Knowledge Alert!
A New Education Module for Prehospital Providers
Disclosures

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• No financial conflict of interest to disclose
Outline

- Emergency Medical Services
- Team work
- Our education module
- Initial results
- How you can get involved
Patient care starts here
Team Work
Flipped classroom concept
Modules

• Case
• Podcast
• Framework
• Discussion questions
## Sample Schedule

### Week 13
#### Day 2
**Homework**
4/4/2018
11:59pm

**Section 6 – Medical Emergencies**

**Respiratory Emergency Part I**
- Students Read Chapter 8 Anatomy & Physiology (Pages 355-373) The Respiratory Systems and Chapter 16 Respiratory Emergencies including chapter objectives.
- Watch the Anatomy & Physiology of the Respiratory System and Respiratory Emergencies Part I Podcast
- Chapter 8 & 16 Pre-class Quiz (Respiratory A&P Only)
- Create an individual question from chapter 15 to play “stump the chump”

### Week 13
#### Day 2
**4/5/2018 or 4/6/2018**

**Section 6 – Respiratory Emergencies**

**Respiratory Emergencies Part I**

**Classroom Work**
- **Team Challenge Questions**
  - Teams try to stump other teams with a topic question.
- **In-Classroom Quiz Review**
  - Pre-Class Chapter Quiz (Respiratory A&P Only)
- **Chapter 16: Respiratory Vocabulary Activity (Box Activity # 27)**
  - Have the student complete this activity in small groups
- **Chapter 16: Respiratory Anatomy & Physiology Jeopardy (Class Activity # 28)**
  - Student will break up into two group to play the activity
- **Class Debriefing**
  - Students ask questions and discuss course content that they need clarified.
- **Golden Nugget**
  - Student states the most important thing they learned from the lesson
- **Plan for Next Class**
  - Assign and explain the homework for the next class.
  - Assign each student with a topic to present a 10 -20 minute post board presentation to the class next day.
Cases

- Objectives:
  - Review Peri-partum cardiomyopathy
  - Review OB history taking
  - Review physiological changes in pregnancy
  - Review indications for CPAP
  - Discuss challenges with OB airway

- 38 year old pregnant female with 3 days of shortness of breath.
- **General Impression:** Female in mild respiratory distress, tachypnic, normal skin appearance, normal capillary refill
- **Vitals:** BP- 110/90   RR- 25   HR- 105   T 99.0   ETCO2  35
- **HPI:** 38 YO F G2P1 who is 7 months pregnant with her second child present complaining of SOB. She reports onset of symptoms about 3 days ago. She denies any chest pain, back pain, abdominal pain or dizziness. Her prior pregnancy had no complications. She has been following with OB and last had an ultrasound about 1 month ago with normal findings.
- **PMH:** N/A
- **PE:** GCS 15, AAOx4, follows commnds, tachypnic with shallow respirations, mild diaphoresis, CTAB, no wheezing or ronchi, tachycardiac with no auscultated murmurs. Gravid abdomen with no tenderness.
- **Summary:** This is a case of an 38 year old Female about 7 months pregnant who is presenting with dyspnea, tachycardia and increased work of breathing. Pregnancy is a hypercoagulable state which increased the risk of developing DVT and pulmonary embolism. Other high risk differentials for dyspnea during pregnancy will include cardiomyopathy and ACS. Management will include placing patient of supplement oxygen or CPAP depending on the work of breathing.
Podcasts

Basic Principles of Pharmacology

Adam C. Benzing, MD MPH
Emergency Medicine Resident Physician, PGY2
University of Central Florida

Principle of Pharmacology
Orlando Medical Institute
Protocol Frameworks

Approach to abdominal pain

Follow corresponding protocols for:
- Pregnant and/or labor
- Trauma
- Shock
- Nausea & vomiting

Acute and severe pain? SBP > 90?
- Comfortable position
- Verbal reassurance

Analgesics
Morphine, Fentanyl, Ketamine

Life threatening?

Ischemic/perforated bowel
- Fever, nausea, vomiting
- Severe tenderness
- Pain with motion
- Abdominal distension

Intra-abdominal infection
- Fever, nausea, vomiting
- Appendicitis – RLQ
- Acute cholecystitis – RUQ
- Pyelonephritis - flank

Dissecting or ruptured abdominal aortic aneurysm
- Unequal distal pulses
- “pulsatile” abdominal mass
- Known history of AAA

Ruptured ectopic pregnancy
- Vaginal bleeding
- New pregnancy
- Missed period in child bearing age

Ultrasound available?
FAST – free fluid
Aorta – ruptured AAA

Could it be cardiac?

Nothing by mouth!
Discussion Questions

1. What is the difference between respiratory arrest and cardiac arrest? Why do you think respiratory arrest leads to cardiac arrest?

2. A 63 year old patient is found down and has respirations of 9. Do you expect him to have a respiratory acidosis or respiratory alkalosis? What are some potential causes of his hypoventilation? What do you expect his end-tidal to look like? Draw the wave form and give a range.

3. What are some physiological effects that may take place during laryngoscopy if the patient still has a gag reflex? How can we prepare for these? In what types of patients may this be detrimental to?
EMS Curriculum
Education for Everyone
How Did We Do?

• Questionnaire in focus groups
• EMT exam scores
Participants

• 49 students
• 88.6% male
• Average age 29 years old
• 91.7% employed full time
• 65.3% high school/GED was highest level of education
Focus Group Response

• Less test anxiety
• Forces more studying

• Not good for auditory learners
• Harder if you have no previous experience

• Positive opinion = positive results
Get involved!
Thank you

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