T1. Systematic assessment and initial management of a major trauma presentation

Assessment of these competencies via Mini-CEX, with final summative Mini-CEX to be completed by the end of the programme. If the trainee has evidence of ATLS certification valid up to the time of end of programme review this can be used as evidence of completion of relevant knowledge within this module.

In addition, key DOPs should be carried out as part of this module including Primary survey, spinal protection measures, pelvic stabilisation techniques

Potential situations in which these competencies could be assessed include any presentation that is likely to be classified as major trauma using the Injury Severity Score (ISS ≥15) and could include the following:

- Any patient with penetrating injuries to neck, head, abdomen, thorax or pelvis
- Suspected open or depressed skull fracture
- Traumatic amputation
- Polytrauma involving multiple areas (Moderate to severe Injury to head/neck or thorax/ abdomen plus /-limb)
- Fall from height with injuries to head + 1 other area
- Fall from standing in the frail elderly with injuries to multiple areas

Core competencies to achieve with adult patients, are EPA level 3 (Indirect active-partial supervision by senior clinician, no prompting or help provided, direct line of vision or supervisor immediately available). Paediatric competencies are to be assessed to EPA level 2 (Direct active – full supervision by senior clinician, with prompting/ verbal and actual guidance and help throughout)

Knowledge/ Skill/ Behaviour	**Detail of competency**
Knowledge	Is able to demonstrate knowledge of mechanisms of common major injuries (blunt and penetrating) to head/neck and spine, limbs and within chest, abdomen and pelvis in trauma, their pathophysiology and initial recognition
	Understands the concept of damage control resuscitation and surgery
	Understands the principles of haemorrhage control and haemostatic resuscitation
	Understands the principles of spinal protection and appropriate immobilisation
	Knows the principles of management of head injury and prevention of secondary brain injury in the context of the major trauma patient
	Appreciates the relevant anatomy and the effects of energy transfer from common injury mechanisms; including falls from height,

Knowledge/ Skill/ Behaviour	Detail of competency
	ballistic and blast, penetrating trauma (stabbing weapons) and high energy blunt trauma (e.g. vehicle collisions with pedestrian)
	Recognises the potential for serious injury from falls from standing in frail and older persons
Skills- History	Is able to obtain a relevant history/hand-over from pre-hospital responders including mechanism, injuries seen and suspected, signs and symptoms, and treatment provided (ATMIST approach)
	Is able to establish an 'AMPLE' history
Skills – Examination	Is able to conduct a primary survey in a trauma patient (adult and children) utilising the principles of ATLS/APLS and communicate/record these as appropriate
	Can safely remove a patient from immobilisation/spinal board while continuing to provide effective spinal protection
	Is able to identify those patients with potentially life-threatening cranial/maxilla-facial injury leading to airway compromise
	Is able to identify airway/respiratory compromise from burns affecting the head/face or from exposure to hot gases/products of combustion in an enclosed space; to appreciate the potential risk from this early during the care of the patient
	Is able to identify those patients with potentially life-threatening thoracic injuries such as aortic injury, tension pneumothorax, diaphragmatic rupture, oesophageal rupture, massive pneumo-/haemo-thorax, flail chest or cardiac tamponade
	Is able to identify those patients with potentially life-threatening abdominal and pelvic injuries such as major vessel injury and bleeding, blunt or penetrating visceral injury such as liver or spleen, or severe pelvic fractures
	Is able to recognise critical limb injury, such as open fractures with ischaemia, and ensure prompt initial treatment and specialist opinion
	Is able to recognise significant traumatic brain injury and spinal cord injury and the need to involve specialist care urgently
	Be able to initiate a systematic secondary survey in a trauma patient (adult and children) utilising the principles of ATLS/APLS and communicate/record these as appropriate (e.g. against checklist)
Skills- investigation and treatment	Appreciates the priority of early control of severe external haemorrhage and undertaking appropriate control measures such as direct pressure, limb elevation or tourniquet, according to local policy
	Is able to initiate emergency airway management, oxygen therapy and identify patients in need of urgent endotracheal intubation and mechanical ventilation, particularly to facilitate safe transfer.

Knowledge/ Skill/ Behaviour	Detail of competency
	Is able to manage a tension pneumothorax or massive pneumo-/haemothorax with an initial emergency decompression procedure and identify the need for open thoracostomy, thoracotomy and subsequent chest drain insertion as require (PP8)
	Is able to obtain appropriate intravenous or intraosseous access in a major trauma patient (PP1)
	Can manage haemorrhagic/hypovolaemic shock with appropriate blood products, intravenous fluids and therapeutics (such as TXA) according to local resources and policy
	Is able to provide safe and effective analgesia.
	Is able to plan initial radiological investigations such as CT scan, ultrasound and plain radiographs in a safe and timely manner
	Is able to safely interpret plain films for CXR, pelvis and C-spine
	Carries out and interprets initial appropriate laboratory investigations
Skills- Clinical decision making, judgement ***[in addition to CC1]***	Knows how and when to activate the trauma team (based on local resources and policy) with pre-alert information or on patient reception
	Recognises when to request more senior or specialty opinion during the course of the patients care
	Is able to manage ongoing trauma care based upon clinical, radiological and laboratory findings including appropriate location for observation and monitoring the patient's response to treatment
	Is able to detect the deteriorating patient and escalate treatment appropriately, including identification of those patients that may need referral/transfer to a specialist care centre
Behaviour- Communication & professionalism ***[in addition to CC7 & CC8]***	Attends promptly when required, understands roles and responsibilities in the trauma team and demonstrates effective communication and team work; taking initial leadership role where required to initiate life-saving measures in a timely manner
	Communicates in a calm and reassuring manner with conscious patients, recognising the potential for disorientation and discomfort
	Communicates effectively with seniors and specialist teams, including when inter-hospital transfer is required (referral/hand-over)
	Is able to reflect on the process and outcomes of trauma care after delivery and be able to identify potential areas for individual or team improvement – participation in team debrief
Paediatric	Recognises important differences in anatomical and physiological terms of response to trauma, therapeutics, radiological imaging and support to parents/family and subsequent psychological impact on team members

Additional optional competencies- EPA 1 to 2

Knowledge/ Skill/ Behaviour	**Detail of competency**
Skills- Examination	Is able to identify and initially manage nasal, LeFort, mandibular, orbital and zygomatic fractures and TMJ dislocation. Be able to identify and initially manage dental fractures, tooth avulsion
Skills- investigation and treatment	Is able to initiate management of torrential nasopharyngeal bleeding by the use of Foley catheters and reduction of mid-face fractures
	Is able to provide monitoring and resuscitative support to patients during interhospital transfer
Skills- Clinical decision making, judgement	Recognises the burns patient who has an airway at risk and needs early intubation