Curtin University

CURTIN MEDICAL SCHOOL

ACUTE CARE PLACEMENT

SPECIFIC LEARNING OBJECTIVES

Curtin Medical School acknowledges that this document has been adapted from:

International Federation for Emergency Medicine Model Curriculum for Medical Student Education in Emergency Medicine. 2010.

with substantive revisions and input from the academic staff and adjunct staff of Curtin Medical School.

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ACUTE CARE SPECIFIC LEARNING OBJECTIVES

A. KNOWLEDGE: Students should be able to:

1	Discuss the presentations / clinical conditions outlined in Annex 1 as they pertain to Emergency Medicine	Theme 1: Scientific Foundations of Medicine	1.3
2	Explain the principles of fluid management and patient related factors which influence treatment	Theme 1: Scientific Foundations of Medicine	1.2
3	Discuss the assessment and management of cardiac arrest in terms of advanced life support principles	Theme 1: Scientific Foundations of Medicine	1.2
4	Discuss peri-arrest conditions and the role of escalation of care in deteriorating patients to prevent cardiac arrest	Theme 1: Scientific Foundations of Medicine	1.3
5	Discuss the recognition and initial treatment of anaphylaxis	Theme 1: Scientific Foundations of Medicine	1.3
6	Explain the principles of initial trauma assessment and management	Theme 1: Scientific Foundations of Medicine	1.2
7	Describe the principles of assessment and initial management in a major burns patients.	Theme 1: Scientific Foundations of Medicine	1.2
8	Discuss the management of simple musculoskeletal trauma (sprains/ strains, fractures, dislocation) seen commonly in the emergency department	Theme 1: Scientific Foundations of Medicine	1.2
9	Discuss the elements of simple wound management	Theme 1: Scientific Foundations of Medicine	1.2
10	Discuss the assessment and the management of a poisoned patient/intentional overdose, including risk assessment. Know the specific management of common overdoses: Alcohol, Paracetamol, Benzodiazepines, Opioid	Theme 1: Scientific Foundations of Medicine	1.2
11	Describe the initial first aid for a patient with envenomation	Theme 1: Scientific Foundations of Medicine	1.3
12	Discuss the assessment and management of environmental emergencies including hypothermia, hyperthermia and drowning	Theme 1: Scientific Foundations of Medicine	1.2
13	Discuss the importance of acute symptom control in ED, especially pain management appropriate for the presenting complaint and treatment for nausea	Theme 1: Scientific Foundations of Medicine	1.2
14	Discuss the pharmacology of commonly used drugs in the emergency department including (not limited to). Adrenaline, Atropine, local anaesthetic, Ketamine, Propofol, Calcium Gluconate, Magnesium sulphate, Hydrocortisone, Frusemide, Salbutamol, Benzodiazepines, Opiates, Antiemetic	Theme 1: Scientific Foundations of Medicine	1.1
15	Apply the concepts of consent, refusal of treatment and competence to the emergency setting	Theme 2: Patient & Doctor: Clinical Practice	2.3
16	Explain the considerations involved in breaking bad news, and describe an approach to do so	Theme 2: Patient & Doctor: Clinical Practice	2.1

17	Discuss end of life decision making in the emergency department	Theme 2: Patient & Doctor: Clinical Practice	2.13
18	Explain which cases must be reported to the Coroner in Western Australia (when not to issue a death certificate)	Theme 4: Professional & Personal Development	4.10
19	Describe the role of the Emergency Department as a key link between the hospital system and the general population, prehospital care, and community providers	Theme 3: Health and Illness in Society	3.7
20	Explain considerations involved in safely discharging a patient from the emergency department	Theme 2: Patient & Doctor: Clinical Practice	2.14
21	Describe the opportunity for primary prevention in the emergency department including injury prevention, drug and alcohol and smoking intervention	Theme 3: Health and Illness in Society	3.1
22	Describe the role of other health professionals in the Emergency Department (e.g. nurses, OT, physio, social work, discharge coordinators)	Theme 4: Professional & Personal Development	4.8

PATIENT ASSESSMENT

B. SKILLS: Students should be able to:

1	Conduct a comprehensive assessment (history, examination and bedside tests) of a patient presenting to an Emergency Department with an undifferentiated illness	Theme 2: Patient & Doctor: Clinical Practice	2.2/ 2.3
2	Synthesise multiple and often incomplete sources of information to develop a management plan for patients	Theme 2: Patient & Doctor: Clinical Practice	2.7
3	Demonstrate the capacity for time management and ability to prioritise attention to those patients with more urgent conditions	Theme 2: Patient & Doctor: Clinical Practice	2.12
4	Demonstrate basic trauma management skills such as initial assessment and treatment using the ABC and secondary survey	Theme 2: Patient & Doctor: Clinical Practice	2.12
5	Perform an assessment on an intoxicated /poisoned patient and perform a toxicological risk assessment	Theme 2: Patient & Doctor: Clinical Practice	2.4
6	Perform a focussed history and physical examination, develop a differential diagnosis and develop a management/disposition plan for patient presentations: Chest pain Shortness of Breath Confusion, altered mental state and Coma Abnormal Behaviour Abdominal pain Acute loss of vision Headache	Theme 2: Patient & Doctor: Clinical Practice	2.2/ 2.3

	Collapse / Brief Loss of consciousness Limb pain / Back Pain Vaginal bleeding (pregnant and non-pregnant) Fever Anaphylaxis Shock / Low BP		

RESUSCITATION

B. **SKILLS:** Students should be able to:

1	Recognise life-threatening illness or injury and apply basic principles of stabilisation to the early management of these entities	Theme 2: Patient & Doctor: Clinical Practice	2.12
2	Perform Basic Life Support (BLS)	Theme 2: Patient & Doctor: Clinical Practice	2.12
3	Apply basic physiologic monitoring (pulse oximeter, blood pressure and cardiac monitor) on a patient and interpret the results	Theme 2: Patient & Doctor: Clinical Practice	2.6
4	Recognise your limitations with respect to emergency care and effectively call for help	Theme 4: Professional & Personal Development	4.9

AIRWAY AND BREATHING

B. **SKILLS:** Students should be able to:

1	Recognise airway compromise and initiate first aid: a. Safely clear airway b. Perform a chin lift and jaw thrust manoeuvre c. Demonstrate use of airway adjuncts (oral and nasal airways, on a mannequin)	Theme 2: Patient & Doctor: Clinical Practice	2.6
2	Place a patient on oxygen by nasal cannula and oxygen via mask	Theme 2: Patient & Doctor: Clinical Practice	2.6
3	Identify patients in respiratory distress	Theme 2: Patient & Doctor: Clinical Practice	2.6
4	Demonstrate effective bag mask ventilation (essential on mannequin, desirable on patient)	Theme 2: Patient & Doctor: Clinical Practice	2.6

CIRCULATION

B. **SKILLS:** Students should be able to:

1	Recognise shock (of any aetiology) and initiate initial management, in any age group	Theme 2: Patient & Doctor: Clinical Practice	2.7
2	Interpret and analyse ECGs (at Day 1 Intern level)	Theme 2: Patient & Doctor: Clinical Practice	2.4
3	Demonstrate proficiency in the use of an automatic external defibrillator (AED)	Theme 2: Patient & Doctor: Clinical Practice	2.6
4	Insert a peripheral venous cannula	Theme 2: Patient & Doctor: Clinical Practice	2.6
5	Perform phlebotomy	Theme 2: Patient & Doctor: Clinical Practice	2.6
6	Chart fluids appropriate for the patient and their condition	Theme 2: Patient & Doctor: Clinical Practice	2.6

OTHER CLINICAL SKILLS

B. **SKILLS:** Students should be able to:

1	Interpret a blood gas (ABG or VBG) result	Theme 2: Patient & Doctor: Clinical Practice	2.6
2	Perform a GCS calculation	Theme 2: Patient & Doctor: Clinical Practice	2.6
3	Perform a bedside blood glucose check	Theme 2: Patient & Doctor: Clinical Practice	2.6
4	Insert a nasogastric tube	Theme 2: Patient & Doctor: Clinical Practice	2.6
5	Insert a urethral catheter	Theme 2: Patient & Doctor: Clinical Practice	2.6
6	Perform basic wound care including suturing of a simple laceration	Theme 2: Patient & Doctor: Clinical Practice	2.6
7	Apply POP back slabs for upper and lower limb injuries	Theme 2: Patient & Doctor: Clinical Practice	2.6
8	Apply a cervical collar (in trauma)	Theme 2: Patient & Doctor: Clinical Practice	2.6
9	Interpret basic Emergency radiology: Chest x-ray, abdominal and limb x-rays (at Day 1 Intern level)	Theme 2: Patient & Doctor: Clinical Practice	2.6
10	Interpret basic laboratory investigations: Haematology, biochemistry and microbiology (at Day 1 Intern level)	Theme 2: Patient & Doctor: Clinical Practice	2.6

COMMUNICATION

B. **SKILLS:** Students should be able to:

1	Demonstrate the capacity to work with the multidisciplinary Emergency Team	Theme 4: Professional & Personal Development	4.8
2	Demonstrate the ability to communicate with patients and their relatives, taking into account cultural and other factors	Theme 2: Patient & Doctor: Clinical Practice	2.1
3	Create clear, concise and accurate discharge summaries containing appropriate information for GPs /community health practitioners	Theme 2: Patient & Doctor: Clinical Practice	2.14

ANNEX 1[1]

1: Generic Objectives for Resuscitation
- 1.1: Resuscitation: Airway interventions
- 1.2: Cardiac Arrest / Peri-arrest
- 1.3: Shock - all varieties
- 1.4: Coma

2.0: Anaesthetics and Pain Relief
- 2.1: Pain Management
- 2.2: Local anaesthetic techniques

3.0: Wound Management
- 3.1: Basic wound debridement and closure
- 3.2: Identification and treatment of infected wounds

4.0: Generic Objectives for Trauma
- 4.1: Major Trauma
- 4.2: Head Injury
- 4.3: Chest Trauma
- 4.4: Abdominal Trauma
- 4.5: Spinal Injury
- 4.6: Maxillo-facial Trauma
- 4.7: Burns
- 4.8: Orthopedic Trauma

5: Generic Objectives for Musculoskeletal Conditions
- 5.1: Upper limb disorders
- 5.2: Lower limb and pelvis disorders
- 5.3: Spine and spinal cord conditions

6.0: Vascular Emergencies
- 6.1 Arterial limb threat
- 6.2: Venous - Deep Venous Thrombosis (DVT)
- 6.3 Aortic aneurysm: abdominal and thoracic

7.0 Abdominal Conditions
- 7.1: Acute Undifferentiated abdominal pain
- 7.2: Haematemesis / malena
- 7.3: Anal pain and rectal bleeding
- 7.4: Diverticulitis
- 7.5 Cholelithiasis / Cholecystitis and Ascending cholangitis

8: Urology
- 8.1: Acute urinary retention or bladder obstruction
- 8.2: Nephrolithiasis and colic

9: Sexually Transmitted Diseases
- 9.1: Identification and initial treatment for endemic (common) diseases

10: Eye Problems
- 10.1: Acute conjunctivitis - bacterial and viral
- 10.2: Acute vision loss
- 10.3: Acute eye trauma including globe rupture, corneal abrasion and foreign body
- 10.4 Acute Glaucoma

11: ENT Conditions
- 11.1: Epistaxis
- 11.2: Infections of the head and neck

[1] [Adapted from: Hobgood C, Anantharaman V, Bandiera G, Cameron P, Halperin P, Jouriles N, et al. (2009). International Federation for Emergency Medicine (IFEM) Undergraduate Education (UGE) Curriculum in Emergency Medicine. https://www.ifem.cc/wp-content/uploads/2016/03/IFEM-UGE-core-curriculum-Jan-15-2009.pdf

- 11.3 Causes of airway obstruction

12: Dental Emergencies
- 12.1: Dental abscess
- 12.2: Dental fracture

13: Gynaecology
- 13.1: Pelvic pain
- 13.2: Dysfunctional uterine bleeding
- 13.3 Bleeding in early pregnancy

14: Obstetrics
- 14.1: Ectopic pregnancy
- 14.2: Uncomplicated emergency vaginal delivery (desirable)

15: Cardiology
- 15.1: Basic electrocardiographic analysis
- 15.2: Recognition and initial treatment of acute myocardial infarction / ischaemic heart disease.
- 15.2: Recognition and initial treatment of life threatening arrhythmia

16: Respiratory Medicine
- 16.1: Airway obstruction
- 16.2: Respiratory failure
- 16.3: Asthma and restrictive airway disease
- 16.4: Acute pneumothorax
- 16.5: Pulmonary embolism

17: Neurological Emergencies
- 17.1: Acute stroke
- 17.2: Spinal cord lesions
- 17.3: Peripheral neuropathies
- 17.4: Acute mental status change
- 17.5: Migraine
- 17.6: Meningitis
- 17.7: Vertigo

18: Hepatic Disorders
- 18.1: Acute hepatitis
- 18.2: Liver failure
- 18.3: Acute cholecystitis and cholangitis

19: Toxicology
- 19.1: Treatment of acute ingestions
- 19.2: Identification of basic toxidromes

20: Acid Base and Ventilatory Disorders
- 20.1: Identification of acid base disorders

21: Fluid and Electrolytes
- 21.1: Basic principles of fluid administration
- 21.2: Dehydration
- 21.3: Hyperkalemia
- 21.4: Hyponatremia

22: Renal Disease
- 22.2: Acute renal failure

23: Diabetes and Endocrinology
- 23.1: Disorders of glucose metabolism (hyperglycaemia. Hypoglycaemia, DKA)
- 23.2: Thyroid disorders

24: Haematology
- 24.1: Anaemia
- 24.2: Disorders of red cell function
- 24.3: Disorders of clotting

25: Infectious Diseases and Sepsis

- 25.1: Endemic infectious diseases
- 25.2: Sepsis
- 25.3: Common infectious diseases or conditions (e.g. pneumonia, UTI, Pyelonephritis,)
- 25.4: Cellulitis and gangrene

26: Dermatology
- 26.1: Blistering and exfoliative diseases
- 26.2: Differential diagnosis of rash
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27: Rheumatology and Immunology
- 27.1: Crystal arthropathy
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- 27.4: Anaphylaxis

28: Child Protection and Children in Special Circumstances
- 28.1: Child abuse signs and symptoms
- 28.2: Legal rights of parents to refuse care

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- 29.2: Hyperbilirubinemia
- 29.3: Disorders of feeding
- 29.4: Neonatal fever

30: Environmental Emergencies
- 30.1: Hyperthermia
- 30.2: Hypothermia
- 30.3 Drowning

31: Oncology
- 31.1: Acute leukemia
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- 31.3: Solid tumors
- 31.3: Complications of chemotherapeutic agents (febrile neutropenia, gastrointestinal upset)

32: Paediatrics
- 32.1: Basic management of paediatric airway
- 32.2: Basic paediatric resuscitation
- 32.3: Common infectious diseases of childhood
- 32.4: Fever in the first 6 months of life
- 32.5: Common injury patterns for normal children

33: Psychiatry
- 33.1: Acute psychosis
- 33.2: Mood disorders
- 33.3: Personality disorders
- 33.4: Acute suicidal and homicidal ideation
- 33.5: Substance abuse