Carroll University – MSPAS Program
PHA516: Emergency Medicine
Spring Term 2017

Course number: PHA 516
Course title: Emergency Medicine
Number of credits: 4 credit hours including lab
Day/time: Thursdays 9:30-12:30 with Monday lab sessions 10-12 (see calendar)
Prerequisites: Successful completion of Year 1 Courses to date
Faculty: Ashley Cyr, MPAS, PA-C
Office: Rm 105 Carroll Graduate Center
Office Hours: before and after class and by appointment
Telephone: 608-921-6661 (**text me for fastest responses**) 
E-mail: acyr@carrollu.edu

Course description
This course provides a comprehensive introduction to diagnosis and treatment of common and life-threatening patient presentations in the Emergency Department.

Course Content
This course will utilize symptom based and organ system based readings, lecture, case presentations, group activities, and group discussion to develop the students’ understanding and skills in introductory emergency medicine. Students will learn to evaluate patients, establish broad differential diagnoses for patient presentation, develop a working diagnosis, select and interpret appropriate diagnostic testing and formulate appropriate treatment and follow up plans for urgent and life-threatening conditions seen in any medical practice. This course will prepare the student for an 8-week clinical experience in the Emergency Department.

Student Expectations
- demonstrates a positive attitude toward learning
- is on time for all scheduled classes, including timely return from breaks
- completes readings and assignments prior to class
- asks relevant and understandable questions
- takes full responsibility for learning and self-directed learning activities
- shows respect for self, other students, and faculty
- refrains from revealing negative feelings through tone of voice or body language
- refrains from disruptive activities during class including eating, talking, getting up and down, use of cell phone, etc.
- relies on personal resources before approaching others for help
- demonstrates cooperation with and mutual respect for peers
- responds to faculty, staff and peers readily and appropriately

Instructor Expectations
• demonstrates a positive attitude towards the facilitation of learning
• is on time for all scheduled classes
• should the need arise, reschedules class time with appropriate and timely notification to students, faculty, and staff
• provides appropriate course materials for class preparation prior to class
• is available for office hours or appointments to assist with questions; responds to faculty, staff, and students readily and appropriately
• listens attentively and initiates communication which is appropriate and timely
• identifies limitations in knowledge and provides appropriate resources for student learning
• provides timely and constructive feedback for assignments and assessments
• shows respect for self, students, and other faculty
• refrains from revealing negative feelings through tone of voice or body language
• demonstrates cooperation with and mutual respect for students, faculty, and staff

Required Text and Reading

Current Diagnosis and Treatment Emergency Medicine, 9th edition


Grading

The course grade for the fall semester will be based upon the following

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Attendance and Professionalism

Attendance at all class periods, laboratories, and practical experiences are mandatory unless otherwise indicated. Poor attendance (unexcused absences, tardiness, and unauthorized early departures), lack of preparation, and unprofessional behavior may result in a lower or failing grade and/or be reported to the program progression committee. If you will be absent, tardy, or need to be excused early you must notify the course director via e-mail or phone prior to the scheduled meeting time. Tardiness and unauthorized early departures will be considered unexcused absences unless prior notification is submitted. Unexcused absences of more than 10% of class time may result in a failing grade. Absences are excused only at the discretion of the course director and/or the PA Program Director. Students may be required to make up missed laboratory time (excused or unexcused) at the discretion of the course director.

Examinations

There will be 3 exams during the semester. Please refer to the schedule for details. Exams are case-vignette multiple choice exams and are closed-book. Challenges to examination questions will be accepted for 3 days after the return of scores. Challenges must be submitted in writing via email with two written sources, at least one from recommended course readings.
No books, papers, notebooks, cellphones, smartphones, I-pods, I-pads, blackberry, etc. or backpacks/bookbags will be allowed on/near your desk during an examination. Recommend keeping personal belongings in the back of the room or in lockers. Hats are prohibited during an exam. Cellphones, smartphones, I-pods, I-pads, blackberry, etc must be turned off during an examination.

Exam Schedule

- Exam 1: 2/27- 10:00-12:00 weighted 25%
  - Content will include all material through 2/23 lecture (Intro to ER, vital signs, shock, EENT, psychiatric emergencies, dyspnea, chest pain, ortho and elderly falls, derm, environmental emergencies)
- Exam 2: 4/10-10:00-12:00 weighted 25%
  - Content will include materials from lectures taking place from 3/2-4/6 lectures (Adult trauma, peds emergencies, abdominal pain, GI bleeding, GU/GYN)
- FINAL: Time TBD, weighted 50%
  - Exam will be cumulative, drawing from all aspects of course with emphasis on final lectures from 4/13-4/27. Approximately half of questions will be cumulative and other half will draw from endocrine lectures, sepsis, headaches, AMS, CVA, syncope, seizure, toxicology, bioweapons

Assignments

Assignments will be required and will be outlined on the LMS course site.

Statement on Academic Integrity

The Carroll University Academic Integrity Policy is located in the Carroll University Student Handbook. Students are encouraged to familiarize themselves with it. If a student violates this policy in any way, the instructor(s) reserve the right to impose a sanction of failure on the assignment/assessment or failure in the course. If you have questions about appropriate citations, please ask your instructor.

Accommodation for Disabilities

Any requests for accommodation for physical or cognitive disability must be made through the Walter Young Disability Services Coordinator at Carroll University. Appropriate accommodations will be evaluated based on the program technical standards once notification has been received from the Walter Young coordinator. If an individual student has special needs or concerns about course requirements related to religious beliefs, cultural issues, or other issues, the student must contact the Program Director with a request for accommodation.

Modifications to the syllabus

The instructor and the University reserves the rights to modify, amend, or change the syllabus (schedule, course requirements, grading policy, etc.) as the curriculum and/or program require(s).

Remediation

Students who receive a D or an F in this or any physician assistant year 1 course will be placed on academic probation.

During the course, a student who scores more than 2 SD below the mean on an exam/assessment may be required to complete additional work. The student will be contacted by the course instructor and asked to meet to discuss the remediation requirements for that particular assessment. Remediation requirements will be determined by the
course instructor. When an instructor requires remediation of a student it does not affect the exam/assessment grade, nor does it improve the semester or course grade. Remediation is required to ensure that course objectives are met. It is expected that assigned work for the purpose of remediation be completed in a thorough, professional and timely manner. Satisfactory completion of remediated work will be determined by the course instructor. Students may be required to complete additional work if the original remediation is deemed unsatisfactory.

Students should make every effort to resolve remediation issues with the course director. If a student is unable to resolve such issues s/he may request a review by the Didactic Subcommittee. All decisions made by the subcommittee are final. If remediation is not successfully completed by the end of the course/semester a grade of “Incomplete” will be given until the work is successfully completed. Please note that an incomplete course grade may delay program progression and/or graduation. Information regarding incomplete grades is available in the Graduate Catalog.

Course Goals

1. To build on previously acquired medical knowledge enabling the student to recognize and manage acute urgent and emergent medical conditions.

2. To foster the development of knowledge and skills needed successfully completing the Emergency Medicine clinical rotation.

Learning Outcomes

Students must be able to quickly and accurately assess the patient in front of them in the clinical setting and generate an appropriate differential with corresponding work up and treatment plan. This will be mimicked in the class room setting through a case based approach. Having this understanding will prepare students to succeed academically and on the PANCE as well as professionally.

Learning Objectives

At the conclusion of each of the following lectures, after completing all reading assignments, in class discussion sessions and cases, lecture materials, and successful completion of all exams, the student will be able to:

Introduction to the ED

- Discuss how the ER different than clinic-based practice/ hospital-based practice
- Describe how the practice of medicine is different in the ER than most other areas of medicine
- Identify members of the ER team and their general job descriptions
- Distinguish appropriate and inappropriate ER/staff interactions
- Identify the many access points there are to the ER
- Identify safety issues in the ED
- Identify the legal aspect of ER medicine that may be different in an emergent setting, i.e. EMTALA, obtaining informed consent, refusal of consent, DNR status, police custody; intoxicated patients
- Discuss the basic “flow” of the ER, triage, and initial varied patient presentations
- Identify the components of the primary survey as they pertain to your “triage” of every patient that presents to the ED
• Discuss the importance of the VITAL SIGNS in your initial triage of a patient

• Discuss the importance of establishing a broad differential from the initial chief complaint as presents on the “board”

• Discuss the management of a patient in terms of utilizing prior knowledge to select appropriate history, focused PE, and select labs and diagnostic imaging to narrow that differential

**Shock**

1. Define shock in terms of both the general pathophysiology involved and in terms of the patient’s clinical presentation in shock.

2. Recognize the morbidity and mortality that results from shock which is undiagnosed, untreated, or unable to be resolved

3. For the following:
   a. Hypovolemic shock
   b. Cardiogenic shock
   c. Distributive shock
   d. Obstructive shock

4. Identify the specific pathophysiologic process involved in each

5. Develop a broad differential diagnosis for each

6. Compare and contrast the above list in #3, in regard to:
   a. patient clinical presentation
      i. VS, mental status, pain/distress level (i.e., hemodynamic status)
   b. patient history (select most pertinent history based on clinical presentation above)
      i. RF’s, PMH, medications (compliance), surgical history, family history, social history
   c. patient physical exam findings
      i. focused for pertinent positive and pertinent negative findings

7. In a patient who presents with chief complaint of shock:
   a. Interpret VS in order to triage the patient for emergent intervention
   b. Use historical information to quickly form a broad differential of possible etiologies
   c. Select focused physical examination needed, and interpret your findings.
   d. From broad differential and focused H&P results, select and interpret appropriate laboratory and imaging studies.
   e. Formulate a working diagnosis from your H&P, lab, and imaging results.
   f. Identify appropriate emergent intervention as necessary
g. Select appropriate therapeutics for the acute emergent presentation

h. Anticipate future potential complications

8. Initiate primary intervention for patient presenting in shock

9. Select the appropriate inpatient setting (HCU, ICU, medical floor with telemetry, medical floor (no tele), surgical floor) for a clinical case given

10. Predict the consultation that will be required (identify the appropriate referral pattern)

11. Anticipate future potential complications prior to the transfer of the patient to the floor

**EENT Emergencies**

1. Identify the key historical clues and PE findings in a patient with the following EENT problems:
   
a. Hyphema
   
b. Acute angle closure glaucoma
   
c. Retinal detachment/vitreous detachment
   
d. Retinal artery or vein occlusion
   
e. Blow out fracture
   
f. Corneal FB
   
g. Globe rupture
   
h. TM rupture
   
i. Foreign bodies in ears, nose, and throat
   
j. Epistaxis
   
k. Epiglottis
   
l. Angioedema
   
m. Peritonsillar abscess
   
n. Dental fractures
   
o. Croup

2. Compare and contrast above relative to:
   
a. patient clinical presentation
   
i. VS, mental status, pain/distress level (i.e., hemodynamic status)
   
b. patient history (select most pertinent history based on clinical presentation above)
   
i. RF’s, PMH, medications (compliance), surgical history, family history, social history
   
c. patient physical exam findings
   
i. focused for pertinent positive and pertinent negative findings
3. Identify appropriate emergent intervention as necessary
4. Select appropriate therapeutics for the acute emergent presentation
5. Anticipate future potential complications
6. Predict the consultation that will be required (identify the appropriate referral pattern)
7. If the patient will be discharged, choose the appropriate follow up in terms of verbal and written discharge instructions, appropriate follow up with PMD, consultants.

**Psychiatric emergencies**

1. Review and understand Figure 49-1 from text.
2. Role of restraints and types
3. Understand taking targeted psych history and components
4. Review physical exam for medical clearance
5. Understand relevant labs needed for clearance
   a. Remember that there may be a medical etiology causing a psychiatric emergency and consider this when working up a patient
   b. Be able create a differential of common medical etiologies manifesting this way
6. Understand presentation and management of the following
   a. Acute drug withdrawal (etoh, cocaine, narcotics)
   b. Schizophrenia
   c. Neuroleptic malignant syndrome
   d. Serotonin syndrome
   e. Manic episode
   f. Acute suicidal patient

**SOB/hypoxia**

1. Generate a broad differential diagnosis for presentation of SOB with hypoxia and presentation of SOB without hypoxia.
2. For each disease state in your differential diagnosis, identify risk factors for each and use this information to stratify likelihood:
   a. List risk factors for pulmonary embolism
   b. List risk factors for COPD, including severity risk
   c. List risk factors for asthma, including severity risk
   d. List risk factors for coronary artery disease
   e. List risk factors for CHF
f. List risk factors (most common etiologies) for pleural effusion

g. List risk factors for pneumothorax (spontaneous, traumatic, iatrogenic)

h. List risk factors for pneumonia

i. List risk factors for pleuritis

j. List risk factors for DKA/metabolic issues

3. Compare and contrast the above list in #2, in regard to:

   a. patient clinical presentation

      i. VS, mental status, pain/distress level (i.e., hemodynamic status)

   b. patient history (select most pertinent history based on clinical presentation above)

      i. RF’s, PMH, medications (compliance), surgical history, family history, social history

   c. patient physical exam findings

      i. focused for pertinent positive and pertinent negative findings

4. In a patient who presents with chief complaint of SOB:

   a. Interpret VS in order to triage the patient for emergent intervention

   b. Use historical information to quickly form a broad differential of possible etiologies

   c. Select focused physical examination needed, and interpret your findings.

   d. From broad differential and focused H&P results, select and interpret appropriate laboratory and imaging studies.

   e. Formulate a working diagnosis from your H&P, lab, and imaging results.

   f. Identify appropriate emergent intervention as necessary

   g. Select appropriate therapeutics for the acute emergent presentation

   h. Anticipate future potential complications

5. If the patient will be admitted to the hospital, choose the appropriate inpatient setting (HCU, ICU, medical floor with telemetry, medical floor (no tele), surgical floor)

6. Predict the consultation that will be required (identify the appropriate referral pattern)

7. Anticipate future potential complications prior to the transfer of the patient to the floor

8. If the patient will be discharged, choose the appropriate follow up in terms of verbal and written discharge instructions, appropriate follow up with PMD, consultants

**Chest pain and arrhythmia**

1. Generate a broad differential diagnosis for presentation of angina CP and presentation of pleuritic chest pain.
2. For each disease state in your differential diagnosis, identify risk factors for each and use this information to stratify likelihood:
   a. List risk factors for coronary artery disease
   b. List risk factors for pulmonary embolism
   c. List risk factors for thoracic aortic aneurysm
   d. List risk factors for pneumothorax (spontaneous, traumatic, iatrogenic)
   e. List risk factors for pericarditis
   f. List risk factors for pleuritis
   g. List risk factors for GERD

3. Compare and contrast pleuritic chest pain and angina chest pain in regard to:
   a. patient clinical presentation
      i. VS, mental status, pain/distress level (i.e., hemodynamic status)
   b. patient history (select most pertinent history based on clinical presentation above)
      i. RF’s, PMH, medications (compliance), surgical history, family history, social history
   c. patient physical exam findings
      i. focused for pertinent positive and pertinent negative findings

4. In a patient who presents with chief complaint of chest pain:
   a. Interpret VS in order to triage the patient for emergent intervention
   b. Identify any arrhythmias and intervene appropriately (primarily covered in ACLS but brief review)
   c. Use historical information to quickly form a broad differential of possible etiologies
   d. Select focused physical examination needed, and interpret your findings.
   e. From broad differential and focused H&P results, select and interpret appropriate laboratory and imaging studies.
   f. Formulate a working diagnosis from your H&P, lab, and imaging results.
   g. Identify appropriate emergent intervention as necessary
   h. Select appropriate therapeutics for the acute emergent presentation
   i. Anticipate future potential complications

5. If the patient will be admitted to the hospital, choose the appropriate inpatient setting (HCU, ICU, medical floor with telemetry, medical floor (no tele), surgical floor)

6. Predict the consultation that will be required (identify the appropriate referral pattern)

7. Anticipate future potential complications prior to the transfer of the patient to the floor
8. If the patient will be discharged, choose the appropriate follow up in terms of verbal and written discharge instructions, appropriate follow up with PMD, consultants.

**Orthopedics and Vascular**

Much of ortho is covered in trauma lectures, however because the emergency department sees so much orthopedics, we will focus some common presentations that you will see time and time again. Understand the presentation and management:

1. Back pain and cauda equina syndrome
2. Compartment syndrome
3. Shoulder fracture and dislocations
4. supracondylar fractures
5. wrist fractures
6. boxers fracture
7. scaphoid fracture
8. tendon lacerations
9. hip fracture
10. knee dislocation and injuries
11. Achilles rupture
12. ankle sprains and fractures

**Dermatologic and Vascular**

Understand the presentation, risk factors and management of the following:

1. Angioedema and urticaria
2. Stevens Johnson and toxic shock syndrome
3. Scalded skin
4. Acute red leg
   a. DVT
   b. Cellulitis
5. Arterial occlusion
6. Impetigo
7. Contact dermatitis
8. Herpes zoster
9. Herpes simplex
10. Other common rashes: tinea, pityriasis, scabies
**Environmental Emergencies (burns, hypothermia, weather related injuries and bites)**

1. Review initial wound care for burn patients
2. Review physiologic changes and fluid requirements for burn patients
3. Recognize the signs and symptoms of patient, depending on degree of hypothermia
4. Review warming techniques for hypothermic patients
5. Discuss the pathophysiology causing damage in frostbite/chilblains (pernio)
6. Select appropriate treatment depending on severity of skin injury
7. Compare and contrast heat edema; heat syncope, heat cramps, heat exhaustion; and heat stroke based on H&P findings
8. Predict complications for patient presenting with hyperthermia
9. Select appropriate intervention for patient with hyperthermia
10. Select the appropriate clinical management of a patient presenting with an animal bite

**Adult Trauma I & II**

1. Discuss the epidemiology of trauma in both adults and pediatric patients
2. Evaluate and manage the acutely injured patient
   a. List components of the primary survey
   b. Initiate resuscitation as warranted
   c. List component of the secondary survey
   d. Identify components of definitive care related to specific injury
3. Predict likelihood of injuries based on the mechanism of injury
4. Identify shock, respond appropriately (covered in prior lecture)
5. Describe the following types of impact and the effect of each on an unrestrained victim
   a. Down and under
   b. Up and over
   c. Compression
   d. Deceleration
6. Describe pathophysiology of head, spine, thorax and abdominal trauma that results from the forces listed above
7. Identify the types of trauma, and most likely results to the patient
   a. Blunt trauma (organ injuries)
      i. Compression
ii. Rapid change of speed

b. MVC
   i. Head on impact
   ii. Acceleration/deceleration
   iii. Abdomen point of impact
   iv. Head point of impact
   v. Auto-pedestrian

c. Falls
   i. Ground level falls
   ii. Vertical falls > 3x height of the patient = severe injuries

d. Penetrating trauma – all cause tissue disruption

e. Blast injuries

f. Burns
   i. Covered in separate lecture

8. Explain the role of radiologic imaging in the care of an acutely injured patient
   a. Select in order the most appropriate imaging studies based on MOI and patient presentation

9. In a patient who presents with acute traumatic injury/ies:
   a. Interpret VS in order to triage the patient for emergent intervention
   b. Head trauma
      i. Predict head injury probability based on MOI, patient characteristics, H & P
      ii. Recognize the following on CT imaging
         1. Subdural hematoma
         2. Epidural hematoma
         3. Intracerebral hemorrhage
         4. SAH
      iii. List the components necessary in H & P that would NOT necessitate CT imaging
   c. Spinal trauma
      i. Predict spinal injuries based on the MOI
      ii. Describe assessment findings associated with spinal injuries
      iii. Differentiate spinal injuries on the basis of assessment and history
iv. Review C spine immobilization and “clearing the C spine”

v. Review procedure for removing patient from “long board”

vi. List the components necessary in H & P that would NOT necessitate imaging

d. Thoracic Trauma

i. Predict thoracic trauma probability based on MOI patient history and PE findings

ii. Describe assessment findings associated with thoracic trauma

iii. Identify the need for rapid intervention of patient with traumatic thoracic injuries and traumatic asphyxia

iv. Recognize PE findings in patient with tension pneumothorax and select appropriate intervention

v. Recognize PE findings in patient with pericardial tamponade and select appropriate intervention

vi. Recognize assessment findings in patient with vascular injuries

e. Abdominal trauma

i. Predict likelihood of abdominal trauma based on MOI, patient H&P

ii. Select appropriate clinical intervention for penetrating trauma to the abdomen

iii. Select appropriate clinical intervention for blunt force trauma/organ rupture

f. Identify appropriate emergent intervention as necessary

10. If the patient will be admitted to the hospital, choose the appropriate inpatient setting (HCU, ICU, medical floor with telemetry, medical floor (no tele), surgical floor)

11. Predict the consultation that will be required (identify the appropriate referral pattern)

12. Anticipate future potential complications prior to the transfer of the patient to the floor

13. If the patient will be discharged, choose the appropriate follow up in terms of verbal and written discharge instructions, appropriate follow up with PMD, consultants.

Pediatric Emergencies

Trauma and Abuse

1. Review scope of pediatric morbidity and mortality from injury

2. Understand contemporary management of pediatric solid organ injury

3. Discuss the use of skin substitutes and dermal templates for contemporary burn management

4. Identify non accidental trauma in infants and children

5. Recognize potential hazards of cumulative radiation exposure and use in clinical decision making about selection of appropriate diagnostic imaging

6. Review Salter Harris fractures
7. Nursemaids

**Fever**
1. Understand the common and most dangerous etiologies of fevers based on age
2. Appropriately work up an infant of any given age with correct diagnostics and treatment
3. Understand antipyretic indications and dosing

**Abdominal pain**
1. Generate a broad differential diagnosis for presentation of acute abdominal pain for each of the following population categories:
   a. Pediatric patients
   b. Adolescent patients
   c. Adults
   d. Geriatric patients
   e. Pregnant patients
   f. Male vs. female patients
2. For each disease state in your differential diagnosis, identify risk factors for each and use this information to stratify likelihood:
   a. List risk factors for acute myocardial infarction
   b. List risk factors for abdominal aortic aneurysm (AAA)
   c. List risk factors for mesenteric ischemia
   d. List risk factors for perforated gastric/duodenal ulcer, bowel, GI tract
   e. List risk factors for bowel obstruction
   f. List risk factors for ectopic pregnancy
   g. List risk factors for placental abruption
   h. List risk factors for spontaneous splenic rupture
   i. List risk factors for acute biliary tract disease, including pancreatitis
   j. List risk factors for incarcerated hernia
   k. List risk factors for complications of bariatric surgery
   l. List risk factors for spontaneous bacterial peritonitis
   m. List risk factors for gastroenteritis
3. Compare and contrast the above diagnoses listed in #2 above, in regard to:
   a. patient clinical presentation
i. VS, mental status, pain/distress level (i.e., hemodynamic status)

b. patient history (select most pertinent history based on clinical presentation above)
   i. RF’s, PMH, medications (compliance), surgical history, family history, social history

c. patient physical exam findings
   i. focused for pertinent positive and pertinent negative findings

4. In a patient who presents with chief complaint of acute abdominal pain:
   a. Interpret VS in order to triage the patient for emergent intervention
   b. Use historical information to quickly form a broad differential of possible etiologies
   c. Select focused physical examination needed, and interpret your findings.
   d. From broad differential and focused H&P results, select and interpret appropriate laboratory and imaging studies.
   e. Formulate a working diagnosis from your H&P, lab, and imaging results.
   f. Identify appropriate emergent intervention as necessary
   g. Select appropriate therapeutics for the acute emergent presentation
   h. Anticipate future potential complications

5. If the patient will be admitted to the hospital, choose the appropriate inpatient setting (HCU, ICU, medical floor with telemetry, medical floor (no tele), surgical floor)

6. Predict the consultation that will be required (identify the appropriate referral pattern)

7. Anticipate future potential complications prior to the transfer of the patient to the floor

8. If the patient will be discharged, choose the appropriate follow up in terms of verbal and written discharge instructions, appropriate follow up with PMD, consultants.

**GI Bleed**

1. Identify anatomically the most common causes of UGI bleeds (those structures above the Ligament of Trietz) and LGI bleeds (those below the Ligament of Trietz)

2. Recognize clinical presentation that suggests an UGI bleed, and presentation that suggests LGI bleed.

3. Based on presentation, VS, and rapid assessment, triage patients who either are hemodynamically unstable or likely to become unstable in the near future

4. Initiate appropriate emergent intervention in patient with GI bleed who is/or is likely to become hemodynamically unstable.

5. For the following UGI bleeding diagnoses:
   a. Erosive esophagitis/gastritis
   b. Mallory-Weiss tear
   c. Boerhaave’s effort rupture
d. Caustic ingestions

e. Neoplasm – esophageal/gastric

f. Varices – esophageal/gastric

g. PUD

h. Gastric AVM/angiodysplasia
   i. Interpret VS in order to triage the patient for emergent intervention
   ii. Use historical information to quickly form a broad differential of possible etiologies
   iii. Select focused physical examination needed, and interpret your findings.
   iv. Select and interpret appropriate labs
   v. Select and interpret appropriate imaging studies
   vi. Formulate a working diagnosis from your H&P, lab, and imaging results.
   vii. Identify appropriate emergent intervention as necessary
   viii. Select appropriate therapeutics for the acute emergent presentation
   ix. Anticipate future potential complications

6. For the following LGI bleeding diagnoses:
   a. Diverticular hemorrhage
   b. IBD (Crohn’s, ulcerative colitis)
   c. Mesenteric ischemia
   d. Infections (enterocolitis, infectious dysentery)
   e. AVM
   f. Hemorrhoids, fissures
   g. Neoplasm
   h. Post-op
      i. Interpret VS in order to triage the patient for emergent intervention
      ii. Use historical information to quickly form a broad differential of possible etiologies
      iii. Select focused physical examination needed, and interpret your findings.
      iv. Select and interpret appropriate labs
      v. Select and interpret appropriate imaging studies
      vi. Formulate a working diagnosis from your H&P, lab, and imaging results.
      vii. Identify appropriate emergent intervention as necessary
viii. Select appropriate therapeutics for the acute emergent presentation
ix. Anticipate future potential complications

7. If the patient will be admitted to the hospital, choose the appropriate inpatient setting (ICU, medical floor with telemetry, medical floor (no tele), surgical floor)

8. Predict the consultation that will be required (identify the appropriate referral pattern)

9. Anticipate future potential complications prior to the transfer of the patient to the floor

10. If the patient will be discharged, choose the appropriate follow up in terms of verbal and written discharge instructions, appropriate follow up with PMD, consultants.

**Endocrine emergencies/electrolyte abnormalities/acid-base abnormalities**

1. Generate a broad differential diagnosis and identify risk factors for each of the following topics:
   a. List risk factors for DKA
   b. List risk factors for hyperosmolar coma
   c. List risk factors for acute adrenal crisis
   d. List risk factors for thyroid storm
   e. List risk factors hypocalcemia
   f. List risk factors hyperkalemia/hypokalemia
   g. List risk factors for hyponatremia
   h. List risk factors for acid-base abnormality

2. Compare and contrast the above list in #1, in regard to:
   a. patient clinical presentation
      i. VS, mental status, pain/distress level (i.e., hemodynamic status)
   b. patient history (select most pertinent history based on clinical presentation above)
      i. RF’s, PMH, medications (compliance), surgical history, family history, social history
   c. patient physical exam findings
      i. focused for pertinent positive and pertinent negative findings

3. In a patient who presents with problems listed in #1:
   a. From focused H&P results, select and interpret appropriate laboratory and imaging studies.
   b. Formulate a working diagnosis from your H&P, lab, and imaging results.
   c. Identify appropriate emergent intervention as necessary
   d. Select appropriate therapeutics for the acute emergent presentation
   e. Anticipate future potential complications
4. If the patient will be admitted to the hospital, choose the appropriate inpatient setting (HCU, ICU, medical floor with telemetry, medical floor (no tele), surgical floor)

5. Predict the consultation that will be required (identify the appropriate referral pattern)

6. Anticipate future potential complications prior to the transfer of the patient to the floor

7. If the patient will be discharged, choose the appropriate follow up in terms of verbal and written discharge instructions, appropriate follow up with PMD, consultants.

Headache

1. Generate a broad differential diagnosis for presentation of acute headache or acute on chronic headache.

2. For each disease state in your differential diagnosis, identify risk factors for each and use this information to stratify likelihood:
   a. List risk factors for intracranial hemorrhage
   b. List risk factors for brain malignancy
   c. List risk factors for migraine headache/cluster headache
   d. List risk factors for encephalitis
   e. List risk factors for meningitis
   f. List risk factors subdural/epidural hematomas
   g. List risk factors for

3. Compare and contrast the above list in #2, in regard to:
   a. patient clinical presentation
      i. VS, mental status, pain/distress level (i.e., hemodynamic status)
   b. patient history (select most pertinent history based on clinical presentation above)
      i. RF’s, PMH, medications (compliance), surgical history, family history, social history
   c. patient physical exam findings
      i. focused for pertinent positive and pertinent negative findings

4. In a patient who presents with chief complaint of headache:
   a. Interpret VS in order to triage the patient for emergent intervention
   b. Use historical information to quickly form a broad differential of possible etiologies
   c. Select focused physical examination needed, and interpret your findings.
   d. From broad differential and focused H&P results, select and interpret appropriate laboratory and imaging studies.
   e. Formulate a working diagnosis from your H&P, lab, and imaging results.
   f. Identify appropriate emergent intervention as necessary
g. Select appropriate therapeutics for the acute emergent presentation

h. Anticipate future potential complications

5. If the patient will be admitted to the hospital, choose the appropriate inpatient setting (ICU, medical floor with telemetry, medical floor (no tele), surgical floor)

6. Predict the consultation that will be required (identify the appropriate referral pattern)

7. Anticipate future potential complications prior to the transfer of the patient to the floor

8. If the patient will be discharged, choose the appropriate follow up in terms of verbal and written discharge instructions, appropriate follow up with PMD, consultants.

**AMS/CVA/TIA**

1. Generate a broad differential diagnosis for presentation of altered mental status, presentation of stroke/TIA, syncope, and vertigo.

2. For each disease state in your differential diagnosis, identify risk factors for each and use this information to stratify likelihood:
   a. List risk factors for stroke/TIA
   b. List risk factors for syncope

3. For the four main topics in today’s lesion (AMS, CVA, syncope, vertigo), compare and contrast them according to:
   a. Patient clinical presentation
      i. VS, mental status, pain/distress level (i.e., hemodynamic status)
   b. Patient history (select most pertinent history based on clinical presentation above)
      i. RF’s, PMH, medications (compliance), surgical history, family history, social history
   c. Patient physical exam findings
      i. focused for pertinent positive and pertinent negative findings

4. In a patient who presents with chief complaint of altered mental status:
   a. Interpret VS in order to triage the patient for emergent intervention
   b. Use historical information to quickly form a broad differential of possible etiologies
   c. Select focused physical examination needed, and interpret your findings.
   d. Select and interpret appropriate laboratory and imaging studies
   e. Formulate a working diagnosis from your H&P, lab, and imaging results.
   f. Identify appropriate emergent intervention as necessary
   g. Select appropriate therapeutics for the acute emergent presentation
   h. Anticipate future potential complications
5. In a patient who presents with chief complaint of CVA:
   a. Interpret VS in order to triage the patient for emergent intervention
   b. Use historical information to quickly form a broad differential of possible etiologies
   c. Once CVA etiology is considered, establish the most important historical information that must be gathered immediately in order to initiate your next steps in management.
   d. Select focused physical examination needed, and interpret your findings.
   e. Select and interpret appropriate laboratory and imaging studies based on whether you have determined this patient to be a tPA candidate or not.
   f. Formulate a working diagnosis from your H&P, lab, and imaging results.
   g. Identify appropriate emergent intervention as necessary
   h. Select appropriate therapeutics for the acute emergent presentation
   i. Anticipate future potential complications

6. In a patient who presents with chief complaint of syncope:
   a. Interpret VS in order to triage the patient for emergent intervention
   b. Use historical information to quickly form a broad differential of possible etiologies
   c. Select focused physical examination needed, and interpret your findings.
   d. Include PE for any injuries that occurred during the syncopal event.
   e. Select and interpret appropriate laboratory and imaging studies as warranted based on your history & PE findings.
   f. Formulate a working diagnosis from your H&P, lab, and imaging results.
   g. Identify appropriate emergent intervention as necessary
   h. Select appropriate therapeutics for the acute emergent presentation
   i. Anticipate future potential complications

7. In a patient who presents with chief complaint of vertigo:
   a. Interpret VS in order to triage the patient for emergent intervention
   b. Use historical information to quickly form a broad differential of possible etiologies
   c. Select focused physical examination needed, and interpret your findings in order to establish a diagnosis of peripheral or central vertigo.
   d. Select and interpret appropriate laboratory and imaging studies as warranted based on your assessment in 7c.
   e. Formulate a working diagnosis from your H&P, lab, and imaging results.
   f. Identify appropriate emergent intervention as necessary
g. Select appropriate therapeutics for the acute emergent presentation

h. Anticipate future potential complications

8. If the patient will be admitted to the hospital, choose the appropriate inpatient setting (HCU, ICU, medical floor with telemetry, medical floor (no tele), surgical floor)

9. Predict the consultation that will be required (identify the appropriate referral pattern)

10. Anticipate future potential complications prior to the transfer of the patient to the floor

11. If the patient will be discharged, choose the appropriate follow up in terms of verbal and written discharge instructions, appropriate follow up with PMD, consultants.

**Toxicology, Drug-Seeking Behavior**

For the following commonly abused medications and poisons:

- Prescription medications
- Over the counter medications
- Illegal drugs
- Household items

1. Recognize and identify the signs and symptoms of drugs of abuse

2. Recognize the long term consequences of continued abuse of substances; both physically and psychologically

3. Identify those substances that are detectable on drug screen testing, and those that are not

4. Discuss the physical dangers and the drug abuse potential for substances commonly abused

5. Select treatment options for patients who present with drug abuse symptoms

6. Identify resources in the Waukesha area for long-term management of drug abuse/addiction problems

Summarize the toxicology associated with, and highlight treatments based off of the mechanism of toxicity of the following:

- Acetaminophen
- Salicylates
- Tricyclic Antidepressants
- Volatile Liquids
- Beta-Blocker and/or Calcium Channel Blocker
- Anticholinergics and/or Antihistamines

**Course Schedule**

*Schedule is subject to change*
<table>
<thead>
<tr>
<th>Date and Time</th>
<th>Topic/System</th>
<th>Presenter</th>
<th>{May include reading or other information}</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/26/17 9:30-12:30</td>
<td>Intro, Vitals, Shock</td>
<td>Ashley Cyr, PA-C</td>
<td>Chap 1, 5, 11</td>
</tr>
<tr>
<td>2/2/17 9:30-12:30</td>
<td>Eye and ENT Emergencies, Psych</td>
<td>Ashley Cyr, PA-C</td>
<td>Chap 31, 32, 49</td>
</tr>
<tr>
<td>2/9/17 9:30-12:30</td>
<td>Respiratory Emergencies</td>
<td>Ashley Cyr, PA-C</td>
<td>Chap 13, 33</td>
</tr>
<tr>
<td>MONDAY, 2/13/17</td>
<td>LAB SESSION</td>
<td>Ashley Cyr, PA-C</td>
<td></td>
</tr>
<tr>
<td>10-12</td>
<td>Cardiopulmonary Cases, Respiratory Equipment</td>
<td></td>
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</tr>
<tr>
<td>2/16/17 9:30-12:30</td>
<td>Chest Pain, Arrhythmias</td>
<td>Ashley Cyr, PA-C</td>
<td>Chap 14, 34, 35</td>
</tr>
<tr>
<td>2/23/17 9:30-12:30</td>
<td>Ortho, Derm, hypo/hyperthermia, adult fever eval</td>
<td>Ashley Cyr, PA-C</td>
<td>Chap 21, 28, 29, 48</td>
</tr>
<tr>
<td>MONDAY, 2/27/17</td>
<td>EXAM ONE—Includes material through 2/23—25%</td>
<td></td>
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<td>10:00-12:00</td>
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<tr>
<td>3/2/17 9:30-12:30</td>
<td>Adult Trauma</td>
<td>Terry McMillan, MD</td>
<td>Chap 12, 22-29</td>
</tr>
<tr>
<td>MONDAY, 3/6/2017</td>
<td>LAB SESSION</td>
<td>Ashley Cyr, PA-C</td>
<td></td>
</tr>
<tr>
<td>10-12</td>
<td>Approach to falls, orthopedic injuries and splinting</td>
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</tr>
<tr>
<td>3/9/17 9:30-12:30</td>
<td>Adult Trauma</td>
<td>Terry McMillan, MD</td>
<td>See above</td>
</tr>
<tr>
<td>3/23/17 9:30-12:30</td>
<td>Peds Emergencies</td>
<td>Ashley Cyr, PA-C</td>
<td></td>
</tr>
<tr>
<td>3/30/16 9:30-12:30</td>
<td>Abdominal Pain, GI bleed</td>
<td>Ashley Cyr, PA-C</td>
<td>Chap 15, 16, 36, 38, 39</td>
</tr>
<tr>
<td>4/3/2017 10:00-12:00</td>
<td>MONDAY, LAB SESSION</td>
<td>Ashley Cyr, PA-C</td>
<td></td>
</tr>
<tr>
<td>4/6/17 9:30-12:30</td>
<td>Abdominal Pain GU/GYN</td>
<td>Ashley Cyr, PA-C</td>
<td>See above</td>
</tr>
<tr>
<td>MONDAY 4/10/17</td>
<td>EXAM TWO—Includes material 3/2-4/6—25%</td>
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<td>10:00-12:00</td>
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<tr>
<td>4/13/17 9:30-12:30</td>
<td>Endocrine, lytes, and HA</td>
<td>Ashley Cyr, PA-C</td>
<td>Chap 20, 43, 44</td>
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<tr>
<td>Date</td>
<td>Time</td>
<td>Topic</td>
<td>Instructor</td>
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<tr>
<td>4/20/17</td>
<td>9:30-12:30</td>
<td>Toxicology, drug seeking behavior, bioweapons</td>
<td>Eric Schmitt, PharmD</td>
</tr>
<tr>
<td>4/24/17</td>
<td>10:00-12:00</td>
<td>LAB SESSION Neuro anatomy review, lumbar puncture</td>
<td>Ashley Cyr, PA-C</td>
</tr>
<tr>
<td>4/27/17</td>
<td>9:30-12:30</td>
<td>Neuro, AMS, CVA, syncope, seizure</td>
<td>Ashley Cyr, PA-C</td>
</tr>
<tr>
<td>5/4/17</td>
<td></td>
<td>Reading Day (no class)—if there is interest I usually do a review session at some point before finals</td>
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<tr>
<td>TBD</td>
<td></td>
<td>FINAL—cumulative, with emphasis on 4/13-4/27/17 material—50%</td>
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