Efficient responses to emergencies in the oral and maxillofacial surgery office require preparation, communication, and thorough documentation of the event and response. The concept of team anesthesia is showcased with these efforts. Emergency medical services training and response times vary greatly. The oral and maxillofacial surgery office should be prepared to manage the patient for at least 15 minutes after making the call to 911. Patient outcomes are optimized when providers work together to manage and transport the patient. Oral and maxillofacial surgery offices should develop and rehearse emergency plans and coordinate these protocols with local emergency medical services teams.

Preoperative Evaluation and Patient Selection for Office-Based Oral Surgery Anesthesia

Stuart Lieblich

Provision of an outpatient anesthetic requires careful review of the patient’s medical history along with salient aspects of the physical examination. The oral and maxillofacial surgeon may need to consult with the patient’s medical providers to gain an understanding of the patient’s potential risks for an adverse event. This article reviews key aspects of the patient evaluation so that an informed determination of suitability for an office anesthetic can be made.

Oral and Maxillofacial Surgery Team Anesthesia Model and Anesthesia Assistant Training

Stephanie J. Drew

The model for oral and maxillofacial surgery (OMFS) delivery of office-based, open airway anesthesia has morphed from the operator-anesthetist to the delivery of team anesthesia, supporting a widespread focus on organizational aspects of the delivery of care. The training, continuing education, and coordination of a diverse anesthesia team provide a system to improve the safety and efficacy of anesthesia delivery. The hallmarks of this system include communication, checks and balances, monitoring, team dynamics, protocols, emergency scenario preparation and rehearsal, and crisis resource management during an emergent situation. This system contributes to and continually supports a culture of safety in the OMFS office.

Anesthetic Agents Commonly Used by Oral and Maxillofacial Surgeons

Kyle J. Kramer and Jason W. Brady

Oral and maxillofacial surgeons have a variety of anesthetic agents that can be used to provide anesthesia safely and efficiently in the office-based environment.
However, it is critical to have a thorough understanding of the particulars for each agent. Commonly used anesthetic agents, administered either individually or in combination, include diazepam, midazolam, propofol, ketamine, opioid agonists such as fentanyl or remifentanil, dexmedetomidine, and inhalational agents, including nitrous oxide and sevoflurane. These agents help provide extreme flexibility for those creating an individualized anesthetic plan that also balances the patient’s history and the anticipated surgical plan to maximize success.

The Failed Sedation: Solutions for the Oral and Maxillofacial Surgeon 165
Robert C. Bosack

Owing to wide variation in patient responses, both intended and adverse, it is impossible to successfully sedate all patients. Choosing the right drug and dose regimen can be challenging, especially in patients who are naive to anesthesia. Underdosing can lead to pain perception, patient movement and combativeness, awareness with recall, and the sympathetic neuroendocrine stress response. Overdosing can lead to unintended loss of upper airway tone, hypoventilation/apnea, adverse cardiovascular changes, and prolonged sedation (with its attendant problems).

Anesthesia for the Pediatric Oral and Maxillofacial Surgery Patient 171
Deepak G. Krishnan

Pediatric patients present to the oral and maxillofacial surgeon for surgical services that can be performed safely and efficiently. Children and parents tend to be anxious; achieving cooperation is paramount for successful procedures. Several techniques can be used to alleviate anxiety and provide analgesia and anesthesia. This article outlines the anatomy and physiology of children and the preoperative anesthetic preparation and techniques unique to pediatric anesthesia. It discusses standards in training in pediatric anesthesia and current recommendations for monitoring. Management of children with autism spectrum disorders and attention deficit hyperactivity disorders highlights special considerations in the management of these children.

Oral Surgery Patient Safety Concepts in Anesthesia 183
Richard C. Robert and Chirag M. Patel

An effective office emergency preparedness plan for the oral and maxillofacial surgery office can be developed through the use of well-designed checklists, cognitive aids, and regularly scheduled in situ simulations with debriefings. To achieve this goal, the hierarchal culture of medicine and dentistry must be overcome and an inclusive team concept embraced by all members of the staff. Technologic advancements in office automation now make it possible to create interactive cognitive aids. These enhance office emergency training and provide a means for more rapid retrieval of essential information and guidance during both simulations and a real crisis.

The American Association of Oral and Maxillofacial Surgeons Simulation Program 195
David W. Todd and John J. Schaefer III

Patient safety in dental anesthesia has been called into question in recent years. Simulation training has been proposed and developed as one possibility for increasing preparedness and training in cases of adverse events in dental anesthesia. This article presents an overview of the challenges of patient safety in dental
anesthesia and how to address them with simulation training. The American Association of Oral and Maxillofacial Surgeons simulation program is unique in its potential to become a standardized, validated competency course with objective grading criteria, mastery-based cooperative learning model, and low facilitator to participant ratio, leading to a practical delivery cost structure.

Airway Management for the Oral Surgery Patient 207
Allan Schwartz

This article discusses anesthesia assessment concepts related to airway evaluation and airway maintenance for safe and reliable selection of either open system (entrainment of room air) or closed system (no entrainment of room air) airway devices, which can be used during office-based oral surgical procedures, depending on the needs of a patient. Dental facial and oral structures are integral to an anesthetist’s preoperative patient evaluation before surgery. The preoperative medical history and physical examination as well as the nature of the oral surgical procedure affect the selection of a proper and safe airway device.

Anesthetic Pump Techniques Versus the Intermittent Bolus: What the Oral Surgeon Needs to Know 227
Richard C. Robert and Chirag M. Patel

The most popular agents in use for office-based anesthesia are propofol, ketamine, and remifentanil, which have the desirable properties of rapid onset and short duration of action. A useful parameter in assessing these agents is the context-sensitive half-time. These anesthetic agents demonstrate relatively low, flat plots compared with older agents. For delivery of intravenous anesthetics, oral and maxillofacial surgeons have relied on small incremental boluses with great success. However, relatively simple syringe infusion pumps can provide an even “smoother” anesthetic. This article familiarizes oral and maxillofacial surgeons with the advantages of infusion pumps and provides examples of their use.