Demonstration: Trauma Scenario

Key Teaching Objective

To demonstrate a trauma scenario and emphasise the following:

- <C> ABCDE/primary survey approach to injury
- Teamwork
- Supportive learning conversation

Environment:
The room should be large enough to accommodate the instructors and equipment and ensure that all the candidates have a good view. Place equipment at an angle to facilitate the audience's ability to view the demonstration; with the instructors facing the audience. Plan for use of white board & use of <C> A B C D E etc to guide preparation

Personnel required:
5 instructors to carry out the demonstrations in the following roles:
Instructors by 2
Team leader
Assistants

Instructor:
Introduces the format of the demonstration then plays the role of the instructor.
As this demonstration is before the scenarios, in the set, emphasise that the demonstration is what will be expected of candidates during the cardiac simulations. *"The trauma scenarios provide an opportunity to use the information and skills from the pre course online learning and the provider course in a clinical context. Each candidate will take on the role of "hands-on team leader" which differs to the usual "hands off team leader" familiar to you clinically and in other simulation formats. The "hands on team leader" teaching model is used by APLS to optimize individual learning and to simulate potential practice models in resource challenged areas. We encourage you to take an active role in assessing and managing the patient. A learning conversation will follow where the candidate and the group can reflect on the scenario and implications for clinical practice."*
Allow time for a learning conversation and give the candidates an opportunity to ask questions.

Please see next page for Demonstration Dialogue (laminated copy will be in face to face course kits)

At the end of the scenario:
Lead learning conversation
Terminate demonstration

Closure
Invite questions
Summarise and close

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Set, Instructor:
Instructor reads the case to the person who is a hands-on team leader (- note, remind candidates that this not like in the morning SEAM workshop)
Candidate repeats scenario back to assistants. Whiteboard calculations with support from team and use of medication book.

History *{initial candidate briefing prior to arrival of child}*

An 8 year old boy collided with a bus when he rode his pushbike straight out of a side road into the main road. He immediately started screaming in pain. Ambulance officers noted a deformed right thigh with a laceration and a moderate amount of blood on the ground. On route to the hospital he received inhaled methoxyflurane and became quiet, only opening his eyes to voice.
Estimated weight 25 kg

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

HR 140, BP 100/65, CRT 5, RR 35, SpO_2 93% in air. Responding to voice by groaning and complaining of pain. He has an abrasion on his right flank. There is a blood-stained dressing on his right thigh. A cervical collar is in place. Pelvic binder in situ.

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

His airway remains patent with good air entry bilaterally. O_2 sat improves to 99% with high flow O_2 via face mask. There is improvement following 2 x 10ml/kg boluses of warmed crystalloid/blood. Massive transfusion protocol. Urgent surgical consultation a priority.

INSTRUCTORS INFORMATION
Key Treatment Points

		☑
<C>	Assess for and control external bleeding	
Airway & C-spine	Establish airway patency	
	Protect cervical spine	
Breathing	High flow O2 via face mask commenced early	
	Titrate O2 therapy to SpO2 94-98% when stable	
Circulation	IV access with wide-bore cannula x 2	
	Blood for cross-match etc	
	Early use of blood & 15 mg/kg tranexamic acid	
	Massive transfusion protocol	
General Therapy	Arrange for urgent surgical review	
	Analgesia	
	ICU/Retrieval/Ortho consult	
Diagnosis	Ruptured Liver, compound fracture right femur	

Instructor Information/Resources

If the child with major haemorrhage has not responded to the initial bolus of 10 ml/kg of crystalloid, then the early use of blood and tranexamic acid should be considered. A major transfusion protocol should commence if shock persists, comprising of boluses of 10 ml/kg warmed blood plus appropriate blood products.

Cervical spine precautions

- Cervical spine injury (CSI) is uncommon in children
- Allowing excessive movement of an unstable CSI may lead to severe morbidity
- Most cervical spines can be cleared clinically. A senior clinician must assist in the assessment of children with persistent symptoms or who are unable to communicate
- Foam collars are recommended (if the child will tolerate one) until CSI can be excluded. Hard collars have no proven patient benefit and are potentially harmful

Cervical spine assessment. Used with permission and endorsed by the Paediatric Improvement Collaborative
https://www.rch.org.au/clinicalguide/guideline_index/cervical_spine_assessment/

Equipment Required

Resusci junior x 1
Monitor-defibrillator with paediatric pads x 1
ALSI unit x 1
Collars/sand bags
Paediatric emergency medication book

Airway & Breathing

Oropharyngeal airway sizes 50mm, 60mm, 70mm, 80mm.
Endotracheal Tubes 2.5 uncuffed, 3- 6 mm (un)cuffed (in 0.5mm steps)
Laryngoscope: adult curved blade
Laryngoscope: straight paed blades
Paediatric Magill Forceps
Yankauer Sucker
Soft Suction Catheters
Oxygen Masks with reservoir
O_2 tubing
Self inflating bags & reservoir: 500ml; 1,600ml
Face Masks circular 01,1,2; anatomical 2,3,4
SpO_2 probe & Capnometry
Bougies and introducers
Stethoscope

Circulation

Intravenous cannula 14-25g
Syringes 5ml x 2, 20ml & 50ml x 1
IO manual
Tape
Pelvic binder
EZ-IO drills
Intraosseous infusion needles 14 and 18g
IV solution 0.9% Normal Saline
BP Cuffs

Disability

Glucose stick bottle
Sharps Bin
Pen Torch
Blanket