

Preparing for Medical Emergencies in the Dental Practice

► Program speaker

Today's speaker is Theodore (Ted) Passineau, JD, HRM, RPLU, CPHRM, FASHRM, Senior Patient Safety & Risk Consultant, MedPro Group (Theodore.Passineau@medpro.com)

Ted provides risk management services for the upper Midwest and Northeast regions. He has worked in the field of medical professional liability since 1987.

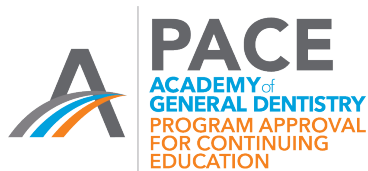
Ted's professional achievements include experience as a medical malpractice defense attorney, risk management consultant, director of risk management, and director of continuing medical education for both doctor-owned and commercial professional liability insurers.

In his career, Ted has provided instruction to thousands of physicians, dentists, and hospital staffs across the United States and internationally, and he has written extensively on various professional liability topics.

In addition to his academic credentials, Ted has been trained in healthcare mediation and conflict resolution by the Harvard School of Public Health, and clinician-patient communication by the Institute for Healthcare Communication. His affiliations include Adjunct Professor of Medical Law at the Thomas M. Cooley Law School, advisory panel for a physician litigation stress website, and former board member of the Tri-County Medical Control Authority.



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► Objectives

At the conclusion of this program, participants should be able to:

- List the more common medical emergencies that can occur in the dental office.
- Describe patients who are particularly likely to develop an emergency medical condition in the dental office.
- Explain the four essential components in preparing for a dental/medical emergency.
- Explain the unique risks accompanying the use of in-office dental sedation.



► Scenario

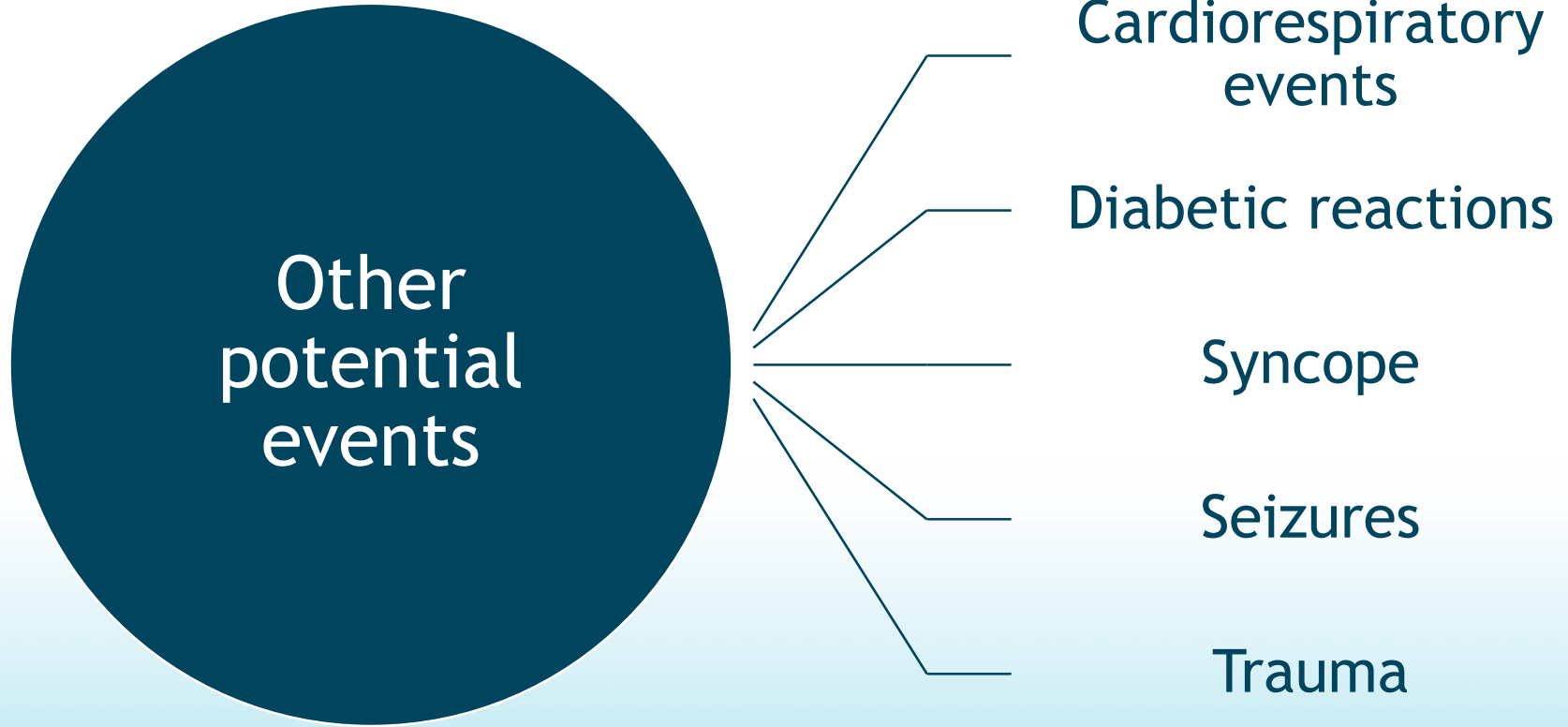
- A 74-year-old patient presents in your dental practice for a routine office visit. While in the waiting room, the patient starts to “feel bad” and soon becomes cool and diaphoretic. While the patient’s daughter reports her condition to the office staff, the patient collapses and progresses quickly to cardiac arrest.
- The front office staff, who does not have experience in emergencies, seems immobilized. The dental office has no equipment and no basic cardiac life support (BCLS) trained staff. After some delay and checking with the dentist, emergency medical services (EMS) is summoned.
- EMS arrives, begins resuscitation, and transports the patient to the emergency department. While the patient is successfully resuscitated, she has suffered profound brain damage and is now in a vegetative state.
- How could this case have been handled better? What would your office do if this happened tomorrow?

► Medical emergencies that can occur

Treatment-related

- Swallowing/aspiration of foreign material
- Medication/allergic interactions
- Anxiety reactions

▶ Medical emergencies that can occur



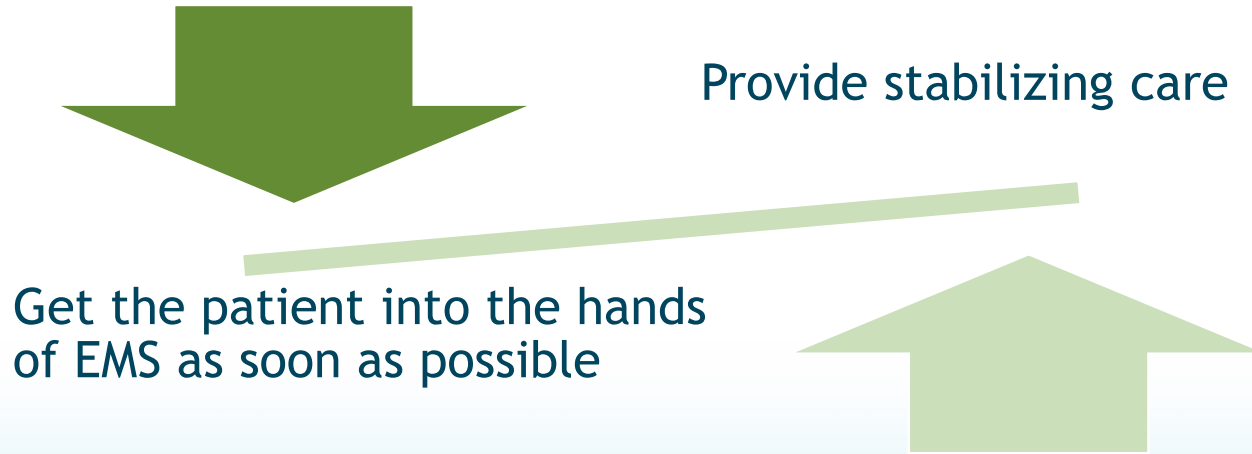
▶ Prevention is the best medicine

- ▶ Pretreatment screening
 - ▶ Elderly/frail patients
 - ▶ Chronically/recently ill patients
 - ▶ Recent significant medical treatment
 - ▶ History of substance abuse/suspicion of recent ingestion
 - ▶ Patients you have had problems with in the past
- ▶ What to check
 - ▶ Blood pressure, heart rate, temperature, glucose level
 - ▶ Consider use of pulse oximetry



► Medical emergencies in the dental office

Goals in treating dental emergencies



The goal is *not* to attempt to make the patient “well”

► Four essential components

A plan

Medications/
equipment

Training

Aftercare

▶ The plan

- ▶ Written
 - ▶ Prominently posted
 - ▶ Periodically reviewed
- ▶ Assignments
 - ▶ By position (not person)
 - Patient care (2-3 persons)
 - EMS contact
 - Calls and escorts EMS
 - Scribe-documents
 - Patient's vital signs and symptoms
 - Treatment rendered and result
 - Medications administered – what, dose, when, effect
 - Family support



► Medications and equipment

Inventory and
check
periodically
(every 6 months)

Designate a
person
responsible for
maintenance

Know how to use
what you have!

► Basic emergency drugs for the general dental office

TABLE 2

Suggested basic emergency drugs for the general dental office.

INDICATION	DRUG	ACTION	ADMINISTRATION
Bronchospasm (Severe Allergic Reaction)	Epinephrine	α - and β -adrenergic receptor agonist	Autoinjectors or preloaded syringes, ampules; 1:1,000 solution subcutaneously, intramuscularly or sublingually; adults, 0.3 milligram; children, 0.15 mg
Mild Allergic Reaction	Diphenhydramine	Histamine blocker	50 mg intramuscularly; 25 to 50 mg orally every three to four hours
Angina	Nitroglycerin	Vasodilator	Sublingual tablet: one every five minutes up to three doses; translingual spray: one spray every five minutes up to three times
Bronchospasm (Mild Asthma)	Bronchodilator such as albuterol	Selective β_2 - adrenergic receptor agonist	Two or three inhalations every one to two minutes, up to three times if needed
Bronchospasm (Severe Asthma)	Epinephrine	α - and β -adrenergic receptor agonist (bronchodilator)	Autoinjectors or preloaded syringes, ampules; 1:1,000 solution subcutaneously, intramuscularly or sublingually; adults, 0.3 mg; children, 0.15 mg
Hypoglycemia	Glucose, as in orange juice	Antihypoglycemic	If the patient is conscious, ingest
Myocardial Infarction	Aspirin	Antiplatelet	One full-strength tablet (165-325 mg) chewed and swallowed
Syncope	Aromatic ammonia	Respiratory stimulant	Inhalant crushed and held four to six inches under nose



► Recommended equipment

Automated external defibrillator (AED)

“D” tank of oxygen and appropriate tubing/masks

Ambu Bag (with appropriate masks)

Assorted size oropharyngeal airways

Suction unit

Bite block

▶ Training

Train staff in basic cardiac life support

- Train everyone in the office
- Require current certification

Conduct some simulations

- Solicit input/identify vulnerabilities

Request the input of your local emergency medical services



► Family support

Identify any persons who accompanied the patient to the appointment and escort them to a private area

Update them as soon as possible

Reassure anyone else in the common areas who may be concerned

► Aftercare

Debrief when possible

Follow up with the patient/ family

Be prepared for an immediate or delayed stress reaction



The Key to a Good Outcome Is Preparation

► Case study

- **Patient:** Male, 30 months old
- **Chief complaint:** Severe dental caries
- **Case overview:** The general dentist decided to operate on this child using sedation provided by an anesthesiologist who periodically traveled to this large practice. The child was prepped, and the appropriate levels of sedation were acquired using an IV technique. The dentist, anesthesiologist, and two assistants were in the room. The dentistry went well. In about 75 minutes, the patient's care concluded. The dentist left the operatory to examine another patient. In about 10 minutes, the patient was released in a semi-sedated state to the recovery room with his mother and an assistant. After he appeared to be progressing, the assistant left the patient with the mother. About 15 minutes later, the mother tried to wake the patient and found him to be unresponsive. The anesthesiologist, who was seeing another patient, was summoned, and emergency resuscitation was begun. Emergency medical services was summoned and the patient was rushed to the hospital.
- **Outcome:** Patient died at hospital.

An Emerging Issue

▶ In-office dental sedation

- ▶ A newly emerging approach to non-OMS practice
- ▶ Moderate to deep sedation in the office setting
- ▶ Typically provided by mobile dental anesthesiologist, a medical anesthesiologist, or a dentist who is fellowship-trained in dental anesthesiology
- ▶ Allows operating dentist to expand scope of practice
- ▶ May be more convenient for the patient

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- ▶ However ...

▶ Risk management and patient safety concerns

This is a significant departure from conventional dental practice, raising important risk management/patient safety concerns:

Adverse patient selection

Pre-anesthesia interview/evaluation/clearance

Achievement of adequate informed consent to anesthesia

Lack of familiar team

Postanesthesia monitoring/evaluation

Emergencies

Recordkeeping

► In-office dental sedation



Finally...

Do you possess the technical skill required to perform procedures made possible by the administration of moderate to deep sedation?

► Resources

- American Society of Anesthesiologists. Relevant ASA standards guidelines and statements. Retrieved from <http://www.asahq.org/quality-and-practice-management/quality-and-regulatory-affairs/qmda-regulatory-toolkit/relevant-asa-standards-guidelines-and-statements>
- American Dental Association. (2016). Guidelines for the use of sedation and general anesthesia by dentists. Retrieved from http://www.ada.org/en/~/media/ADA/Education%20and%20Careers/Files/ADA_Sedation_Use_Guidelines
- American Association of Nurse Anesthetists. Office-based anesthesia: What every patient should know to prepare for surgery in a physician's office. Retrieved from <https://www.aana.com/patients/office-based-anesthesia>

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