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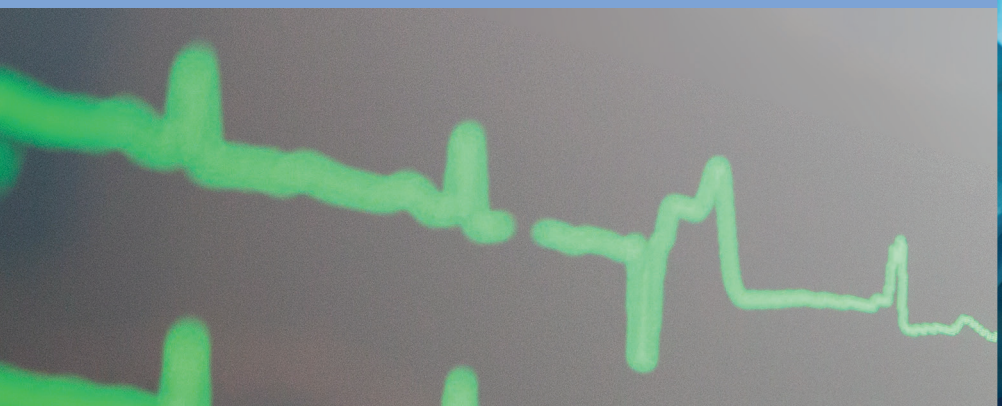

Office Anesthesia Evaluation Manual

9th Edition

AAOMS Office Anesthesia Evaluation Manual, 9th Edition

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AAOMS

Preface

Patient safety in office-based anesthesia is of paramount importance for the oral and maxillofacial surgeon. The foundations for safe office-based anesthesia include obtaining an appropriate medical history, performing an appropriate focused physical exam and airway assessment, and proper patient selection for the office environment. Additionally, having a well-trained anesthesia team and deliberate practice of office-based emergencies are key components in preparation for adverse events. Lastly, having a standardized approach with regard to staffing, equipment, drugs and documentation and record keeping ensures that AAOMS members are well-prepared to treat patients safely in the office environment.

This ninth edition of the *AAOMS Office Anesthesia Evaluation Manual* contains updates to address patient safety concerns facing modern anesthesia delivery in the office setting. The manual was delayed for revision to include updated algorithms from the American Heart Association's Pediatric Advanced Life Support (PALS) and Advanced Cardiac Life Support (ACLS) that are included in the appendices. Literature reviews for each chapter cover developments and trends in the last six years. The U.S. population is aging as a result of the parallel decline in both mortality and fertility rates; therefore, a chapter was developed on specialized care of the geriatric patient. In recent years, several states have passed recreational marijuana usage and the nation is facing an opioid epidemic. A chapter has been developed on anesthesia delivery considerations for care of the patient utilizing illicit drugs. Several new tools are provided in the appendices to assist oral and maxillofacial surgeons (OMSs) with their medical records, practice logs, emergency drills, etc. A summary of new content is provided on the next page.

The sixth edition of the *AAOMS Parameters of Care: Patient Assessment and Anesthesia in Outpatient Facilities* are documents supported by the *AAOMS Office Anesthesia Evaluation Manual*. These *ParCare* documents provide recommendations for the perioperative assessment of the patient and for the provision of safe sedation and anesthesia in the oral and maxillofacial surgery (OMS) office and can be located on the AAOMS website.

This manual is a required text for the Dental Anesthesia Assistant National Certification Examination (DAANCE), providing a standard educational base for the OMS office anesthesia assistant.

Oral and maxillofacial surgeons remain ever-diligent and determined to provide the safest possible office-based anesthesia. Our impressive morbidity and mortality statistics continue to support the concept that the anesthesia team model is a safe, efficient and cost-effective model for OMS office-based ambulatory surgical and anesthesia care.

New Content to the Ninth Edition

A number of revisions are included in the ninth edition of the OAE. There are several very important additions that the Committee on Anesthesia felt would improve patient safety for our patients and improve the OAE Manual. Here are some of the highlights and where to find them:

Patient Selection Criteria (See Appendix 7)

This new tool has been created to help an OMS identify patients for office-based anesthesia who present with increased risk. These charts provide absolute contraindications and identify relative contraindications that may require outside consultation before scheduling the procedure. The patient selection criteria are identified for both pediatric and adult patients.

OMS Airway Algorithms (See Appendix 5)

This newly added flowchart assists with the steps in approaching and resolving perioperative and intra-operative airway problems. Unlike the ASA Difficult Airway algorithm, these flowcharts are appropriate to the OMS office-based setting.

Protocols for Emergencies (See Chapter 10 and Appendix 3)

These expanded protocols allow for mock drills and for the OAE, and present best practices for management of emergency scenarios.

Pediatric Chapter (See Chapter 6)

The pediatric chapter has been expanded reflecting the increased focus of AAOMS with managing pediatric patients in the office environment.

Geriatric Considerations in Office-Based Anesthesia

(See Chapter 7)

For the first time, the OAE will have a chapter on the geriatric patient. This chapter will review the physiology of aging, review common disease states in the elderly, discuss preanesthetic evaluation, pharmacologic differences and anesthetic management of the geriatric patient.

OAE Calibration Program (See Chapter 9)

The evaluation visit or examination is the core of the OAE program. The examiners must be calibrated and uniform so that evaluations are conducted in a fair and non-biased manner. This new chapter addresses how to prepare evaluators to ensure all members are being evaluated consistently across the country.

Scope and Purpose

The Committee on Anesthesia of the American Association of Oral and Maxillofacial Surgeons (AAOMS) has developed this ninth edition of the *Office Anesthesia Evaluation Manual* to aid practicing oral and maxillofacial surgeons in assessing the patient's anesthetic risk and preparing for office emergencies associated with the administration of anesthesia. The first edition of the manual was published in 1971 and was compiled primarily from materials graciously provided by the Southern California Society of Oral and Maxillofacial Surgeons. This ninth edition offers current information on new pharmaceuticals, equipment and procedures used in the administration of anesthesia. Particular emphasis has been placed on recognition and management of emergencies and complications associated with office administration of anesthesia. The ninth edition has been coordinated with the *AAOMS Parameters of Care: Anesthesia in Outpatient Facilities and AAOMS Parameters of Care: Patient Assessment* chapters to reflect current office anesthesia practice.

General anesthesia – administered by and in the offices of oral and maxillofacial surgeons and their anesthesia teams – has been an integral part of our practice for more than 50 years. The record of safety with this form of outpatient anesthesia is exemplary. This manual is intended to provide the practitioner with resources and guidelines for current practice protocols and emergency procedures.

The Committee emphasizes that the facilities, equipment, medications and techniques described in this manual are only suggestions and are not to be construed in any manner as requirements for practice or as having the endorsement of AAOMS. Acceptable alternatives exist for almost every situation discussed, and no two facilities have the same equipment or employ the same procedures.

The use of words such as "mandatory," "required," "criteria," "standard," "rules," "must," "should," "necessary," "shall," "causes," "acceptable" and "high quality" are not intended to imply or infer in any way a legal standard of care.

Introduction

In 1975, AAOMS established the Office Anesthesia Evaluation Program. It was designed to assure that each practicing AAOMS member maintained a properly equipped office and was prepared to use accepted techniques for managing emergencies and complications of anesthesia in the treatment of the OMS patient in the office or outpatient setting.

The Office Anesthesia Evaluation Program was conceived, developed and implemented by AAOMS through its component state societies to benefit the public whom its members serve. In 1990, the AAOMS House of Delegates voted changes in the *AAOMS Bylaws* that require official component societies' constitutions and bylaws to include a provision for fulfillment of an onsite office evaluation based on the AAOMS Office Anesthesia Evaluation Program as a requisite for active membership. In 2003, the AAOMS House of Delegates approved the following *Bylaws* change:

> *"AAOMS fellows/members must have their offices successfully evaluated and re-evaluated by their component society every five years or in accordance with state law, provided the state law does not exceed six (6) years between evaluations and otherwise meets AAOMS office anesthesia guidelines. State or component societies will notify AAOMS immediately of any state/component society fellow/member who does not fulfill this requirement."* [1]

The AAOMS Committee on Anesthesia developed this manual to provide a protocol for the performance of the onsite evaluation by component societies and to present information that could aid oral and maxillofacial surgeons in assessing the patient's anesthetic risk and preparing themselves and their offices for management of anesthetic complications. It presents scientific and clinical information and can serve as a reference for the practitioner. It is important that the oral and maxillofacial surgeon keep abreast of new concepts in patient care because medical and dental science is changing constantly as the efficacy of new ideas is established.

The commitment of the oral and maxillofacial surgeons who pioneered the use of anesthesia for outpatient OMS must be complimented. This manual is dedicated to the ongoing commitment to maintain high standards of anesthesia care.

[1] American Association of Oral and Maxillofacial Surgeons. *Governing Rules and Regulations, 2017-2018*. Rosemont, Ill: American Association of Oral and Maxillofacial Surgeons: Chapter I, Section 20.A.1.i. Chapter III, Section 30:4.

Definitions

American Society of Anesthesiologists (ASA) *Continuum of Depth of Sedation: Definition of General Anesthesia and Levels of Sedation/Analgesia*. (Approved by ASA House of Delegates on Oct. 13, 1999, and last amended on Oct. 15, 2014.):

Minimal Sedation (Anxiolysis) is a drug-induced state during which patients respond normally to verbal commands. Although cognitive function and coordination may be impaired, airway reflexes, ventilatory functions and cardiovascular functions are unaffected.

Moderate Sedation/Analgesia is a drug-induced depression of consciousness during which patients respond purposefully** to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is usually maintained.

Deep Sedation/Analgesia is a drug-induced depression of consciousness during which patients cannot be easily aroused but respond purposefully** following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. Patients may require assistance in maintaining a patent airway, and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained.

General Anesthesia is a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. The ability to maintain ventilatory function independently is often impaired. Patients often require assistance in maintaining a patent airway, and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression of neuromuscular function. Cardiovascular function may be impaired.

Because sedation is a continuum, it is not always possible to predict how an individual patient will respond. Hence, practitioners intending to produce a given level of sedation should be able to rescue*** patients whose level of sedation becomes deeper than initially intended. Individuals administering Moderate Sedation/Analgesia should be able to rescue*** patients who enter a state of Deep Sedation/Analgesia; while those administering Deep Sedation/Analgesia should be able to rescue*** patients who enter a state of General Anesthesia.

**Reflex withdrawal from a painful stimulus is NOT considered a purposeful response.

***Rescue of a patient from a deeper level of sedation than intended is an intervention by a practitioner proficient in airway management and advanced life support. The qualified practitioner corrects adverse physiologic consequences of the deeper-than-intended level of sedation (such as hypoventilation, hypoxia and hypotension) and returns the patient to the originally intended level of sedation. It is not appropriate to continue the procedure at an unintended level of sedation.

Accreditation Standards for Advanced Specialty Education Programs in Oral and Maxillofacial Surgery Definitions:

Deep Sedation is a controlled state of depressed consciousness, accompanied by partial loss of protective reflexes, including the inability to continually maintain an airway independently and/or to respond purposefully to verbal command, and is produced by a pharmacologic or nonpharmacologic method or a combination thereof.

General Anesthesia is a controlled state of unconsciousness, accompanied by partial or complete loss of protective reflexes, including the inability to maintain an airway independently and respond purposefully to physical stimulation or verbal command, produced by a pharmacologic or nonpharmacologic method, or combination thereof.

Anesthesia Team (as defined by* AAOMS Parameters of Care*):

Moderate Sedation – The anesthesia team consists of the surgeon, trained and currently competent in ACLS, and one additional person trained and currently competent in Basic Life Support (BLS) for Healthcare Providers.

Deep Sedation/General Anesthesia – The anesthesia team consists of the surgeon, trained and currently competent in ACLS, and two additional persons trained and currently competent in BLS for Healthcare Providers. The individual designated to monitor the patient's level of sedation should have no other responsibilities.

Acknowledgments

The AAOMS Committee on Anesthesia periodically revises and updates the *Office Anesthesia Evaluation Manual*. The Committee on Anesthesia and the AAOMS Board of Trustees wish to acknowledge the effort extended by volunteers who devoted countless hours to the creation of the current document. Such effort is exceptional given the complexity and amount of work necessary to make the project meaningful to the membership.

The Committee would like to recognize the American Society of Anesthesiologists for its willingness to assist AAOMS in reviewing this manual.

Chapter 1
The Office Anesthesia Evaluation Program: Component Society Guidelines and Evaluation Guidelines

Introduction

Outpatient anesthesia administered in the offices of oral and maxillofacial surgeons (OMSs) has an exceptional record of safety. The anesthesia training of oral and maxillofacial surgeons is extensive and progressive throughout residency. In addition, the American Association of Oral and Maxillofacial Surgeons (AAOMS) develops continuing education programs and parameters of care to help our members stay apprised of all aspects of anesthesia care.

On completion of an accredited residency program, the new OMS will have his/her facility and office protocols evaluated by his/her peers in accordance with the *Office Anesthesia Evaluation (OAE) Manual*. The onsite evaluation is conducted every five years thereafter. The purposes of this section of the OAE manual are to provide a protocol for the performance of the onsite evaluation by component oral and maxillofacial surgery societies and to present a model for those endeavoring to establish an outpatient facility that is in compliance with AAOMS guidelines and adheres to current standards of care.

Component Society Guidelines

The Committee on Anesthesia recognizes that professional licensing regulations vary from state to state with respect to office evaluation. It further recognizes that some state licensing boards are mandated by law to conduct an evaluation in a prescribed manner. When state licensing board regulations are in partial compliance with the OAE manual, the component society is required to evaluate only that part of the evaluation that is not mandated by the state licensing board. For example, some state licensing board regulations require all the components of the onsite OAE evaluation and re-evaluation, with the exception of currency in advanced cardiac life support (ACLS). In such cases, the component society would only need to verify their members' ACLS status. The AAOMS Committee on Anesthesia is available to answer questions that the component society may have on the conformance of state licensing board regulations with the AAOMS OAE Manual.

Situations undoubtedly arise that have not been discussed in this manual. Knowledgeable OMSs with a concern for patient care and compassion for their peers will be able to adapt to those situations. The AAOMS Committee on Anesthesia is willing to assist with specific problems that a component society anesthesia committee may encounter. Inquiries from component society committees, as they attempt to perform the important task of office anesthesia evaluation, are welcomed.

The Anesthesia Committee

Since the inception of the OAE program, it has been the purview of component society officials to appoint an anesthesia committee composed of local oral and maxillofacial surgeons who are knowledgeable and interested in outpatient anesthesia. The many hours of work that may be required annually by each committee member to complete the evaluations makes it essential to choose committed individuals. The committee should have established administrative procedures that include the following:

- A tracking system of all component society members and those AAOMS members grandfathered from state component society membership whom the component society may evaluate.
- An attestation form for those members not subject to evaluation (e.g., those who administer only local anesthesia, full-time military and for those in academic practice).
- Procedures for scheduling site visits.
- Procedures and timeframes for re-evaluation of those who are found deficient in specific areas.
- Reporting of results to component society leadership and AAOMS.

Once a member has been evaluated, he/she may be eligible to serve as an evaluator of others upon completion of the stated requirements of the anesthesia committee and/or per state guidelines. In this way, the pool of evaluators may be enlarged quickly to reduce the workload of committee members. Two evaluators comprise the team visiting an office. More than two on a team may produce congestion during the evaluation process, complicate scheduling of office visits and be detrimental to the smooth flow of the evaluation. It is appreciated that finding willing people to participate is difficult; however, two examiners during the initial evaluation should always be the goal.

At the end of the evaluation visit, one member of the evaluating team should complete the required form (see supplemental material at end of Chapter 1, Required Anesthesia On-Site Inspection and Evaluation Form) confirming completion. Any deficiencies should be noted, discussed with the member and sent to the state society. The OMS should be given a specific period of time to correct any deficiencies after which time he/she will either be recorded as satisfactory/complete or will be considered no longer a member in good standing. The evaluation includes review of the office emergency equipment and drugs (see Appendix 2, Emergency Equipment and Drugs, also available at AAOMS.org/anesthesia_resources.php).

The Anesthesia Committee Chair

It is important that a Chair be appointed by the component society. The Chair must obtain frequent reports from his/her committee members on progress in completing assigned evaluations. He/she must intervene if a committee member fails to complete an assignment and see that the evaluations are completed. The Chair is responsible for reporting committee progress to the component society officer(s). The Chair should be an individual who can make a compatible match between evaluators and OMSs to be evaluated and avoid assignment of evaluations by competitors, if problematic.

The Permanent Record File

The committee Chair, or in some cases the component society administrator, should be responsible for annually compiling a permanent record summary of the committee's activities. This updated summary should be maintained at the society's headquarters, and a copy of the entire file should be given to each incoming member of the committee. The data should be reported, as requested, to the AAOMS Committee on Membership.

At a minimum, data should include the following:

- Names of all participants and dates of all evaluations conducted.
- Copy of the required AAOMS form.
- Recording of successful completion or need for re-evaluation within a specified period for specified deficiencies.
- The total number of evaluations.
- A list of members who have not been evaluated and who have resisted multiple attempts by the committee to schedule an evaluation (the component society should have a mechanism for dropping these individuals from membership).
- American Heart Association (AHA)-approved ACLS certification.

In addition, the permanent record may contain suggestions for additional activities. These suggestions may include recommendations for the anesthesia committee programs, morbidity and mortality studies, assistant certification programs, research projects and publications the committee may wish to undertake.

Scheduling the Office Evaluation

Because of the difficulties involved in scheduling three or more surgeons for a meeting, usually it is more efficient for committee members to obtain an oral commitment from the individual to be evaluated. A confirming letter may be sent to all parties involved once the arrangements have been made (see supplemental material at end of Chapter 1, Sample Letter A). The member should be referred to Part I of this manual for an overview of the content of the evaluation, to supplemental material at end of Chapter 1, Sample Anesthesia On-Site Inspection and Evaluation Form and to Appendix 2, Emergency Equipment and Drugs (also available at aaoms.org/anesthesia_resources.php).

Suggested Guidelines for a Member Who Does Not Meet the OAE Standards

Any member found deficient in complying with the guidelines set forth in the AAOMS OAE manual should receive documentation of the evaluation, including the specific deficiencies and a plan to provide documentation of the correction of the specific deficiencies and/or a re-evaluation in accordance with the policies and timeframes for successful completion established by the component society.

Management of Members Who Resist an Initial OAE

Illness, changes in office personnel or any number of other factors may cause postponement of a scheduled office anesthesia evaluation. Such problems, although annoying, can be overcome by persistence and a desire to complete the evaluation. The individual who procrastinates repeatedly or who refuses evaluation must be given a deadline for compliance. Usually, one or more members of the anesthesia

committee can convince all but the most stubborn members into compliance. If all persuasion fails, a deadline must be set. A suggested letter (sent by certified mail with return receipt) may follow the format in Sample Letter B found in supplemental material at end of Chapter 1.

Evaluation of AAOMS Members Who Are Not Component Society Members

The AAOMS House of Delegates mandated that AAOMS component societies include the provision that one requisite for membership be an onsite OAE and re-evaluation every five years. Evaluations are based on the AAOMS OAE program or required applicable state regulations, provided they meet the AAOMS OAE program guidelines. The 2004 AAOMS House of Delegates clarified that these requirements are applicable to all AAOMS members regardless of membership in the component society.

The AAOMS Committee on Anesthesia requests the component society evaluate these AAOMS members who are not members of the component. In the event the component society is unable to fulfill this request, the Committee on Anesthesia will make arrangements for evaluation of these AAOMS members.

Members Eligible for Exemption from the OAE

The AAOMS Board of Trustees recognizes that there are institutional barriers that prevent an onsite evaluation of members who practice in academic institutions and federal service facilities. These members – and members who do not provide moderate sedation, deep sedation, or general anesthesia services in their offices – are eligible for a waiver of the OAE requirement. For the AAOMS policy on exemptions from evaluations, see supplemental material at end of Chapter 1 or access the waiver form at AAOMS.org/anesthesia_resources.php.

Onsite OAE Protocol

The OAE protocol consists of four components, as described in this section.

Part I – Office Facilities, Equipment and Monitoring

See supplemental material at end of Chapter 1 for the required Anesthesia On-Site Inspection and Evaluation Form and Appendix 2 for Suggested Emergency Equipment and Drugs.

All office equipment and records related to patient care should be available for inspection by the visiting OMS.

This section describes the physical requirements for performing office anesthesia with concern for the safety, comfort and well-being of patients. Each OMS facility is unique; not all facilities have or should have the same physical requirements. Proper equipment in a well-planned office is one of many important factors contributing to patient management by an experienced, well-trained oral and maxillofacial surgeon and a well-trained staff.

The fundamental physical requirements for the anesthesia facility are as follows:

- Operating room
- Operating table or chair
- Lighting system with backup
- Suction equipment with backup
- Oxygen and supplemental gas delivery systems with backup
- Gas storage
- Monitoring
- Preparation, storage and handling of medications
- Transport equipment
- Recovery facilities or area with monitoring, and oxygen and suction source
- Communication equipment
- Nitrous oxide exposure control
- Inhalation volatile anesthetic exposure control
- Patient records
- Emergency management equipment

The office should also have a fire safety protocol in place (RACE – Rescue, Activate alarm, Confine the fire, Evacuate/extinguish), especially in a free-standing facility.

Operating Room

The operating area should be large enough to accommodate the patient on a table or in an operating chair and permit the OMS anesthesia team and the surgical assistants to move freely around the patient. Small operating rooms can inhibit the activities of the anesthesia team, particularly during the management of emergency situations.

Access to and from the operating room is important. A door width of at least 36 inches provides easy access for wheeled equipment and allows two full-size persons to walk side-by-side through the door. This is desirable for assisting patients to and from the operating room.

Operating Table or Chair

The most important features of the table or chair are as follows:

- The ability to position the patient so the anesthesia team can maintain the airway.
- The ability to alter the patient's position quickly in an emergency.
- The ability to provide for a firm platform for the management of cardiopulmonary resuscitation.
- The ability to provide for easy access to the patient's mouth and facial area.
- The ability to place the patient in Trendelenburg position.

Headrests on dental chairs must be tight enough to resist unintentional release when the patient is asleep, which could result in a cervical injury. The table or chair should be surfaced with material that is easy to clean and maintain. The table or chair should be capable of withstanding the patient's weight and the pressure of the performance of cardiopulmonary resuscitation.

Lighting Systems

Room lighting must be adequate to permit evaluation of the patient's skin and mucosal color. Fluorescent overhead lights with daylight tones are desirable. Operating lights may be ceiling or wall mounted, or the oral and maxillofacial surgeon may prefer to use a headlight system.

It is vital to provide for auxiliary lighting in the event of a power failure in the operating suite. Although hospitals have emergency generators that activate immediately to maintain electrical power to the operating room, most outpatient facilities do not have this capacity. Backup lighting should be battery powered and of sufficient intensity and duration to permit completion of any operation underway or safe termination at a point that will allow easy completion after power is restored.

Suction Equipment

Suction may be provided by either a portable suction unit or a central suction installation. Most OMSs prefer a central installation, with the pump located away from the operating suite to reduce noise. It is important to adhere to a regular maintenance schedule and provide for auxiliary suction in the event of pump or electrical power failure.

A portable suction unit powered by the line current generally is a satisfactory substitute for a failed central suction unit. This unit can provide suction in the recovery area or in other parts of the office not generally serviced by a central unit.

If electrical power fails, suction must be provided by an alternate source. Such devices can be water vent, oxygen venturi or battery-powered portable suction. Multiple suction tips should be available in the operating room.

Oxygen and Supplemental Gas Delivery Systems

This manual does not discuss at length the advantages and disadvantages of various anesthetic machines. The capability of the machine to deliver oxygen under pressure to the patient is the fundamental requirement.

A flow-meter machine is the most accurate method for delivering anesthetic gases. Any unit capable of delivering metered oxygen under positive pressure meets the requirements for the anesthetic machine. This type of machine should be calibrated periodically according to the manufacturer's guidelines. Gas outlets for remote delivery systems must be pin-indexed to prevent unintentional administration of the wrong gas. Fail-safe mechanisms on anesthetic machines prevent the flow of nitrous oxide or other gaseous agents if the flow of oxygen is depressed below a safe level (i.e., prevents delivery of hypoxic mixture). Other aspects of the gas delivery system are discussed in the "Gas Storage" section.

The OMS office should be equipped with a portable oxygen unit that is capable of delivering this gas under positive pressure.

Gas Storage

Remote gas storage in an outpatient facility decreases the hazards associated with the sudden release of gas contents, explosion, possible fire hazards and the activity that normally attends the replacement of depleted tanks. When tanks are stored in a remote location, the following requirements must be met:

- Tank gauges must be accessible for checking.
- Rapid changeover to reserve supplies must be possible. At least two tanks of oxygen must be connected to the system so that one can be activated manually or automatically if line pressure drops in the other. Supplemental gases, such as nitrous oxide, need not be connected in this manner, but it is strongly recommended that they be in tandem to facilitate changeover.
- If an automatic changeover system is used, an audible or visible low-oxygen pressure warning device is

mandatory to alert the staff when the reserves are being used.

- A system must be in place to secure tanks. It is strongly recommended that a warning system be installed in all facilities with remote gas systems. Furthermore, local fire department regulations and building and plumbing codes for remote gas storage and delivery systems should be followed carefully.

Monitoring

Anesthetics may directly or indirectly alter the metabolic, electrolytic or hemodynamic parameters of various tissues and organ systems. The resulting quantitative and qualitative changes depend on various factors, including the pharmacologic properties of the agents, drug concentrations, mode of administration, tissue perfusion, metabolism, excretion of the agent (biotransformation) and the patient's autonomic response. Preoperative baseline vital signs should always be recorded to understand the magnitude of any changes that might occur during the anesthetic.

Monitoring Equipment

Continuous, time-sensitive monitoring of all patients is required. Equipment must include a blood pressure monitor with an automated time determined capability and a method for recording the data. An electrocardiographic (ECG) monitor to visualize cardiac rhythms is required for interpretation. Pulse oximetry must be used to follow the oxygen saturation in the blood throughout the procedure as a measure against the baseline value. Monitors with print and/or storage capability are available. Capnography should be considered in all anesthetics. During moderate or deep sedation and general anesthesia, the adequacy of ventilation shall be evaluated by continual observation of qualitative clinical signs and monitoring for the presence of exhaled carbon dioxide unless precluded or invalidated by the nature of the patient, procedure or equipment. AAOMS Office Anesthesia Evaluations require capnography for moderate sedation, deep sedation and general anesthesia. During general anesthesia where volatile inhalation agents or succinylcholine is used, temperature must be continually monitored. Consideration should be given to the use of a precordial stethoscope during anesthesia administration to listen to breath sounds and cardiac rhythm.

Monitoring equipment should be checked and calibrated in accordance with the manufacturer's recommendations and documented on an annual basis.

Visual Observation

Monitoring devices have limitations and do not replace the need for careful observation of the anesthetized patient by the healthcare professional, but they serve as adjuncts to alert the practitioner to any change in the patient's status. Visual methods of monitoring involve close observation of the patient:

- Is the patient breathing?
- What is the character of the respiratory pattern (e.g., depth, rate and rhythm)?
- Is the respiratory exchange unobstructed?
- What is the patient's level of responsiveness?

These observations provide some information about the adequacy or deficiency of the oxygen carrier system, which is composed of the blood components, the respiratory system and the cardiovascular system. The degree of autonomic tone and perfusion may be inferred by observing the patient's color and temperature. The patient with increased sympathetic tone and marked peripheral vasoconstriction caused by stress, increased blood pressure or increased cardiac rate exhibits pallor and coolness of the extremities. These signs and symptoms do not necessarily pinpoint the exact cause but – when coupled with information obtained from monitoring devices (e.g., sphygmomanometer, pulse oximeter or ECG) – can help establish the diagnosis and facilitate treatment. The information provided by continuous monitoring allows for anesthetic management to minimize or prevent any adverse reactions induced by the stress of surgery, anesthesia or preexisting systemic disease.

Preparation, Storage and Handling of Medications

Strict adherence to sterile techniques should be followed in preparation and use of all medications. Techniques for mixing and storing anesthetic agents must be formalized and simplified to prevent errors in dilution. Label and date all syringes clearly, and discard immediately any unused medications with documentation of disposal in conformance with Drug Enforcement Administration (DEA) requirements. Syringes, extension tubing, connectors and intravenous fluid containers must be single-use and discarded after each patient. It is important to use one vial with one syringe for one patient.

Controlled pharmaceuticals should be secured and maintained in accordance with state and federal guidelines.

A designated refrigerator may contain medications but may not contain food or other personal items. Continuous

temperature monitoring of the refrigerator is required to alert the staff if a power outage occurs and to prevent medications and products from deteriorating and becoming ineffective.

Transport Equipment

A variety of techniques are used to transfer patients from the operating suite to the recovery area. Patients should be kept in the surgery area until all protective reflexes have fully returned unless the OMS staff is in immediate attendance at all times in the recovery area to continue monitoring vital signs and airway observation. Numerous portable chairs are available for safe movement of the patient to the recovery area. Maximum safety is attained when the patient recovers in the operating room and walks with assistance to the recovery area. A protocol for emergency evacuation of the anesthetized patient from the building should be available.

Recovery Facilities

In the recovery area, the staff must be able to continuously observe a patient recovering from an anesthetic procedure and have sufficient room to respond to an emergency situation. Oxygen under pressure, adequate lighting, suction and electrical outlets for pulse oximetry, cardiac monitoring and defibrillation equipment must be available when battery-powered equipment is not being used.

Nitrous Oxide Exposure Control and Inhalation Anesthetic Exposure Control

The AAOMS Committee on Anesthesia refers to the Centers for Disease Control and Prevention for recommendations on controls for exposure to nitrous oxide and other potential chemical hazards (cdc.gov/niosh/topics/nitrousoxide/).

Communications Equipment

It is important for the operating team to have a method of communicating with other members of the office staff in an emergency. In some small facilities, direct oral communication may be sufficient. In most, however, a call button or an intercom system should be used. It also is mandatory to have the telephone numbers of an ambulance service or a paramedic squad and the nearest hospital readily available. These numbers should be displayed prominently and their location made known to the office staff. In most communities, the emergency number 911 is used to summon help.

Records in the Operating Room

The medical database, including history and results of the physical examination of the patient undergoing an office anesthetic procedure, should be available for review by the anesthesia team before any procedure. Findings of significance should be made known to all members of the team. A Sample Patient Heath History Form is found in supplemental material at end of Chapter 1. Consent for anesthesia and surgery, signed by the patient and/or other responsible person, should be in the operating room at the time of the surgical procedure. The Universal Protocol for Preventing Wrong Site, Wrong Procedure, Wrong Person Surgery should be implemented: conduct preprocedural verification; mark the procedure site/radiograph/identify tooth number; perform immediate preprocedure timeout where team members agree to correct patient, correct site and correct procedure. For further information, go to jointcommission.org/standards_information/up.aspx.

The anesthesia record is time-oriented and includes vital signs of the patient, types of drugs and amounts administered, length of the procedure, names of the personnel in the room and any complications of anesthesia (see supplemental material at end of Chapter 1, Sample Anesthetic Record). Furthermore, oxygen saturation on room air is recorded before anesthetic agents are administered and before discharge. For moderate sedation, deep sedation and general anesthesia, the respiratory rate, oxygen saturation, end tidal CO_2, heart rate, blood pressure and cardiac rhythm are monitored and recorded every five minutes during the intraoperative period. When endotracheal anesthesia is used, expired carbon dioxide levels and temperatures are recorded every five minutes until extubation.

Emergency Management

Airway equipment must be available immediately to the office anesthesia team. These items may be in the operating suite and the recovery room area or on a portable device that can be brought immediately to the patient's side. Emergency airway equipment should include the following:

- Full-face mask (in appropriate sizes with connectors)
- Oral and nasopharyngeal airways
- Bag-mask-valve device with ability to provide positive pressure ventilation
- Laryngeal mask airway or other supraglottic airway devices
- Endotracheal tubes (various sizes for children and adults) with appropriately sized stylets
- Laryngoscope (with reserve batteries and bulbs plus an assortment of adult and pediatric blades)

- Airtraq or other video laryngoscope
- Equipment for performing a cricothyrotomy

Completion of an AHA-approved ACLS course every two years is required of fellows and members. This implies that the office surgical suite is properly equipped to begin ACLS protocols. In addition to the appropriate emergency drugs, a defibrillator with quick-look paddles or an automated external defibrillator is necessary. PALS is recommended for the practitioners who treat pediatric patients.

Part II – Simulated Emergencies (See Appendix 10)

Part II of the OAE consists of a demonstration by the OMS and his/her anesthesia team of the management of simulated office emergency scenarios. The OMS and his/her staff should manage the emergencies in as realistic a manner as possible.

The evaluators and the OMS anesthesia team should talk about emergency situations and how they should be managed. The OMS anesthesia team should demonstrate their methods for managing the following specific emergencies: laryngospasm; bronchospasm; emesis and aspiration; airway obstruction; angina/myocardial infarction; hypotension; hypertension; venipuncture complications; neurocardiogenic (vasovagal) syncope; hyperventilation syndrome; seizures; allergic reaction; local anesthetic toxicity and malignant hyperthermia. For more information, see Appendix 10.

Part III – Discussion Period

Part III of the OAE consists of a discussion between the evaluators and the OMS that involves a critique of the emergency demonstrations and/or facilities. This discussion should not become an examination; it should be a means of communicating suggestions to improve anesthesia safety.

This part of the evaluation should be conducted in private with the OMS. The evaluators should note deficiencies and make positive suggestions for improving the office facility and patient management. It is appropriate at this time to discuss management of high-risk patients if this has not been covered during an earlier phase.

Part IV – Observation of Anesthesia/Surgery in the Office (Optional)

An observation of surgical procedures with anesthesia may be observed. Part IV is conducted at the discretion of the component society and is subject to state laws and regulations and patient consent.

Sample Anesthesia On-site Inspection and Evaluation Form

Date Sent to Society _____

Name of Practitioner Evaluated _____ General Anesthesia Permit Number (if applicable) _____

Location(s) Inspected _____ Telephone Number _____

Date(s) of Evaluation _____ Time of Evaluation _____

Names of Evaluators _____

_____

A. Personnel

1. ACLS Certificate (Please have doctor's ACLS Certification available)
2. PALS Certificate (if appropriate)
3. Evidence of: one year advanced training in anesthesiology, Fellow of the American Dental Society of Anesthesiology, Diplomate of the American Board of Oral and Maxillofacial Surgery, eligible for examination by American Board of Oral and Maxillofacial Surgery, or Fellow of the American Association of Oral and Maxillofacial Surgeons
4. List of assisting staff's credentials/CV/training:
   a. _____
   b. _____
   c. _____

B. Records

Have available three charts of patients who have been treated in your office with intravenous sedation or general anesthesia.

1. An adequate medical history of the patient.
2. An adequate physical evaluation of the patient.
3. Anesthesia records showing: continuous monitoring of heart rate, blood pressure, and respiration using electrocardiographic monitoring and pulse oximetry, and ventilation by capnography. In patients undergoing inhalational anesthesia, preoperative and postoperative temperature monitoring, and if the procedure is longer than 30 minutes, continuous temperature monitoring.
4. Recording of monitoring every five minutes.
5. Evidence of continuous recovery monitoring, with notation of patient's condition upon discharge and person to whom the patient was discharged.
6. Accurate recording of medications administered, including amounts and time administered.
7. Records illustrating length of procedure.
8. Records reflecting any complications of anesthesia.

C. Office Facility and Equipment

1. ***Noninvasive Blood Pressure Monitor***
2. ***Electrocardiograph***

3. ***Defibrillator/Automated External Defibrillator***
4. ***Pulse Oximeter***
5. ***Capnography equipment***
6. ***Operating Theater***
    a. Is the operating theater large enough to accommodate the patient on a table or in an operating chair adequately?
    b. Does the operating theater permit an operating team consisting of at least three individuals to move freely about the patient?
    c. Does the operating theater allow easy access for emergency personnel and transportation equipment?
7. ***Operating Chair or Table***
    a. Does the operating chair or table permit the patient to be positioned so the operating team can maintain the airway?
    b. Does the operating chair or table permit the team to alter the patient's position quickly in an emergency?
    c. Does the operating chair or table provide a firm platform for the management of cardiopulmonary resuscitation?
8. ***Lighting System***
    a. Does the lighting system permit evaluation of the patient's skin and mucosal color?
    b. Is there a battery-powered backup lighting system?
    c. Is the backup lighting system of sufficient intensity and power for an adequate period of time to permit completion of any operation underway at the time of general power failure?
9. ***Suction Equipment***
    a. Does the suction equipment permit aspiration of the oral and pharyngeal cavities?
    b. Is there a backup suction device available?
10. ***Oxygen Delivery System***
    a. Does the oxygen delivery system have adequate full-face masks and appropriate connectors, and is it capable of delivering oxygen to the patient under positive pressure?
    b. Is there an adequate backup oxygen delivery system?
11. ***Recovery Area (recovery area can be the operating theater)***
    a. Does the recovery area have available oxygen?
    b. Does the recovery area have available adequate suction?
    c. Does the recovery area have adequate lighting?
    d. Does the recovery area have adequate electrical outlets?
    e. Can the patient be observed by a member of the staff at all times during the recovery period?
12. ***Ancillary Equipment***
    a. Is there a working laryngoscope complete with an adequate selection of blades, spare batteries and bulbs?
    b. Are there endotracheal tubes and appropriate connectors?
    c. Are there oral airways?
    d. Are there any supraglottic airway devices?
    e. Is there a tonsillar or pharyngeal type suction tip adaptable to all office outlets?
    f. Are there endotracheal tube forceps?
    g. Is there a sphygmomanometer and stethoscope?
    h. Are there an electrocardioscope and defibrillator/automated external defibrillator?

i. Is there a pulse oximeter?
j. Is there a capnography monitor?
k. Is there adequate equipment for the establishment of an intravenous infusion?

D. Drugs

1. Vasopressor drug available?
2. Corticosteroid drug available?
3. Bronchodilator drug available?
4. Muscle-relaxant drug available?
5. Intravenous medication for treatment of cardiopulmonary arrest available?
6. Narcotic antagonist drug available?
7. Benzodiazepine antagonist drug available?
8. Antihistamine drug available?
9. Antiarrhythmic drug available?
10. Anticholinergic drug available?
11. Coronary artery vasodilator drug available?
12. Antihypertensive drug available?
13. Mechanism of response for dantrolene (Dantrium)?

Overall Equipment – Facility _____ **Adequate** _____ **Inadequate**

Comments _____

_____

_____

_____

Recommendations _____

_____

_____

_____

Signature(s) of Evaluators _____

_____

Printed Name(s) of Evaluators _____

_____

Sample Scheduling and Resistant Member Letters

Sample A - Scheduling Letter

Dear Doctor _____:

It is my pleasure to inform you that your office anesthesia evaluation has been scheduled for (hour, day, date). You will be assisted by your advisers, Drs. _____. The doctors will want to evaluate, through questioning and observation, the simulated step-by-step treatment of all emergency situations listed in the *AAOMS Office Anesthesia Evaluation Manua*l, Appendix 10.

If not prohibited by state law and with patient consent, the evaluators may observe a surgical procedure(s) with anesthesia. The complete evaluation may take up to three hours.

The evaluation is divided into four parts: observation of surgical/anesthetic techniques (optional), simulated emergencies (with your office staff), examination of all emergency equipment and drugs, and an oral evaluation in private.

The Anesthesia Committee appreciates your cooperation in this matter. Self-evaluation significantly elevates our standards of practice and contributes to the public's health, welfare and safety.

Please note that the visiting doctors have cleared their appointment books and are taking time away from their practices to assist you in this self-evaluation. Please do not cancel this visit.

Sincerely,

Chair, Anesthesia Committee

Sample B - Resistant Member Letter

Dear Doctor _____:

The *society name* has adopted a bylaw change requiring an initial office anesthesia evaluation and re-evaluation every five years to maintain membership. Based on the actions of the AAOMS House of Delegates, an onsite office anesthesia evaluation must be implemented to maintain official AAOMS membership as well as component society membership. This evaluation is based on the AAOMS Office Anesthesia Evaluation Program or required applicable state regulations, provided they meet AAOMS Office Anesthesia Evaluation Program Guidelines. I am instructed to inform you that your AAOMS and _____ Component Society active membership (if applicable) will be jeopardized if an in-office anesthesia evaluation has not been completed by _____(date).

I sincerely hope you will contact the Chair of our anesthesia committee and complete an office anesthesia evaluation prior to this deadline. If you have any questions or problems, please contact Dr. _____ , who can assist in arriving at a solution.

Very truly yours,

Secretary
(State) Society of Oral and Maxillofacial Surgeons

Office Anesthesia Evaluation Waiver

Declaration

A requirement for members in AAOMS is that fellows and members must undergo an office anesthesia evaluation and re-evaluation every five years. A waiver of this requirement is available in limited circumstances and must be verified every five years. If you wish to have the evaluation waived, please complete the following:

I am an oral and maxillofacial surgeon who:

- ❑ Is solely in an administrative position.
- ❑ Solely holds a research position.
- ❑ Is full-time faculty in a teaching hospital or clinic and is privileged to administer sedation/anesthesia by the medical staff through the department of anesthesia.
- ❑ Is full-time in a federal service facility and is privileged to administer sedation/anesthesia by the medical staff through the department of anesthesia.

or

I am an oral and maxillofacial surgeon who does not offer:

- ❑ Moderate and deep sedation and general anesthesia services in my office(s).

I understand that I am required to undergo an office anesthesia evaluation if I offer sedation/anesthesia services in positions or locations (offices) other than the above.

Signature _____ Date _____

Typed or Printed Name _____

Address _____

Witness Signature _____ Date _____

Sample Patient Health History Form

Name Nickname Date

Address City State ZIP Code

Home Cell

Email

Date of Birth SS# Sex: M/F Height Weight

For the following questions, circle yes or no, whichever applies. Your answers are for our records only and will be kept confidential.

1. Has there been any change in your health in the past year? Yes No
   If yes, please list
2. When was your last physical exam? / /
3. Name of Primary Care Physician (PCP)
   Conditions being treated for?
4. Have you had any serious illness, operation or hospitalization? Yes No
   If yes, please list
5. Do you or any other family member have a history of problems with anesthesia? Yes No
6. Have you had an artificial joint replacement? (knee, hip, shoulder, etc.)
7. Are you taking or have you taken bisphosphonates for osteoporosis or chemotherapy for multiple myeloma or other cancers (Fosamax, Actonel, Boniva, Reclast, Aredia, or Zometa)? Yes No
8. Are you taking any medications? Yes No
   If yes, please list: _____
   _____
9. Pharmacy name/location: _____

10. Do you have or have you had any of the following diseases or problems?
    a. Damaged heart valves, artificial valves or heart murmur? Yes No
    b. Heart trouble, heart attack, angina, high blood pressure, stroke, arteriosclerosis or any other heart condition? Yes No
       i. Chest pain upon exertion? Yes No
       ii. Shortness of breath climbing two flights of stairs? Yes No
       iii. Do your ankles swell? Yes No
    c. Sinus trouble? Yes No
    d. Asthma, hay fever or seasonal allergies? Yes No
    e. Sleep apnea? Yes No
    f. Fainting spells or seizures? Yes No
    g. Diabetes? Yes No
    h. Hepatitis, jaundice or liver disease? Yes No

i. Thyroid problems?	Yes	No
j. Respiratory problems, emphysema, bronchitis, etc.?	Yes	No
k. Arthritis or painful, swollen joints including jaw joint (TMJ)?	Yes	No
l. Osteoporosis?	Yes	No
m. Stomach ulcer or hyperacidity?	Yes	No
n. Kidney disease?	Yes	No
o. Tuberculosis?	Yes	No
q. Persistent cough or cough that produces blood?	Yes	No
r. Persistent swollen neck glands?	Yes	No
s. Low blood pressure?	Yes	No
t. Epilepsy or neurological disorder?	Yes	No
u. Cancer?	Yes	No
11. Have you had abnormal bleeding?	Yes	No
a. Have you ever required a blood transfusion?	Yes	No
12. Do you have any blood disorder such as anemia?	Yes	No
13. Have you ever had treatment for a tumor or growth?	Yes	No
14. Have you had radiation therapy to the head, neck or jaws?	Yes	No
15. Are you allergic to or have you had a reaction to the following? *Please note the reaction.*	Yes	No
a. Local anesthesia?	Yes	No
b. Penicillin or antibiotics?	Yes	No
c. Sulfa drugs?	Yes	No
d. Barbiturates or sleeping pills?	Yes	No
e. Aspirin?	Yes	No
f. Iodine?	Yes	No
g. Codeine or other narcotics?	Yes	No
h. Latex or rubber products?	Yes	No
i. Other?	Yes	No
16. Have you ever had any serious trouble associated with previous dental treatment?	Yes	No
If yes, please explain:	Yes	No
17. Do you have any other condition or disease you think the doctor should know about?	Yes	No
If yes, please explain:	Yes	No
18. Do you smoke any type of cigarettes, cigars, marijuana or chew tobacco? Use Opioids?	Yes	No
If yes, how much per day:	Yes	No
19. How much alcohol do you drink per week? What type?		
20. Do you have a past or present chemical dependency, alcohol or emotional disorder? (e.g., anxiety, depression, ADHD)	Yes	No
21. Are you wearing contact lenses?	Yes	No
22. Are you wearing removable dental appliances?	Yes	No

Women

23. Are you pregnant or trying to become pregnant?	Yes	No
24. Do you have problems associated with your menstrual period?	Yes	No
25. Are you nursing?	Yes	No

Chief Dental Complaint _____

_____

_____

_____

Referring Doctor _____

I have read and understand the above. Any questions I had about this form have been answered and I understand the answers. I understand it is my responsibility to fill out the form correctly and completely.

Date _____ Patient's Signature _____

Doctor's Signature _____

Dental Insurance

Primary Insurance Company _____

Address _____

_____

Insured's Name _____

Insured's Birthdate _____

Insured's Employer _____

Telephone Number _____

Group Number _____

Relationship _____

Social Security / ID number _____

Medical Insurance

Primary Insurance Company _____

Address _____

_____

Insured's Name _____

Insured's Birthdate _____

Insured's Employer _____

Telephone Number _____

Group Number _____

Relationship _____

Social Security / ID number _____

Attestation on Equivalence of Satellite Office

I attest that all satellite offices, listed below, in which I administer sedation/anesthesia meet the same facility, equipment and personnel standards as that of my primary office, which has been evaluated by the Society of OMS or in compliance with state law.

Signature Date

Typed or Printed Name

Address of Primary Office

Street

City State ZIP

Phone

Date of Evaluation of Primary Office

Satellite Office 1

Street

City State ZIP

Phone

Satellite Office 2

Street

City State ZIP

Phone

Use additional form for more than two Satellite Offices.

Note: State dental boards may require that all offices be evaluated.

Sedation and Anesthesia Record

Patient _____

ID # _____

☐ Premed _____

☐ Equipment Check Dx: _____

☐ Time Out Tx: _____

Preoperative start time: _____

Date	Age	NPO	ASA	Surgeon	Anesthetist
			1 2 3		
Weight	**Height**	**BMI**	**Airway**	**Surgeon Asst.**	**Anesthetist Asst.**
			Mallampati 1 2 3 4		

Agents/Drugs	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	TOTAL
Midazolam																	
Fentanyl 50 mcg/ml																	
Propofol 10 mg/ml																	
Methohexital 10 mg/mL																	
Ketamine																	
Dexamethasone 4 mg/mL																	
Remifentanil mcg/cc																	
Zofran mg																	
Exparel mg																	
Sevoflurane %																	
Lidocaine 2% 1:100 k epi																	
Articaine 4% 1:100 200k epi																	
Mepivacaine 3%																	
Fluids NS RL																	
Nitrous Oxide L/min																	
Oxygen L/min %																	

MONITORS
☐ Auto BP R L
☐ ECG (Lead II)
☐ Pulse Oximeter
☐ Stethoscope
☐ Capnograph
☐ BIS
☐ Temp
SYMBOLS
SBP ∨
DBP ∧
Pulse •
Resp ❍
Anes x
Anes x̲
Surg ⊙
Surg ⊙̲
POSITION
☐ Reclined
☐ Supine

	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
ECG																
SpO_2																
mmHg																
Temp																
200																
180																
160																
140																
120																
100																
80																
60																
40																
20																
0																

IV	
☐ 22G Catheter	x___
☐ 20G Catheter	x___
☐ _____	x___
R ☐ Antecubital	x___
☐ Radial	x___
L ☐ Dorsum hand	x___
☐ _____	x___
AIRWAY	
☐ Nasal Cannula	
☐ Nasal Mask	
☐ Mask	
☐ Nasopharyngeal	
☐ Oral	
☐ LMA	
☐ ET Tube	

Comments _____ Dr. Signature _____