Part V:

Medical Emergencies

EMT Curriculum Correlation Guide

Medical Emergencies

EMT Course Topic	EMT Review Audio Lectures App Each segment is like an insightful lecture. If you don't have this app for your class, learn more at http://bit.ly/LCReady-Audio	Other Resources
Pharmacology		Discussion Board Questions (attached below) Polypharmacy in the Elderly (Article)
Respiratory Emergencies	Respiratory Audio – Asthma Respiratory Audio – COPD	Discussion Board Questions (attached below) Drowning Case Study (Article)
Cardiac Emergencies	Cardiology Audio – Acute Coronary Syndrome Cardiology Audio – Resuscitation Cardiology Audio – Heart Failure	Discussion Board Questions (attached below)
Altered Mental Status (diabetes, stroke, overdose, etc.)	Intro to Altered Mental Status and Opiate Overdose Audio Stroke Audio Seizure Audio	Discussion Board Questions (attached below) Stroke Mimic Case Study (Article) Seizure Case Study (Article) Opioid Overdose Case Study (Article)

EMT Curriculum Correlation Guide

Medical Emergencies

EMT Course Topic	EMT Review Audio Lectures App Each segment is like an insightful lecture. If you don't have this app for your class, learn more at http://bit.ly/LCReady-Audio	Other Resources
Anaphylaxis	Anaphylaxis Audio	
Abdominal Emergencies		
Psychiatric Emergencies		
Hematologic & Renal Emergencies		
Medical Overview		Medical Emergencies study cards and review questions in the EMT Review Plus App.

EMT Discussion Board Questions

Medical Emergencies: Respiratory

Your patient has respiratory distress. Explain why each of the following findings may be seen: • Wheezes • Crackles • JVD • Pedal edema • Anxiety or anxiousness	This question focuses on the causes of each of the signs listed. Wheezing is caused by air moving through narrowed bronchioles. Crackles result from fluid, often from left heart failure. JVD in this case would likely be caused by right heart failure (but there are other causes). Pedal edema is dependent and often a result of right heart failure. Anxiety in many patients is an early sign of hypoxia since the brain is very intolerant of reduced oxygen levels.
You are caring for an 18-year-old female with asthma. She is experiencing an attack. She states, in short breaths, "I don't know why I keep having these attacks." She has inspiratory and expiratory wheezes. Her vital signs are P 102 R 22 BP 142/88 SaO2 92% on room air. She used her inhaler twice (two puffs each) in the past 30 minutes. Please answer the following questions: • What are the triggers for an asthma attack? • Can you administer additional bronchodilators • (inhaler/nebulizer) to this patient? Why or why not?	Viral respiratory infections, allergies, and exercise are common triggers of asthma. There are other, less common triggers your students might find like air temperature and aspirin. This patient is young, and while slightly tachycardic, it's still prudent to administer bronchodilators by inhaler or small volume nebulizer. Reducing respiratory distress and hypoxia would likely have a positive effect on the pulse. Be sure to discuss the difference between a NREMT answer and your local protocols in questions like. The NREMT correct answer may be to administer the med while your protocols may require med control contact at the EMT level.
You are called to a 15-year-old patient with respiratory distress. The parents say that their son can be dramatic, and they don't know if he is having an asthma attack or hyperventilating. How would you differentiate? List at least three things you would look for to decide	This will show you how deeply your students read and understand. Asthma has prolonged expiratory times, wheezing, and response to bronchodilator medications. With capnography, EtCO2 is reduced in hyperventilation while potentially increased in asthma. Asthma would also potentially show the shark fin pattern. Students should never simply assume it is drama unless relevant clinical conditions are ruled out.

EMT Discussion Board Questions

Medical Emergencies: Cardiology and Resuscitation	
When would you use a CAB approach, and when would you use an ABC approach? Provide a brief patient presentation/situation for each.	CAB is used when no signs of life (breathing or movement) are observed from the patient. This may be accompanied by poor color and other signs of pulselessness. In the CAB approach, you would go right to a combined pulse and breathing check. If no pulse, begin compressions immediately. Everyone else gets an ABC approach.
The American Heart Association has eliminated pulse checks after each defibrillation. Explain two reasons for this.	One reason is that the more time spent doing compressions, the better pressure for perfusion. Pulse checks take time away from compressions. The other reason is that even with ROSC, blood pressure doesn't just jump up to a normal level immediately. The CPR provides a bridge until the patient's circulation can take over. Terms and concepts to add into posts as subsequent / follow-up questions include: • What does ROSC stand for? • What might you see if a patient does regain a pulse?

EMT Discussion Board Questions

Medical Emergencies: Altered Mental Status

You are dispatched to the scene of a motor vehicle collision. A 46-year-old male is in one vehicle and appears confused. The police say he is intoxicated but want him “checked” before they take him to the station. He has a small red mark on his forehead and no other obvious injury. For this patient: • Explain how you would try to differentiate between a head injury, hypoglycemia, and intoxication. • Do you believe it is in your scope of practice to “clear” patients for the police in situations like this? Why or why not?	There are several things that may be observed or assessed, including blood glucose, breath odors, what the patient states, signs of injury, skin color, temp and condition, vital signs, and more. It is always interesting to see what students come up with. In this case, it isn’t always possible to clear the patient without the assessment and diagnostic tests available at a hospital. The head injury is the complicating factor. It is usually not recommended. Follow up question: If this patient wanted to refuse, would he be able to do so because of his confusion?
There are many different types of seizures. Describe what each of the following would look like when they occur: • Aura • Tonic activity • Clonic activity • Post-ictal period • Absence seizure • Simple partial seizure	This asks for classic definitions of seizures and may be found in the student's textbook. It is designed to get the student into the book or other reference sources and apply a description to them. Follow up question: Why would a patient with a history of seizures experience another seizure if they take medications to prevent them? (answer – patients may not take their medication or take less because of financial considerations or the way it makes them feel. Some stop because they haven’t had a seizure in quite some time.)
Hyperglycemia has signs and symptoms, often referred to as the "three P's" polyuria, polydipsia, and polyphagia. Explain what each one is and why each one is seen in the hyperglycemic patient.	Polyuria – glucose is a large molecule that begins to spill into the urine at about 180 – 200 mg/dL. The large molecule pulls water with it. This causes excess urination. Polydipsia – the patient is thirsty because of dehydration (see excessive urination). Polyphagia – although the blood is high in glucose, the cells in the body can’t access it. So, the body sends out a signal for more food (glucose).

EMT Discussion Board Questions

Medical Emergencies: Altered Mental Status	
The crew before you used all of the test strips in your blood glucometer. There are none available—and you have a diabetic patient. List three things that might indicate your patient is hypoglycemic and three things that might indicate your patient is hyperglycemic.	Hypoglycemia often has a sudden onset. The patient usually has moist skin. The history may include taking more insulin, a runaway insulin pump, an unusual amount of exercise, or decreased intake. IDDM history is also more common. Hyperglycemic patients will usually have dry skin, may have an acetone breath odor, have a history of NIDDM, and experience a gradual onset. If you ask this question along with the one above, ask for things other than the three Ps.
Your patient has a history of Type II/NIDDM diabetes. She has an unusual breath odor and dry, warm skin. No blood glucose measurement is available. Your partner said that the “rule” is “when in doubt, give glucose.” Do you believe this patient should receive oral glucose? Do you believe that rule is appropriate?	Make sure your students know that the history of type II/NIDDM tends to go toward hyperglycemia, and this is compounded by the breath odor (acetone/ DKA) and dry skin. Even without the technology available today, we shouldn't use blanket rules in place of thinking. The issue is that we are hesitant to miss a potentially correctable condition (hypoglycemia). This doesn’t mean we can’t think and assess before making a decision.

EMT Discussion Board Questions

Medical Emergencies: Poisoning and Overdose

You find a 26-year old male in a dormitory room with a needle by his arm. He responds by moaning to a firm trapezius pinch. His vital signs are P 88 R 20 BP 102/68 SaO2 90%, and his skin is warm and dry. • Would you administer naloxone to this patient? • Is there any additional information you would like to know to make this decision?	This question is definitely on the edge – intentionally. His pulse, respirations, and sats don't scream respiratory failure or arrest—and he responds to pain. The main thing is that we want students to make decisions based on their evaluation of his respiratory effort—and not the ability to "wake him up." Asking about respiratory depth, minute volume, chest movement, reevaluation after a time period, or a decision to ventilate show what a student is thinking.
You are called for an unresponsive man at a residence. You find a man unresponsive on the couch. Two other family members say they don't feel well. • What are your first actions? • Are the two other family members patients? Why or why not? • What assessment and care do you provide for patients at this scene?	This is potentially a carbon monoxide situation. Safety first. Realizing the cause is important. All become patients. Assessment and care should be guided by their level of responsiveness with ventilation provided for patients in failure. Carbon monoxide oximetry may be available. Older versions haven't shown to be accurate, but it is worth getting a reading if that technology is available. Oxygen administration is indicated. A great follow-up question would be what students expect the patient's pulse oximetry to be. It may be high because of the binding of carbon monoxide to hemoglobin.

EMT Discussion Board Questions

Medical Emergencies: Allergy and Anaphylaxis

List three ways you could distinguish between an asthma attack and anaphylaxis. Explain how each finding would be valuable.	Hives, hypotension, upper airway sounds/swelling (asthma is a lower airway disease), GI distress and/or diarrhea, and a history of allergies are at the top of the list. Your students may think of others. Both conditions can cause wheezing.
A 25-year-old female was stung by a bee. She is allergic to bee stings. She is alert and complains of a developing “lump in her throat.” She has hives and swelling in her upper arm, where she was stung. Her vitals are P 88 R 16 BP 110/88 SaO2 96% on room air. Should you administer an epinephrine auto-injector? Why or why not? Justify your response.	This was chosen to be a challenging decision. The important part of this discussion is to recognize that many patients fall somewhere in the middle like this. On the administer epi side, we have a sensation in the throat with a prior allergy to bee stings. The pulse pressure is narrowing slightly. On the other hand, the pulse and respirations aren't the worst, and the patient is alert. As a follow-up question, ask what your students would look for to indicate worsening and a need for the auto-injector.

EMT Curriculum Correlation Guide

About the resources in this curriculum guide:

EMT Audio Lecture apps

We have two audio lecture series (EMT and AEMT) as well as a pathophysiology audio series for EMTs and AEMTs. These can help students get the equivalent of an insightful lecture or a solid review to supplement coursework. For details and pricing, visit **http://bit.ly/LCReady-Audio**

EMT Review Plus app

The EMT Review Plus app contains over 1,100 items including study cards, review questions and NREMT-style practice exams, with a rationale for every answer. Critical thinking, medical terminology and pathophysiology are included. For details and pricing, visit **https://bit.ly/EMT-Review-App**

Limmer Education website

Our resources are high quality, clinically accurate, and educationally sound, written by the nation's top EMS and allied health experts. Since 2009, our apps have been used in classrooms and by students all over the world. **LimmerEducation.com/products**