

## Undergraduate Introduction to Emergency Medicine Course



### **COURSE OVERVIEW**

An introduction to Emergency Medicine concepts and equipment, designed to make students feel more comfortable approaching the acutely unwell patient both in an Emergency Department and in a pre-hospital environment.

**Targeted at:** Phase 1/early Phase 2 Medical Students, but all may benefit. Also open to AHPs (nursing, midwifery, physio etc.)

**Sessions:** 4 x 90-120 minutes

- Session 1: Assessing an Acutely Unwell Patient
- Session 2: Cardiac Arrest
- Session 3: Trauma
- Session 4: Pre-Hospital Care and Major Incidents

### **CURRICULUM AIMS & OBJECTIVES**

#### **Curriculum Aims:**

1. Students will be more confident with assessing an acutely unwell patient
2. Students will know when they need to call for help, who to call and how to call them for common Emergency Medicine scenarios
3. Students will understand the theory behind stabilising and investigating a trauma patient
4. Students will appreciate the setup of UK pre-hospital care and how these services operate
5. Students will understand the principles of managing the scene of an incident and triaging patients
6. Students will be able to handover a patient effectively using the SBAR method

#### **Objectives: Session 1 - Assessing the Acutely Unwell Patient**

By the end of the session, students will be able to:

- Know when the A-E assessment is used

- Know the steps of an A-E assessment and what examinations/investigations should be performed at each stage, including expected normal findings and common pathological findings
- Perform a thorough A-E assessment on an unwell patient with a common emergency presentation in a simulated environment
- Be familiar with commonly used equipment in an A-E assessment and where to find it

### **Objectives: Session 2 - Cardiac Arrest**

By the end of the session, students will be able to:

- Identify a patient that is in cardiac arrest, or at risk of imminent cardiac arrest, using the A-E assessment approach
- Perform CPR/life support (BLS in yr 1-3/ILS in yr 4/ACLS in yr 5) to begin resuscitation of a patient while waiting for help to arrive
- Identify when they need to call for assistance in the event of the following scenarios: deteriorating patient, adult cardiac arrest, paediatric cardiac arrest, neonatal cardiac arrest, anaesthetic emergency, obstetric emergency, massive haemorrhage, fire, security incident
- Activate the adult/paediatric cardiac arrest team via a 2222 call, giving all the required information and repeating the call in two minutes if no responders have arrived
- Describe the role of the cardiac arrest team, who is included within the team and how their roles are divided
- Understand the different methods of airway management in cardiac arrest, including how to insert common airway adjuncts
- Understand principles of defibrillation using both automatic and manual modes
- Safely operate a defibrillator in automatic mode
- Identify when to stop resuscitation, either due to return of spontaneous circulation (ROSC) or a failed resuscitation attempt
- Appreciate the impact a resuscitation attempt can have on staff members, and the need for a team debrief following a resuscitation attempt
- Work as a team to identify cardiac arrest, call for help and provide resuscitation to a patient in a simulated environment

### **Objectives: Session 3 - Trauma**

By the end of the session, students will be able to:

- Identify when a patient may have experienced a trauma based on their mechanism of injury
- Identify and begin initial management of shock/haemorrhage, including obtaining IV/IO access, fluid resuscitation, blood transfusion and the massive haemorrhage protocol
- Identify and begin initial management of suspected spinal injury, including C-Spine immobilisation, criteria for a CT scan and criteria for 'clearing' a patient's C-spine
- Identify and begin initial management of a suspected fracture, including common limb, pelvic and rib fractures and complications of fractures (e.g. neurovascular damage, compartment syndrome)
- Identify and begin initial management of a suspected head injury, including skull fractures, cerebral haemorrhage, raised ICP and criteria for a CT head
- Explain the components of a 'trauma screen' and the radiological investigations involved, including bedside FAST scans
- Explain the difference between a trauma unit and a major trauma centre, with an appreciation of which patients get sent where
- Participate in a case-based discussion of common trauma scenarios

#### **Objectives: Session 4 - Pre-Hospital Care and Major Incidents**

By the end of the session, students will be able to:

- Describe the setup of an Emergency Department, how it is divided (Resuscitation, Majors, Minors, Triage...) and patient flow through the department
- Describe the setup of UK pre-hospital care services (ambulance services, HEMS, BASICS doctors, search and rescue)
- Recall the steps of an A-E assessment and understand how to apply them to an environment with limited equipment or extreme conditions
- Safely manage the scene of an incident and triage multiple patients quickly in a major incident
- Safely extricate a patient from the scene of an incident, including an appreciation of the steps involved in removing a patient from a car following a serious traffic collision
- Handover a patient succinctly in a pre-hospital environment (when medical staff arrive at the scene) and in a hospital environment (when pre-hospital staff handover to the emergency department) using the SBAR method