

**Sydney Medical School
University of Sydney
Discipline of Emergency Medicine**

Emergency Rotation- 2017

STUDENT EMERGENCY ROTATION LEARNING OBJECTIVES

1. Attend organised ED rounds and teaching sessions as outlined by your supervisor on day one of the Emergency Rotation
2. Present a “hot case” you have seen in the ED to an ED doctor including history, examination, provisional and differential diagnoses and initial investigations and management
3. Attend an informal session on “Principles of Performing Procedures in the Emergency Department”, using insertion of a chest drain as an example.
 - a. Observe a common ED procedure such as lumbar puncture, joint relocation, cardiopulmonary resuscitation, defibrillation, chest drain
4. Attend a weekly 1hour group discussion. The student will have completed the mandatory materials in preparation for this session. The tutor will facilitate the session with the expectation that students will be able to complete the designated section of the workbook following completion of the session
5. Complete an evening shift during the term in the Emergency Department, the focus is to obtain an overview of how an ED and its systems, e.g. Trauma call, acute resuscitation system and MET calls, work.

STUDENT EMERGENCY ROTATION LEARNING TOPICS

1. The introductory foundation learning topic is to be completed upon commencing the rotation. This learning topic focuses on fundamental knowledge necessary to function effectively in the ED environment.
2. This is then followed by the five core learning topics for students to complete.
3. Each learning topic will focus only on the fundamental aspects of essential knowledge.
4. Students will be required to complete mandatory learning materials as set out in this document
5. Students may be directed by their tutors to supplementary learning material by accessing <http://cdemcurriculum.org>

**INTRODUCTORY LEARNING TOPIC- GENERAL APPROACH TO THE
UNDIFFERENTIATED PATIENT PRESENTING TO THE EMERGENCY DEPARTMENT**

Learning Topic:

Sick patients presenting for emergency care often do so in an undifferentiated manner. By “undifferentiated” we mean a patient with a problem the cause of which is not known at the time of presentation. A fundamental component of ED

care is therefore having an effective strategy to manage a patient presenting with an undifferentiated clinical problem. This requires developing a systematic approach to assessment and stabilization, and should the patient acutely deteriorate, initiating good quality essential life support. The mastery of these fundamental skills is the first step toward confident and safe care of patients in the ED.

Learning Objectives:

1. Demonstrate a systematic approach to the clinical assessment of the undifferentiated patient presenting to the emergency department.
2. Discuss the initial management of the undifferentiated patient using the DR ABCDE approach.
3. Describe the time-line for performing resuscitation, secondary care and tertiary care in the ongoing delivery of care to the undifferentiated patient.
4. Discuss the importance of repeated and timely reassessment of the undifferentiated patient.
5. Demonstrate the principles of essential life support for a collapsed/arrested patient in the emergency department - BLS/ALS.

Learning Resources:

1. View the following lecture- Assessing the sick patient
<https://vimeo.com/36334761>
2. Attend the lecture and discussion group on, The undifferentiated patient in the Emergency Department.
3. Attend a session on BLS/ALS.

CORE LEARNING TOPIC 1- CHEST PAIN

Learning topic

Chest pain is one of the most common chief complains in emergency medicine. Students need to become proficient in the assessment and stabilization of patients presenting with chest pain to the ED. Chest pain has an extensive differential diagnosis. The focus is on chest pain requiring emergency care, such as acute coronary syndrome, pulmonary embolism, aortic dissection and pneumothorax.

Learning Objectives

1. List the critical diagnoses for chest pain.
2. Describe the initial actions that should be taken for patients with chest pain.
3. Review the role of the ECG
4. List non-emergent causes of chest pain

Learning Resources:

- Mandatory
 - View the lecture on chest pain <https://vimeo.com/35310303#at=3>,
 - Go to <http://embasic.org/> and listen to the podcast one chest pain
 - Complete the EM workbook section and bring this to class for further discussion with your tutor

CORE LEARNING TOPIC 2- SHORTNESS OF BREATH

Learning Topic

Shortness of breath is frequently the chief complaint in the emergency department (ED) and is commonly associated with hospital admission. Students need to become

proficient in the assessment of these patients, as delayed diagnosis and treatment of underlying conditions can lead to substantial morbidity and mortality. The focus is on the common disorders: asthma, COPD, pneumonia, pulmonary oedema, pneumothorax, and pleural effusion.

Learning Objectives

1. List the life-threatening causes of shortness of breath with a focus on respiratory distress
2. Describe the initial approach to a patient with shortness of breath
3. Discuss the initial management plan for a patient with shortness of breath and respiratory distress

Learning Resource

- Mandatory
 - View the lecture on shortness of breath
<https://vimeo.com/35310564>
 - Go to <http://embasic.org/> and listen to the podcast on shortness of breath
 - Complete the EM workbook section and bring this to class for further discussion with your tutor

CORE LEARNING TOPIC 3- ALTERED MENTAL STATE

Learning Topic.

Diagnosing a patient with a change in mental status can be a daunting challenge in the ED. The differential diagnosis of AMS is exhausting. Students need to be proficient in distinguishing organic from non-organic causes of AMS. The focus will be on approaching AMS in terms of: primary CNS or structural, metabolic, toxic, pharmacologic, infectious disorders and considering other disorders such as mental or psychiatric related disease.

The student will also develop an approach to acute onset headache

Learning Objectives

1. Recognize the importance of historical factors in diagnosing causes of AMS
2. Identify dementia, delirium and psychosis as the three most common classifications of AMS
3. Articulate a differential diagnosis of AMS based on H&P findings
4. Construct an approach to the diagnostic workup and management of a patient with AMS
5. Describe initial management of many causes of AMS
6. Discuss the disposition of a patient with AMS

AMS-Headache

1. List the common causes and emergent differential diagnosis of headache
2. Explain the importance of a complete neurological exam in the evaluation of all headache patients
3. Describe the time-sensitive treatment options for ischemic stroke
4. Explain the treatment of status epilepticus

Learning Resource

- Mandatory

- View the lecture on Headache- <https://vimeo.com/35310357>
- Go to <http://embasic.org/> and listen to the two podcasts one on AMS the other on headache
- Complete the EM workbook section and bring this to class for further discussion with your tutor

CORE LEARNING TOPIC 4- ABDOMINAL PAIN

Learning Topic

- Abdominal pain is a common yet challenging complaint due to the large number of possible etiologies in conjunction with variable clinical presentations. While a specific diagnosis is frequently difficult to make in the emergency department, it is imperative that the emergency physician exclude time-dependent disease processes that if left undiagnosed could lead to morbidity or mortality. Students must recognize life and or organ threatening causes of abdominal pain in the ED. The focus is on common disorders: ectopic Pregnancy, Appendicitis, Abdominal Aortic Aneurysm (AAA), Pelvic Inflammatory Disease (PID)/Tubovarian Abscess (TOA), Biliary Disease, Bowel Obstruction, Perforated Viscus, Mesenteric Ischemia, Testicular or Ovarian Torsion

Learning Objectives

1. Discuss the initial assessment and management of a patient presenting to the emergency department with abdominal pain
2. List the critical diagnoses for abdominal pain
3. Describe the classic historical and physical exam findings for the critical abdominal pain diagnoses
4. Discuss the utility of laboratory testing in the evaluation of abdominal pain
5. Discuss the advantages and limitations of different radiologic modalities used in the evaluation of abdominal pain
6. Discuss the treatment and disposition for the critical diagnoses for abdominal pain

Learning Resource

- Mandatory
 - View the lecture on Abdominal Pain- <https://vimeo.com/35310452>
 - View the lecture on Problems in Early Pregnancy- <https://vimeo.com/35875694>
 - Go to <http://embasic.org/> and listen to the two podcast, one on abdominal pain and the other on abdominal pain in the female
 - Complete the EM workbook section and bring this to class for further discussion with your tutor

CORE LEARNING TOPIC 5- TRAUMA

Learning Topic

Trauma is the leading cause of death in the first four decades of life in most developed countries. To this end, there are more than 5 million trauma-related deaths each year worldwide. Motor vehicle crashes cause over 1 million deaths per year. Injury accounts for 12% of the world's burden of disease.

Learning Objectives

1. Perform an accurate rapid assessment with focus on ABCDE's
2. Resuscitate and stabilize by priority
3. Discuss secondary survey
4. Discuss appropriate labs and ancillary studies to the trauma injured patient
5. Learn disposition

Learning Resources

- Mandatory
 - Go to <http://embasic.org/> and listen to the two podcasts on trauma
 - Complete the EM workbook section and bring this to class for further discussion with your tutor

ASSESSMENT-

Satisfactory Completion of Emergency Rotation

1. The student will be assessed on adequacy of completion of the Emergency Medicine Workbook requirements and the above key objectives. Should these requirements not be fulfilled, the student will not receive a satisfactory completion of the Emergency Rotation. This may require the student to repeat the term.
2. Students are also required to have a satisfactory attendance record as set down by the relative clinical school for satisfactory completion of the rotation

Formal Examinations

1. Mandatory learning materials are examinable. Students are expected to have completed these materials as well as the ED workbook by the end of the Emergency Rotation.

ADDITIONAL LEARNING RESOURCES-

1. Students may be directed to other learning resources. These are to supplement the mandatory learning materials. Students may be directed to this content by their tutor. These sites include:
 - a. <https://emergencypedia.com/medical-students/>; with practical emergency medicine clinical skills content
 - b. <http://www.cdemcurriculum.com/>; a case base learning resource

REFERENCE SOURCE-

1. The definitive reference resource for this rotation is <https://emergencypedia.com>

FURTHER READING-

1. Cameron et al. Textbook of Adult Emergency Medicine, 4th Edition ISBN : 9780702053351
2. Westmead Junior Doctors Handbook, 2017, which is accessible via NSW Health, Clinical Information Access Portal (CIAP)- <http://www.ciap.health.nsw.gov.au>