

Ohio Patient Safety Institute

EXAMPLE OF A POLICY ON UNINTENDED INTRAOPERATIVE AWARENESS

The attached example of a policy on unintended intra-operative awareness during general anesthesia is offered as a tool for anesthesiologists and their hospitals. The Ohio Patient Safety Institute (OPSI) developed a template for Ohio organizations that is consistent with recommendations from the American Society of Anesthesiologists (ASA) and Joint Commission on Accreditation of Hospitals (JCAHO) regarding helping to prevent and manage unintended intra-operative awareness. OPSI does not warrant that adopting policies based on this example will lead to the prevention of any episode of intraoperative awareness or that its use will deter or affect the outcome of any litigation. We advise anesthesiologists and other health care providers to customize this and all other examples of policies prepared by third parties for use in their own institutions.

TITLE: Unintended Intra-operative Awareness During General Anesthesia

PURPOSE:

To establish a process for preventing and dealing with unintended intra-operative awareness during general anesthesia.

BACKGROUND:

Unintended intra-operative awareness (or anesthesia awareness) occurs when a patient becomes cognizant of some or all events during surgery, or other procedure, performed under general anesthesia, and has direct recall of those events. This does not include times before the induction of anesthesia is complete, or during intended emergence.

The incidence of awareness during general anesthesia is reported to be greater in patients for whom a smaller-than-usual dose of general anesthetic is necessary to decrease dangerous side effects (e.g., hemodynamic instability). Procedures identified as typically falling into this category are some cardiac, obstetric, and major trauma cases. Because unintended intra-operative awareness during general anesthesia is not always preventable, health care practitioners should be prepared to anticipate, acknowledge, and manage this occurrence with compassion and diligence.

Monitoring patients during general anesthesia to prevent intra-operative awareness can be challenging. Despite a variety of available monitoring methods, awareness is difficult to recognize while it is occurring. Typical indicators of physiologic and motor response, such as hypertension, tachycardia, or movement are often masked by the use of neuromuscular blocking agents to achieve necessary muscle relaxation during the procedure, as well as the concurrent administration of other drugs necessary to the patient's management, such as beta-blockers or calcium channel blockers.

POLICY:

A. Prevention

1. Equipment maintenance.

Periodic maintenance of the anesthesia machines and its vaporizers will be performed and documented.

2. Preoperative identification

Certain procedures may entail a higher risk of unintended intra-operative awareness and some patients with certain characteristics may be at an increased risk for the occurrence of intra-operative awareness. These include:

- a. Cardiac surgery patients

- b. Acute trauma patients with hypovolemia
- c. Cesarean section patients under general anesthesia
- d. Patients undergoing emergency surgery
- e. ASA Physical Status 4 and 5 patients
- f. Patients with impaired cardiovascular status
- g. Patients with anticipated difficult intubation
- h. Patients with a history of awareness
- i. Patients with a history of heavy alcohol intake
- j. Patients with a history of chronic use of benzodiazepines, opioids or both.

Patients considered by the anesthesiologists to present significantly higher risk for an awareness experience should be informed of the potential for awareness in preoperative discussions with their anesthesiologists.

3. Reducing the risk of intra-operative awareness during general anesthesia

The appropriate anesthesia techniques and medications are determined by clinical judgment based on each patient's unique circumstances.

- a. The anesthesia provider should consider pre-medication with an agent that may reduce the incidence of awareness (e.g. a benzodiazepine or scopolamine) when deemed appropriate.
- b. If intubation of the trachea is difficult, consideration should be given to the administration of additional dosages of the induction or amnesic agent.
- c. Anesthesia practitioners should realize that certain medications (e.g. beta-blockers, calcium channel blockers, alpha-2 agonists) and neuromuscular blocking agents may mask the hemodynamic and physiologic responses to inadequate anesthesia.

4. Education of clinical staff

This policy and the JCAHO Sentinel Event Alert regarding anesthesia awareness (Issue 32 -October 6, 2004) will be available to all members of the clinical staff. Individuals interviewing patients should receive training in interview techniques and how to handle the situation if an event is identified.

B. Managing an Episode of Unintended Intra-operative Awareness During General Anesthesia:

When an anesthesiologist learns that a patient may have had unintended intra-operative awareness of surgical or procedural events during general anesthesia, the anesthesiologist should explore, document, and report the experience and provide for any necessary follow-up care. When other personnel learn that a patient may have experienced unintended intra-operative awareness during general anesthesia, the personnel should inform the anesthesiologist of record about the suspected occurrence.

PROCESS:

Each patient should be interviewed by an anesthesiologist or other designated person in the post-operative period, ideally in the first 72 hours after the procedure, but not until the patient has recovered sufficiently from the anesthetic to respond appropriately. If an individual other than the anesthesiologist interviews the patient, that individual should be a skilled interviewer trained

to handle the patient in the event that an episode of unintended intra-operative awareness is identified. Suggested interview questions to help identify such events include:

1. What is the last thing you remember before going to sleep?
2. What is the first thing you remember waking up?
3. Do you remember anything between going to sleep and waking up?
4. Did you dream during your procedure?
5. What was the worst thing about your operation?

If an episode of unintended intra-operative awareness during general anesthesia occurs or is suspected, the anesthesiologist who was responsible for the patient's care, or a qualified designee, should interview the patient further and document the details of the patient's experience. If the anesthesiologist determines that unintended intra-operative awareness during general anesthesia has occurred, the following steps may serve to mitigate serious patient sequelae:

- Assure the patient of the credibility of his or her account and sympathize with the patient's experience;
- Explain what happened and why, if a reason can be given (e.g., the necessity to administer light anesthesia in the presence of significant cardiovascular instability);
- Offer the patient support, including referral of the patient to a psychiatrist, psychologist, or the Hospital Counseling/Advocacy Services if appropriate;
- Document any referrals or treatment provided to the patient;
- Notify the patient's surgeon and nurse;
- Complete an occurrence report concerning the event for the purpose of quality management.

References:

- American Society of Anesthesiologists Sample Policy
JCAHO Sentinel Event Alert #32
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