

# SOP: Anesthesia Administration Guidelines and Monitoring

This SOP provides comprehensive **anesthesia administration guidelines and monitoring** to ensure safe and effective anesthesia delivery. It covers patient assessment, drug selection, dosage calculation, administration techniques, continuous monitoring of vital signs, management of anesthesia depth, recognition and response to adverse reactions, recovery protocols, and documentation requirements. The goal is to optimize patient safety, minimize complications, and promote successful anesthesia outcomes through standardized practices.

## 1. Purpose

To establish standardized procedures for anesthesia administration and monitoring, ensuring patient safety and protocol compliance.

## 2. Scope

This SOP applies to all healthcare professionals involved in anesthesia care, including anesthesiologists, nurse anesthetists, and anesthesia technicians.

## 3. Responsibilities

- Anesthesia Provider:** Conducts patient assessment, administers drugs, performs monitoring, and manages anesthesia care.
- Support Staff:** Assists in preparation, equipment maintenance, and documentation.
- Recovery Team:** Oversees patient care during anesthesia recovery phase.

## 4. Procedure

### 4.1 Patient Assessment

- Review patient's medical history and allergies.
- Perform physical examination and pre-anesthesia assessment.
- Obtain informed consent.

### 4.2 Drug Selection and Dosage Calculation

- Select appropriate anesthetic agents based on patient's profile and procedure type.
- Calculate dosage based on weight, age, and comorbidities.
- Check for drug interactions and contraindications.

### 4.3 Administration Techniques

- Prepare and label all drugs and equipment.
- Administer anesthetics using aseptic technique.
- Record drug name, dosage, route, and time.

### 4.4 Monitoring and Management

| Parameter                                 | Frequency               | Acceptable Range            |
|---|-------------------------|-----------------------------|
| Heart Rate                                | Continuous              | 60-100 bpm (adult)          |
| Blood Pressure                            | Q5min or continuous     | 90/60 – 140/90 mmHg (adult) |
| Oxygen Saturation (SpO <sub>2</sub> )     | Continuous              | >94%                        |
| Respiratory Rate                          | Continuous              | 12–20/min (adult)           |
| End-tidal CO <sub>2</sub> (if applicable) | Continuous              | 35–45 mmHg                  |
| Temperature                               | Q15min                  | 36–37.5°C                   |
| Depth of Anesthesia                       | As clinically indicated | Appropriate to procedure    |

## 4.5 Recognition and Response to Adverse Reactions

- Recognize early signs of complications (airway obstruction, hypotension, arrhythmias, allergic reactions).
- Initiate emergency protocols as needed:
  - Maintain airway patency
  - Support circulation (IV fluids, vasopressors)
  - Administer antidotes
  - Call for assistance

## 4.6 Recovery Protocols

- Transfer patient to recovery area when consciousness, airway, and stability are restored.
- Monitor vital signs and clinical status during recovery.
- Assess readiness for discharge using standard scoring systems (e.g., Aldrete Score).

## 4.7 Documentation

- Record all assessments, drugs administered, monitoring parameters, adverse events, and interventions in the anesthesia record.
- Complete post-procedure documentation and handover notes.

## 5. References

- ASA Guidelines for Basic Anesthetic Monitoring
- Institutional Anesthesia Policies and Procedures
- Drug Manufacturer Product Information