

## I'm Doing Simple Cases in OBA. What Could Possibly Go Wrong?

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### OBJECTIVES

#### Upon completing this program, the discussants should be able to:

1. Enumerate any regulations and accreditations regarding an office-based practice.
2. List the types of procedures and anesthetic techniques that lend themselves to an office-based practice.
3. Know how to equip, staff and maintain a safe office based operating room and post anesthesia care unit (PACU).
4. Develop a performance improvement (PI) program.

### STEM CASE - KEY QUESTIONS

You have been staffing a free-standing operating room in an orthopedic surgeon's office where you routinely deliver anesthesia for shoulder and knee arthroscopies. The first case of the day is a 5'4" female weighing 105 kg. She is mouth breathing, has a MP class 3 airway, and has a history of snoring. She is scheduled for a knee arthroscopy under monitored anesthesia care (MAC).

1. Is this patient a candidate for an office-based anesthetic?
2. What further work-up would you like?
3. Are there any rules or regulations regarding candidates for an office based anesthetic?
4. Is MAC intrinsically safer than general anesthesia?
5. How do you proceed?

The next patient is a 36 y/o ASA 1 female for a diagnostic shoulder arthroscopy. The anesthesiologist could not reach her prior to surgery. She arrives to the office drinking a cup of black coffee.

1. Are pre-operative requirements in an office different from those in an accredited hospital?
2. How do you proceed?
3. If you choose to continue, what would be a suitable anesthetic technique?
4. What intra-operative monitoring would you utilize for this patient?

You travel to a plastic surgeon's office for the final case of the day. The patient is an ASA 1, 64 y/o female for an endoscopic brow lift, with bilateral upper and lower blepharoplasties. After an uneventful procedure she experiences intractable nausea and vomiting.

1. How would you monitor these patients in the PACU?
2. What criteria would you use for discharge from the PACU?
3. If nausea and vomiting resolve, can the patient drive herself home? Take a taxi home?
4. If nausea and vomiting do not resolve, what are your next steps?

This is the third case of nausea and vomiting this month.

1. Is a PI program necessary for an office-based practice?
2. What post-operative indicators would use for reporting to your PI program?

### **PROBLEM BASED LEARNING DISCUSSION**

One of the new exciting fields in anesthesia is the office-based anesthetic practice. Yearly, 8.3 million cases are performed in 41,000 offices. As of yet, few regulations exist regarding standards of care. Only a few states have laws on the books regulating an office-based surgical practice, and each has addressed its concerns in different fashions. California's assembly Bill 5995 states that the surgeon must have "admitting privileges at a local accredited or licensed acute care hospital." The Oregon Medical Association requires that the surgeon should have privileges at "an accredited institution." Florida's Regulation 59R-9 states that the surgeon must have "staff privileges or documented training such as board certification or comparable." New Jersey Register 30NJR2251 goes further in stating that the surgeon must be "credentialed to perform that surgery or special procedure by a hospital."

Although not required to do so in most states, an office can become a certified facility via one of three routes. The accrediting bodies are:

1. Joint Commission on Accreditation of Healthcare Organizations (JCAHO)
2. Accreditation Association for Ambulatory Health Care (AAAHC)
3. American Association for Accreditation of Ambulatory Surgery Facilities (AAAASF)

Thus far, the only states to require office accreditation are California, Florida, Rhode Island, and Texas. The AAAHC have accreditation cycles of 6 month, 1 year or 3 years. This association has accredited approximately 1,200 facilities. The AAAASF has accredited approximately 600 facilities and issues 3-year accreditations. JCAHO has recently moved into the office arena and offers a 3-year cycle. JCAHO issues a handbook of 146 key points that the surgical office must adhere to. These include:

1. Physical design of the office
2. Surgeon qualification
3. Administration in the office
4. Monitoring capabilities both intra-op and post-op
5. Ancillary care
6. Equipment
7. Drugs
8. ACLS
9. Temperature
10. Neuromuscular functioning
11. Patient positioning
12. Pre and post anesthesia care
13. Post anesthesia care unit (PACU) evaluation
14. Discharge evaluation
15. Emergency procedures (fire, emergency admission/transfer, etc)

"Why all the fuss? In the office we are doing simple cases with MAC." This is a common comment. However, a study in 1988 by Cohen, Duncan et. al. examined 100,000 anesthetics and found the highest mortality (208 patients) occurred in patients undergoing MAC anesthesia. Data from the ASA closed claims project also reveals a significant morbidity and mortality in this patient population. In June 1997, the ASA newsletter addressed this specific issue. Analysis of the data in the closed claim data bank revealed that of the 3,791 cases at the time, 2% of them

were MAC. But the trend is alarmingly increasing. In the 1970's, MAC cases comprised 1.6% of all claims, in the 1980's 1.9%, and by the 1990's it had risen to 6%. General anesthesia made up 71% and regional comprised 27% of all claims. The percentage of MAC claims made for death was *equal* to that of general anesthesia. An injury during a MAC anesthetic was *more* likely to result in a permanent injury than a temporary injury. In comparison, an injury resulting from general or regional anesthetic was more likely to be temporary in nature. Injuries resulting from MAC anesthesia are as follows:

1. Death 34%
2. Brain damage 19%
3. Nerve damage 7%
4. Eye damage 12%
5. Myocardial infarction 4%
6. Stroke 4%
7. Burn 4%
8. Emotional distress 4%
9. Aspiration 4%

The majority of claims made with MAC anesthesia were for elderly patients of an ASA 3-5 status. There also tends to be higher monetary payouts for injury during MAC anesthesia compared to general anesthesia. Suits were filed in 90% of MAC claims. Of these 65% were settled, 20% went to judgment and 15% were dropped.

The range of payment for these cases was \$2,000 to \$6.3 million with a median of \$75,000.

Looking specifically at anesthetics performed in an office is more difficult since the data sparse. This may be due to the 3-5 year lag in reporting. In 2001 there were 5,480 claims in the database (dental claims are excluded). Of these, 753 were claims in ambulatory surgery centers while 14 were office-based anesthetics. Most claims originated from ASA 1 and 2 patients. The injuries obtained in the office were of greater severity than those occurring in an ambulatory surgery center. In an office 64% of claims were for death, while in an ambulatory surgery center, death accounted for only 21%. In an office, only 21% of injuries were considered temporary in nature, while in an ambulatory surgery center 62% were temporary. Damaging events in an office had the following breakdown:

1. Respiratory 50% (including: airway obstruction, bronchospasm, inadequate oxygenation and ventilation, and esophageal intubation)
2. Cardiovascular 8%
3. Equipment 8%
4. Drug related 25% (including: wrong drug/dose, malignant hyperthermia, and allergy)
5. Block needle trauma 8%

While most claims (64%) occurred intra-operatively, a substantial number occurred both in the PACU and after discharge, 14% and 21% respectively. Forty six percent of all claims in the office were considered to be preventable, while only 13% were considered preventable in the ambulatory surgery center. All of the preventable, in office, injuries occurred due to respiratory events in the PACU. These would have been avoided if a pulse oximeter had been employed. While the ambulatory surgery care was considered substandard in 34% of cases, the care was

considered **substandard** in 50% of office-based anesthetics. Payments were made in 92% of office-based claims, with a median payout of \$200,000, while payments were made in an ambulatory surgery center in 59% of cases with a median payout of \$85,000.

However sparse the legislature in this growing field of medicine, the ASA has developed specific recommendations regarding the practice of anesthesia in these remote locations. In deciding what cases should be done in an office, one should consider that according to the ASA in “Basic Standards for Pre-Anesthesia Care”( October of 1997), “the anesthesiologist shall be responsible for determining the medical status of the patient by reviewing the medical record, interviewing and examining the patient, and obtaining and/or reviewing tests.” Furthermore, in deciding which cases should be done, and which should not, our society has a great deal of information available. The anesthesiologist should refer to the ASA guidelines for:

1. Office Based Anesthesia
2. Basic Anesthetic Monitoring
3. Ambulatory Anesthesia and Surgery
4. Pre and Post Anesthesia Care
5. Non-OR Anesthetizing Locations

It becomes clear that the same standard of care used in a hospital must be adhered to in an office. The anesthesiologist must feel comfortable to do what is right for the patient, and not feel pressured to push the limits of acceptability. The idea that a case is “only a simple MAC case” should be discarded. Although no doctrine presently exists, there are patients who should not be considered candidates for an office based anesthetic including:

1. Unstable ASA 3
2. ASA 4-5
3. Brittle diabetics
4. Substance abuser
5. MH susceptible patient
6. Seizure disorder
7. Morbidly obese
8. Potential difficult airway
9. No escort
10. Procedures with the potential for large fluid shifts

The choice of monitoring should be the same in the office as in the hospital. This applies to the OR as well as the PACU. Furthermore, there should be a nurse assigned to the PACU, and there should exist specific discharge criteria. A discharge policy should have specific criteria for categories that include: Vital signs, ambulation, nausea and vomiting, pain and surgical bleeding.

Each practice should have a quality improvement and continuing medical education plan in place. This should be a written policy with sentinel events triggering a chart review. Events that should trigger a chart review include:

1. Unplanned hospital admission
2. Dental injury

3. Corneal abrasion
4. Aspiration whether or not resulting in pneumonia
5. Nerve injury, both central or peripheral
6. Post dural puncture headache
7. Myocardial infarction within 2 days of anesthetic care
  
8. Re-intubation
9. Cardiac or respiratory arrest
10. Adverse drug reaction including anaphylaxis
11. Patient unsatisfied with quality of anesthesia care
12. Surgical events including:
  - a. Infection
  - b. Bleeding
  - c. Emergency re-operation

The committee should include members of the anesthesia team as well as the operating surgeons office. The plan should also include a measure of patient satisfaction.

Before beginning to work in an office the anesthesiologist should carefully examine the office, as well as his/her malpractice policy. Most policies will have qualifications or clauses that may exclude an incident if proper protocol was not followed. Policies may require, and *we should require at a minimum all* of the following:

1. CO<sub>2</sub> monitoring
2. Suction
3. Maintenance schedule of ventilator and or monitors
4. Back-up oxygen supply
5. Anesthesia informed consent
6. Patient must be discharged to an adult
7. Emergency transfer plan in place
8. Routine emergency plan
9. Functioning defibrillator
10. Surgeon with suitable malpractice and license
11. Have a performance improvement plan in place
12. Etc.

As the field of office-based anesthesia grows, more and more cases will ultimately be done in an office as opposed to a traditional hospital setting. Often times there will be financial pressures on the anesthesiologist to “just do the case”. The anesthesiologist must be familiar with what makes a *safe* office, a *suitable* patient, a *competent* surgeon and an *appropriate* case. It will become increasingly more important that we as a society maintain a standard of care that is both safe and efficient, and be able to answer the questions that will inevitably arise.

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