Managing Medical Emergencies

A Three-Pronged Approach for Healthcare Practices

Laura M. Cascella, MA

Medical emergencies — unexpected events that lead to bodily injuries or critical medical conditions — can occur anywhere, including healthcare practices. In fact, these types of emergencies might not be as uncommon as many people think.

One study found that 62 percent of family medicine and childcare offices saw at least one child each week that required urgent care or hospital admittance.¹ Further, the combined results from two dental studies showed that more than 30,000 emergencies occurred in dental offices over a 10-year period (in a survey of more than 4,000 dentists).²

Medical emergencies in healthcare are a reality, but unfortunately many healthcare practices are unprepared to handle them. Lack of time, financial constraints, and low prioritization can all play a role in thwarting preparedness efforts.

This article will further explore the types of medical emergencies that can occur in healthcare offices and will discuss how healthcare providers and their staff members can take provident measures to prevent, prepare for, or respond to emergency situations.

Overview of Medical Emergencies

In healthcare settings, medical emergencies might be directly related to treatment or therapy, or they might occur by chance. For example, a patient might experience a mild or severe allergic reaction as a result of a medication given during treatment, or a patient who is presenting for routine care may suffer a sudden cardiac arrest in the office waiting room.
Certain situations or factors might increase the risk of medical emergencies, such as patients who underestimate the urgency of their conditions and present to a medical office instead of an emergency department (ED). This scenario might partially account for the earlier statistic related to family medicine and childcare offices, as “parents of critically ill children are often unaware of the severity of their child’s illness.”

Further, several dental resources note that emergency situations may develop as a result of procedures associated with a high degree of patient anxiety, inadequate pain management, or failure to treat dental phobia.

To manage these types of incidents, and other emergencies that might occur, healthcare providers should be aware of how to potentially prevent these circumstances and how to appropriately respond if an emergency situation does occur. A three-pronged approach that addresses prevention, preparation, and action can help providers and their staff members proactively manage medical emergencies.

**Prevention**

Although some medical emergencies are inevitable, others can potentially be avoided through careful patient evaluation and assessment. In an article titled “Knowing Your Patient,” Dr. Stanley Malamed explains that the prevention of medical emergencies is based heavily on gathering information and assessing the patient’s level of care-related anxiety. Several steps in the patient care process are critical in the prevention effort, including the medical questionnaire, the provider-patient encounter, and the physical exam.

First, the medical questionnaire — completed by the patient or a parent/caregiver prior to seeing the healthcare provider — provides an initial glimpse of the patient’s current health

---

**Examples of Medical Emergencies**

- Loss of, or altered, consciousness
- Respiratory distress
- Myocardial infarction (MI)
- Sudden cardiac arrest
- Stroke
- Hypoglycemia
- Asthma attacks
- Allergic reactions
status and medical history. The information gathered in the medical questionnaire is essential to understanding the patient’s clinical condition, and it should be updated regularly and reviewed before each visit.

Second, during the provider-patient encounter, the treating clinician can review the questionnaire and ask for clarification or additional information about any conditions the patient has reported. For example, if the patient is diabetic, the provider may inquire about management of blood sugar levels. If the patient has previously had an MI, the provider might ask about any ongoing symptoms, such as shortness of breath. The additional information gleaned during the provider-patient encounter may reveal potential red flags for a medical emergency.

Third, the physical exam gives the clinician an opportunity to evaluate the patient’s physical condition and determine whether the patient has any visible signs of illness or distress. For example, a phobic patient might appear agitated or nervous, even if he/she has not verbalized any anxiety. Additionally, the physical exam allows the provider to obtain baseline vital signs, a valuable tool for monitoring the patient before, during, and after treatment and recognizing signs of distress.7

The information gathered from these three elements of the patient care process — the medical questionnaire, the provider-patient encounter, and the physical exam — can help the provider proactively assess the patient’s risk of a medical emergency.

If the level of risk is concerning, the provider might want to consider whether (a) seeking a consultation with a colleague, specialist, or other healthcare professional would be beneficial; (b) the patient’s treatment plan should be modified; or (c) the patient should be treated in a hospital.
Patient anxiety or fear related to medical or dental treatment can be problematic in various ways, including manifesting as medical emergencies.

**Case Example 1: Dental**
A patient who had an extreme phobia of dental care was diagnosed with generalized periodontitis and agreed to a treatment plan of root planing, chemotherapy, and aggressive maintenance.

The night before the patient’s appointment, she took 10 mg of diazepam, which the periodontist prescribed. The morning of the patient’s appointment, she ate breakfast and, on her way to the appointment, inhaled a moderate amount of cannabis to try to relax.

Because of the patient’s anxiety, she was offered the option of having the procedure done using nitrous oxide analgesia. Unfortunately, the practice had no nitrous oxide protocol in place. Thus, few questions were asked about the patient’s recent ingestion of food or other substances.

Prior to starting the procedure, the patient’s nitrous oxide level was increased twice due to her anxiety. Shortly into the procedure, the patient vomited, aspirated some of her vomitus, and lost consciousness. Emergency medical services (EMS) was called; while awaiting their arrival, the doctor tried to establish an airway but was unsuccessful. Despite attempted resuscitation at the scene and the hospital, the patient died.

**Case Example 2: Medical**
A patient who had broken his wrist in a motorcycle accident presented to an ambulatory surgery center for repair of the fracture. The patient, who was visibly anxious upon arrival, was seated in the waiting area to fill out forms. Once the patient completed the forms, he was instructed to remain in the reception area until called. More than 40 minutes went by, with the patient becoming increasingly nervous.

Eventually the patient was moved into the preoperative area, where a nurse tried to place an intravenous (IV) line. After several unsuccessful attempts, the nurse commented that the anesthesiologist "might have to go through the foot," and then abruptly left the area.
Managing Phobic Patients (continued)

The patient, who was already sweating and jittery due to his anxiety, began to panic upon hearing how they might insert the IV line. He stood up from the bed and began to pace, complaining that he felt short of breath. Although his wife — who was in the preoperative area with him — tried to calm him and get him to return to the bed, the patient continued to wander around the area.

A few seconds later, the patient fainted, falling and hitting his head on a medical cart and then the floor. EMS was called and the patient was transported to the hospital where he was treated for a concussion and edema.

Risk Tips

When developing policies for managing anxious or phobic patients, healthcare providers should consider establishing:

- Protocols for premedication (e.g., providing sedation the night prior to surgery or treatment)
- Policies related to appointment scheduling and treatment duration (e.g., scheduling phobic patients in the morning to reduce compounding apprehension, or splitting lengthy procedures into shorter sessions when possible)
- Strategies for minimizing the time patients spend in the reception or pretreatment areas (e.g., asking patients to fill out forms prior to their appointments to reduce waiting time)
- Requirements for monitoring patients’ vital signs (e.g., establishing baseline measurements at a visit prior to the surgery or procedure, which providers and staff can compare with perioperative measurements)
- Protocols for sedation during treatment and pain management during and after the surgery or procedure

Preparation

Although prevention efforts are an important part of emergency preparedness, medical emergencies can and will occur, making preparation paramount. A vital step in preparing for a medical emergency is developing a written emergency response plan.

When creating or evaluating your practice’s plan for responding to unexpected medical events, consider the following:

- **The availability of skilled and experienced EMS.** Will EMS be able to respond quickly in the event of a medical emergency? Are they skilled with treating your practice’s patient population? Is it likely that you or another healthcare provider will need to provide emergency workers with additional guidance on patient care once they are onsite?

- **Transportation time.** The amount of time it will take to transfer a patient to the ED is an important factor to consider when developing a plan and strategy for medical emergencies. A healthcare office that is close to a hospital ED may have a completely different plan than a rural office that is a considerable distance from the nearest hospital.

The emergency response plan also should include comprehensive information related to staff roles and responsibilities during a medical emergency, communication protocols, policies for staff training, and use and maintenance of emergency supplies and equipment.

Staff Roles and Responsibilities

One of the first steps in designing an emergency response plan is to assign staff roles and responsibilities. “Offices should use all of their staff effectively and have a proactive team approach.” The approach should reinforce the important role that each staff member plays in emergency preparedness, and it should stress that appropriate preparation can potentially improve a patient’s outcome.
The size of the practice and the staff members’ skills and training will help shape specific roles and responsibilities. However, regardless of whether the office has 3 employees or 20 employees, each individual should be well-versed in the practice’s emergency response plan, understand his/her duties, and know the appropriate steps to follow during a medical emergency.

For example:

- Who will notify the appropriate healthcare provider of the medical emergency and direct him/her to where the patient is located (if the provider is not with the patient when the emergency occurs)?
- Who will take the lead in providing emergency care to the patient?
- Who will assist the team leader in bringing the emergency supplies and helping administer care?
- Who will call 911 (or another emergency service)?
- Who will meet the emergency responders when they arrive and direct them to the patient?
- Who will document the course of events?
- Who will direct the flow of patients while other staff members are responding to the emergency?

Specific responsibilities during a medical emergency should be delegated based on job positions, rather than individuals. This approach will help prevent gaps in responsibility if a staff member is out of the office. However, the individual who is covering the position needs to be notified of the duties that they will be expected to perform. If they do not have the appropriate training or skills, the responsibilities should be reassigned to an appropriate staff member.

Additionally, emergency response accountabilities should be included in written job descriptions for relevant positions. Each position’s assignments should be reviewed at least
annually to ensure that the practice’s emergency response plan is thorough and complete. Competencies for each staff position should also include skills that will likely be required for responding to emergency situations.

**Communication**

During a medical emergency, “anxiety, panic, and negative effects on other patients can be minimized if staff members know their roles and are able to execute them as planned.”\(^{12}\)

Critical to the smooth execution of the practice’s emergency response plan is the ability of providers and staff members to communicate effectively.

Although the nature of the event may precipitate a chaotic or panic-induced response, the team leader should remind staff to remain calm, speak clearly, and use eye contact when delivering messages. This will help prevent miscommunication or oversight of important information.

Practices can benefit from using a “closed-loop” technique when communicating emergency information. This term means that “when the leader sends a message, the team member acknowledges receiving the instruction, thereby confirming that he or she heard and understood the message.”\(^{13}\) In a closed-loop approach, instructions should be delivered sequentially, and the team leader should wait for confirmation that each action has occurred before giving additional directives.

Further, the practice should support a culture of safety in which staff members are encouraged to clarify information they do not understand or vocalize any concerns during the emergency response process. This strategy can help reduce stress and pressure on staff members and allow them to identify missed steps or deviations from the emergency response plan. It is vital that the team “concentrate on what is right for the patient, not who is right, during a medical emergency.”\(^{14}\)
Staff Training

Training healthcare providers and staff members to appropriately manage medical emergencies is paramount to developing an effective emergency response plan. Training ensures that team members have the critical skills that are necessary for handling an emergency situation.

Medical and dental associations advise that all office staff should obtain certification in basic life support (BLS). Further, the American Dental Association (ADA) Council on Scientific Affairs and the American Academy of Family Physicians both encourage routine retraining of BLS skills “because these skills are maintained only through repetition.”

Depending on the nature of the practice and the patient population, healthcare providers also may want to consider training in advanced cardiac life support (ACLS) and/or pediatric advanced life support (PALS). Any training or certification related to BLS, ACLS, or PALS should be documented in staff members’ personnel files.

Another key component of staff training involves conducting routine emergency drills. These drills should verify knowledge of emergency techniques, protocols, and usage of emergency response equipment and supplies. Drills should also be used to evaluate the team’s ability to effectively provide emergency care at a moment’s notice.

Continuing education (CE) also offers opportunities to learn more about emergency medicine and response. CE courses might be available through medical and dental schools, local hospitals, professional associations and societies, and other organizations (such as the American Heart Association [AHA] and the American Red Cross).

Emergency Supplies and Equipment

Medical and dental associations and emergency preparedness literature generally recommend that office practices maintain at least basic emergency supplies and equipment, such as portable oxygen, bandages, blood pressure cuffs, glucose meters, a pulse oximeter,
epinephrine and other emergency medications, universal precautions, etc.\textsuperscript{17} Beyond that, the breadth and contents of each office’s emergency kit will largely depend on:

- The type of practice
- The patient population
- The procedures/therapies performed
- Anticipated emergencies or level of risk
- Geographic location
- Provider and staff training and skills
- State requirements\textsuperscript{18}

Additionally, specialty guidelines might provide information about the necessary supplies, medications, and equipment needed to manage specific types of medical emergencies or patient populations.

Perhaps the most important consideration when purchasing or assembling an emergency kit is ensuring that healthcare providers and staff members have the knowledge and training to administer the emergency medications and use the emergency equipment. “For medical and legal reasons, no office should stock equipment that cannot be used safely by office staff.”\textsuperscript{19}

Emergency supplies and equipment should be stored in a designated location that is cool, dry, and accessible at all times. Further, emergency kits should be labeled and easy to transport. This will allow staff to quickly transfer equipment and supplies to the person requiring assistance.

An assigned staff member should routinely inventory all emergency medications, check expiration dates, and restock medications as appropriate. Utilizing a checklist or tracking log can facilitate thorough documentation of the results of these inspections.

Likewise, emergency equipment should be routinely inventoried and tested to verify that it is functioning properly. MedPro’s \textit{Medical Equipment Management} guideline recommends testing
critical equipment, such as lifesaving and emergency equipment, at least twice a year. Healthcare practices also should maintain equipment logs to document all inspections, testing, preventive maintenance, and repairs for emergency equipment (as well as other types of equipment).

### Automated External Defibrillators

Professional healthcare organizations, such as the ADA and the AHA, recommend having automated external defibrillators (AEDs) available in healthcare offices — and some states laws mandate having them. Check with your state medical/dental board or association to determine the requirements in the state(s) in which you practice.

Even in states that do not have AED laws, healthcare practices could potentially be sued for wrongful death under common law if a patient dies of sudden cardiac arrest in the office. When thinking about whether to include an AED as part of your practice’s emergency equipment, consider the likelihood of a sudden cardiac arrest occurring in your office, the location of your practice (e.g., distance to an ED), and availability of skilled EMS.

### Action

Although preparing for medical emergencies requires time and resources, the results can prove significant. When an emergency occurs, healthcare providers and staff members must be ready to quickly implement their emergency response plan.

Even if providers and staff are not experienced with, or highly knowledgeable of, the type of emergency taking place, the common goal is to “manage the patient’s care until he or she recovers fully or until help arrives.” A dual strategy to emergency response is recommended that involves a medical response and a communication response that occur simultaneously.
In terms of medical response, a critical aspect of managing the patient’s care is ensuring that he/she is receiving a sufficient supply of oxygenated blood to vital organs — a goal that is supported through the delivery of BLS. Various emergency preparedness resources also recommend following the PABCD approach (see box).

More specific algorithms and protocols related to managing certain types of emergencies — such as sudden cardiac arrest, anaphylaxis, bronchospasm, swallowed instruments or devices, chest pain, shock, seizures, etc. — can be obtained through specialty organizations, professional associations, and state and local healthcare resources.

While the medical response is occurring, various communication activities also should take place, including calling for emergency help, directing staff, obtaining information from family members or caregivers and providing them with updates (if applicable), calling the hospital ED to alert staff of the situation, and documenting the sequence of events as it takes place.25

Post emergency phone numbers — such as the numbers for EMS, the local hospital, poison control, etc. — in a visible location to facilitate the response process. If the caller has to dial a prefix to activate an outside line, note that information as well. Periodically, an assigned staff member should check the list of emergency numbers for accuracy.

Although the number of activities involved in an emergency response and the rapid succession with which they must occur might seem indicative of chaos, proactive planning, training, and drilling will help prepare healthcare providers and staff to react quickly and efficiently on the patient’s behalf.
Take-Away Message

Although medical emergencies often are unpredictable, healthcare practices can take proactive steps to ensure that patients receive efficient, appropriate, and coordinated care in an emergency situation.

A threefold approach that addresses prevention, preparation, and action can help healthcare practices develop or evaluate their emergency response plans, implement comprehensive emergency management procedures, support staff training and readiness, and reinforce a culture of safety.
Endnotes


3 Toback, Medical emergency preparedness in office practice.

4 Dentistry IQ, Medical emergencies in dentistry; Malamed, S. F. (2010). Knowing your patients. Journal of the American Dental Association, 141(Suppl 1), 3S-7S.

5 Dentistry IQ, Medical emergencies in dentistry.

6 Malamed, Knowing your patients.

7 Ibid.

8 Ibid.

9 Dentistry IQ, Medical emergencies in dentistry; Toback, Medical emergency preparedness in office practice.


12 Sempowski, Dealing with office emergencies.

13 Haas, Preparing dental office staff members for emergencies.

14 Malamed, Knowing your patients.


16 ADA Council on Scientific Affairs, Office emergencies and emergency kits.


18 Rosenberg, Preparing for medical emergencies; Toback, Medical emergency preparedness in office practice.
19 Toback, Medical emergency preparedness in office practice.


21 Ford, Does a dental practice have a common law duty to have an AED available?

22 Haas, Preparing dental office staff members for emergencies.

23 Sempowski, Dealing with office emergencies.


25 Sempowski, Dealing with office emergencies.

26 Haas, Preparing dental office staff members for emergencies.

This document should not be construed as medical or legal advice. Because the facts applicable to your situation may vary, or the laws applicable in your jurisdiction may differ, please contact your attorney or other professional advisors if you have any questions related to your legal or medical obligations or rights, state or federal laws, contract interpretation, or other legal questions.

MedPro Group is the marketing name used to refer to the insurance operations of The Medical Protective Company, Princeton Insurance Company, PLICO, Inc. and MedPro RRG Risk Retention Group. All insurance products are underwritten and administered by these and other Berkshire Hathaway affiliates, including National Fire & Marine Insurance Company. Product availability is based upon business and regulatory approval and may differ among companies.

© 2018 MedPro Group Inc. All rights reserved.