jurisdictional requirements (see further reading below).

Its secondary functions include:

- Management of future care
- Education
- Research
- Medico-legal⁴
- Departmental administration
- Coding
- Quality assurance⁵

With the advent of computerised and digital records it is important to seek opportunities to enhance the quality of patient records as well as the means by which information is captured such that clinical efficiency is increased, vigilance is optimised, and errors are minimised.⁶ Consequently, information should be considered either as mandatory, highly desirable, or optional when designing digital systems and deciding on data to be captured and features to be included. Input from credentialled anaesthetists is essential when distinguishing between mandatory, highly desirable, or optional.

5. General principles

The functionality of an electronic anaesthesia record should synchronise with the complexities of anaesthesia workflow,^{7,8} ideally providing enhanced patient safety, and physician decision support. Data collected should be accessible to allow analytical interrogation in order to enhance patient outcomes.⁹ Ideally such a system should also be able to reliably collect data for coding.

The development of electronic anaesthesia records should aim to facilitate the primary role of guiding clinical management. Enhancements such as Clinical Decision Support^{10,11,12} should be considered for inclusion. The desirable features of any anaesthesia information management system are included in the Appendix attached to this guideline.

The record must be signed by the anaesthetist/s responsible for that patient's care. Digital signatures are an acceptable form of signature.

All components of the anaesthesia record should be readily available throughout any patient's hospital stay, and for all subsequent attendances. Records should also be able to be provided to patients and other healthcare facilities as required in a clear and easily understood format. Access to records must be in accordance with privacy laws.

Handwritten records should be legible and able to be understood by subsequent healthcare professionals. Where there are regulatory requirements, as per the Standards for Charting of the NMC in New Zealand, these must be observed.

6. Recommendations

The anaesthesia record should include the following:

6.1 Basic Information

6.1.1 Identity:

- 6.1.1.1 Patient details including name, date of birth, gender, weight, height, and hospital record number.
- 6.1.1.2 Pre-anaesthesia baseline observations
- 6.1.1.3 Surgeon(s)/Proceduralist(s).
- 6.1.1.4 Anaesthetist(s).
- 6.1.1.5 Hospital.

6.1.2 Procedure:

Description of the procedure(s) performed.

6.2 Pre-anaesthesia consultation information

- 6.2.1 Documentation of the pre-anaesthesia assessment of the patient. (See *PG07(A) Guideline on pre-anaesthesia consultation and patient preparation*). This will normally include:
 - 6.2.1.1 A summary of general medical status by relevant systems and diseases including co-morbidities and ASA risk classification.
 - 6.2.1.2 Concurrent therapy and any known drug or other sensitivities.
 - 6.2.1.3 History of previous anaesthesia and relevant surgery.
 - 6.2.1.4 Physical examination of the patient including assessment of the airway and dental condition.
 - 6.2.1.5 Results of relevant laboratory data and other investigations.
 - 6.2.1.6 Fasting status of the patient
- 6.2.2 Any pre-medicant drugs prescribed, time given, route of administration and description of any side effects or reactions. Prescriptions must comply with any applicable regulatory requirements.
- 6.2.3 An outline of the anaesthesia plan including documentation of discussion with the patient or guardian.
- 6.2.4 Documentation of discussion of risks and consent, if not recorded elsewhere. (See *PS26(A) Position statement on informed consent for anaesthesia or sedation*).
- 6.2.5 Documentation of consent should include, where relevant, anaesthesia, blood or blood products, financial, staffing, including presence of students and so on, and/or intimate examination by others, and photography.

6.3 Anaesthesia information

- 6.3.1 **Technique:** The full details of the anaesthesia technique used, whether general, regional, sedation, or monitored care (see *PS19(A) Position statement on monitored care by an anaesthetist*).

- 6.3.2 **Medication:** The details of dosage, timing and route of administration of all drugs and a description of any side effects or reactions. Where relevant it is advisable to record medications administered by the proceduralist.
- 6.3.3 **Airway:** The size and type of any artificial airway used, and a description of any airway problems encountered as well as the method of their solution.
- 6.3.4 **Anaesthesia breathing system:** Details of the anaesthesia circuit, gas flows, and ventilation techniques.
- 6.3.5 **Monitoring:** Documentation of the physiological variables monitored and the equipment used, where relevant. Information provided as a monitor print-out should include accurate patient identification (see *PG18(A) Guideline on monitoring during anaesthesia*).
- 6.3.6 **Fluid therapy and vascular access:**
 - 6.3.6.1 Intravenous infusion: Details of intravenous therapy including the site, size of cannula and the nature and volume of fluids infused.
 - 6.3.6.2 Details of central venous and arterial access.
- 6.3.7 **Blood loss:** An estimate of blood and fluid loss where relevant.
- 6.3.8 **Position:** The position of the patient during the procedure and any protective measures employed.
- 6.3.9 **Time:** The time of significant anaesthesia and operative events, observations and interventions, including administration of drugs, should be readily identifiable from the record.
- 6.3.10 **Complications or problems:** A detailed description of any complications or problems encountered should be included.
- 6.3.11 Other information that is considered particularly relevant should also be recorded such as details of interoperative investigation.

6.4 Post-anaesthesia information

- 6.4.1 Respiratory, cardio-vascular and, where applicable, neurological status, prior to transfer from theatre to the post anaesthesia care unit (PACU) should be noted.
- 6.4.2 Incidents arising during this period and their management should be documented (see *PS04(A) Position statement on the post-anaesthesia care unit*).
- 6.4.3 Plan for pain management, fluid therapy and oxygen therapy as required, should be charted for guidance of PACU staff.
- 6.4.4 Discharge plan including destination on transfer from operating theatre or PACU.
- 6.4.5 Space should be available for documenting any post-anaesthesia visits.
- 6.4.6 Documentation of outcome data, including clinical indicators, audit and quality assurance information as decided by the anaesthesia department/anaesthetists or the relevant jurisdictional authorities.

This document is accompanied by a background paper (PG06(A)BP) which provides more detailed information regarding the rationale and interpretation of the Guideline.

Related ANZCA documents

PS04(A) Position statement on the post-anaesthesia care unit

PG07(A) Guideline on pre-anaesthesia consultation and patient preparation

PG18(A) Guideline on monitoring during anaesthesia

PS19(A) Position statement on monitored care by an anaesthetist

PS26(A) Position statement on informed consent for anaesthesia or sedation

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Further reading

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Appendix

Mandatory/Desirable features of anaesthesia information management systems

Basic principles

Anaesthesia information management systems should provide a platform that is easy to use, reliable, compatible with existing systems, secure and have the capacity to provide reports based on a single case or a selected range of cases.

Input from credentialed anaesthetists should be sought in determining which features are mandatory and which are highly desirable.

Usability and reliability

The elements that define a usable interface are:

- Similarity to previously adopted systems or paper-based record.
- Automated input with frequent sampling rate.
- Locally defined, modifiable templates for common procedures.
- Flexible input options with free text always available.
- Ability to reassign/delete a record if confirmed to be assigned to the wrong patient
- Complete medication and equipment library easily accessible with minimal user input.
- Integration with pre-operative, PACU, ICU and ward postoperative information systems.
- Compatible with common and complex use case episodes for example an emergency case with procedures performed and drugs administered prior to commencing the anaesthetic episode.
- Single screen for each episode of care, automatically advancing with time.
- Intuitive design.
- Availability of equipment to allow easy access to the information management system at all points of care.
- Decision support available for calculations, allergy and anaesthesia alerts.
- Reliability of the anaesthetic information system, in that the data captured during an episode of care is never lost, and that the system does not need frequent restarting.

Interoperability

Consideration should be given to the ease with which data needs to flow in different clinical and administrative settings. Elements to improve interoperability are:

- Standards compliance - HL7, FHIR, SNOMED-CT, ICD, ISO, electronic interface and local proprietary standards.
- Clinical context - in particular, the clinical systems (Medical, nursing and allied health) used elsewhere the institution.
- Administrative context – easy access to data for financial, institutional KPI, safety and quality reporting mechanisms.
- National context - bi-directional compatibility with governmental systems. For example, individual patient data available from external/generic electronic health systems and benchmarking data available from aggregated data sets, while providing data to supplement those data sets.

Security

The elements of data security are integrity, privacy, confidentiality and accessibility.

Systems, processes and governance should be adopted to address each of these dimensions of security, with clear lines of responsibility and risk management available in a transparent format.

Reports

A fundamental aspect of collecting anaesthetic data is the ability to then access and summarise the information.

Reports should be easy to generate and have an intuitive interface that allows aggregated data manipulation and export in a generic format.

Reports for an individual case should also be possible in electronic or printed format to enable easy communication between healthcare providers inside and outside the institution. These reports should be in a format that is concise and easy to read.