APLS: Trauma Scenario 1

History {initial candidate briefing prior to arrival of child}

A 6 year old girl walked out from behind a bus and was hit by a motorcycle. A passer-by told the ambulance crew that she had been thrown about 6 metres along the street. She is agitated and uncooperative.
Estimated weight 20 kg.

Initial impression {provide information as candidate assesses child and applies monitoring}

RR 35, HR 120, BP 90/60, SpO_2 88% in air. She is agitated, whimpering, calling for her mother. GCS 13 (E 4, M 5, V 4). There are bruising and grazes on her right forehead, right chest and right arm. Cervical collar is in place. Pelvic binder in situ. Right lower leg is in splint.

Clinical Course {to be given to candidate as they progress}

The child initially stabilises with oxygen, and a 10 ml/kg fluid bolus. Subsequently RR rises and SaO_2 falls and there is decreased air entry on the right as a haemothorax enlarges. Perfusion deteriorates and HR rises. A second fluid bolus and chest drain are necessary.

INSTRUCTORS INFORMATION

Key Treatment Points ☑

<C>	Assess for and control external bleeding	
Airway & C-spine	Establish airway patency	
	Protect cervical spine	
	High flow O2 via face mask commenced early Titrate O2 therapy to SpO2 94-98% when stable	
Breathing	Intercostal catheter and drainage of haemothorax	
Circulation	Early IV access X 2 wide-bore cannulae	
	Blood for cross-match etc	
	Fluid boluses 10 mls/kg x 2 of warmed crystalloid or blood	
General Therapy	Analgesia	
	Arrange CXR & X-ray of injured limbs Trauma, Surgical, Retrieval, ICU Consult	

Diagnosis: Right pulmonary contusion with haemothorax. Fracture Right humerus. Fractured Right tibia and fibula.

Learning objectives

At the end of this session participants should be able to:

- Apply the structured approach to assessment, management and diagnosis of blunt trauma and shock
- Recall and apply the management of hemothorax and lung contusion
- Recall and apply the management of hypovolemic shock in their own practice

APLS: Trauma Scenario 2

History {initial candidate briefing prior to arrival of child}

A 5 year old boy was playing on father's trailer. He fell off when his father started driving. Dad stopped the car and found that one of the wheels of the trailer was on the boy's chest – so that Dad had to reverse the car to get it off. Dad told the ambulance officers that his son was initially not responsive but by the time they arrived he was crying and talking. Estimated weight 20kg

Initial impression {provide information as candidate assesses child and applies monitoring}

Cervical Collar in place. Eyes closed but obeying commands, cooperative but complaining of nausea. There were significant petechiae above clavicles. He has abrasions on the right side of forehead, chest, lower abdomen and pelvic area. Pelvic binder in situ. HR 125, SpO_2 92% in air, RR 25, decreased R chest movement, BP 97/63, CRT 2.

Clinical Course {to be given to candidate as they progress}

Increased work of breathing, pain on inspiration, decreased chest movement and decreased breath sounds right side. Tenderness when palpating right side of the chest. No surgical emphysema. Saturation improves to 98% once oxygen applied. Analgesia reduces splinting and improves chest movement. Abdomen soft. Pelvis stable
Conscious state deteriorates- becomes irritable, then only responding to painful stimuli. Begins vomiting. Airway is at risk. SpO_2 falls to 90%. Chest X-ray shows significant R lung contusions.

INSTRUCTORS INFORMATION

Key Treatment Points ☑

< C>	Assess for and control external bleeding	
Airway & C-spine	Establish airway patency	
	Protect cervical spine	
	High flow O2 via face mask commenced early Titrate O2 therapy to SpO2 94-98% when stable	
Breathing	Arrange for urgent intubation and ventilation	
Circulation	Early IV access x 2 large bore cannula	
	Cross match & Blood tests	
General Therapy	Arrange CXR & X-ray of injured limbs Analgesia & sedation ICU / Retrieval service / Surgical /Neurosurgical consultation	

Diagnosis: Head Injury, Severe lung contusion

Learning objectives

At the end of this session participants should be able to:

- Apply the structured approach to assessment, management and diagnosis of blunt trauma involving head and chest injuries
- Recall and apply the principles of management regarding hypoxemia and lung contusion
- Recall and apply the management of traumatic brain injury in their own practice

Potential Issues to be Discussed

Advanced airway/ventilation management/RSI **in trauma, head injury- MILS**

- Analgesia in initially alert patient to improve ventilation
- Fluid resuscitation in hemodynamically normal patient with lung and head injury
- Use of team members for MILS
- Need for CO_2 control once conscious level drops
- Short and medium term implications of lung contusions

Advanced Paediatric Life Support