

Simulation Scenario

Simulation Case Title: Advanced Airway Management in Pediatric Patient

Patient Name: Child

Patient Age: 5 y/o

Chief Complaint: Head injury with decreasing level of consciousness

<p>Brief narrative description of case <i>Include the presenting patient chief complaint and overall learner goals for this case</i></p>	<p>Patient was playing on a trampoline. Fell from trampoline and struck head on ground. Initially unresponsive, then woke up and was interacting appropriately. Family called EMS after patient began to become increasingly confused. Upon EMS arrival, pt is a GCS of 7 (E1/V2/M4) with apparent isolated head injury. Pt is not protecting airway. The overall learner goal for this case is to discuss and practice advanced airway management in the pediatric patient.</p>
<p>Primary Learning Objectives <i>What should the learner gain in terms of knowledge and skill from this case?</i></p>	<p>Identify impending respiratory failure. Identify the role of I-gels/LMA, ETTs. Placement of I-gels/LMA, ETTs. Assess for proper placement, management, and troubleshooting of advanced airways.</p>
<p>Critical Actions <i>List which steps the participants should take to successfully manage the simulated patient. These should be listed as concrete actions that are distinct from the overall learning objectives of the case</i></p>	<p>Identify impending respiratory failure and need for advanced airway. Position patient for effective oxygenation, ventilation, and ultimately intubation. Prepare with preoxygenation, appropriately sized equipment, and backups. Intubate and/or place LMA. Appropriate BVM or ventilator setting discussion. Transport patient.</p>
<p>Learner Preparation <i>What information should the learners be given prior to initiation of the case</i></p>	<p>Participants are told that the 5y/o male fell from a trampoline, striking his head on the ground. They arrive on scene to find a minimally responsive child positioned on his side with GCS 7. Told by bystanders that his level of consciousness has rapidly decreased over the past 15 minutes and has vomited twice.</p>

Initial Presentation	
<p>Initial vital signs</p>	<p>HR 131 B/P 95/52 RR 6 O2sat 81 Temp 36.4</p>
<p>Overall appearance <i>What do learners see when they first enter the room?</i></p>	<p>Patient is positioned on his side. Contusion/abrasion to right side of head. Vomit on ground next to patient's face. Pt has slow, irregular respirations.</p>
<p>HPI <i>Specify what info here and below must be asked vs what is volunteered by patient or caregiver</i></p>	<p>Family volunteer that patient was jumping on a trampoline (no nets), when he tripped and fell, striking the right side of his head on the concrete ground. He initially lost consciousness, but woke up after about a minute and seemed normal, except for a complaint of a headache. About a half hour later, he began to become confused and now is as you see him. Family positioned him on his side when he began to vomit and called EMS.</p>

Past Medical/Surgical History	Medications	Allergies	Family History
No medical hx.	No medications	No allergies	No hx.

Physical Examination

General	Patient is positioned on his side on the ground, with vomit on the ground and about the mouth.
HEENT	Large contusion/abrasion to right side of head. Right pupil is 6mm sluggish, left is 4mm reactive.
Neck	Clear.
Lungs	CTAB.
Cardiovascular	Pulses strong, equal, palpable x4 extremities.
Abdomen	Soft, no signs of injury.
Neurological	Pt is initially a GCS 7 (E1/V2/M4). May declines further with EMS on scene (this depends if EMS crews have RSI capability —can decline to GCS 3 if no RSI capability of crew. Otherwise, will have a gag reflex and require RSI).
Skin	Warm, dry. Abrasion/contusion to R scalp, otherwise clear.
GU	No signs of injury.
Psychiatric	Deferred.

Instructor Notes – Changes and Case Branch Points

Intervention / Time point	Change in Case	Additional Information
Arrival/Initial Assessment	Initial assessment, questions answered by bystanders; Identify that airway requires management	
Position patient for optimal oxygenation/ventilation/intubation	No improvement in vitals.	
Preoxygenation	Minimal improvement with passive oxygenation; improvement into 90s with BVM.	
Prepare Equipment		
RSI, if appropriate		
Place advanced airway	If successfully placed, SpO2 will maintain in 90s.	

Confirm Placement		
Transport		

Equipment provided:

GAT crew will provide all mannequins/equipment needed for this scenario.

Equipment needed:

GAT crew will provide all mannequins/equipment needed for this scenario.

Narrative of Scenario: Participants arrive on scene to find a critically injured child with an isolated head injury requiring advanced airway management and transport. Depending upon scope of the crew, patient may/may not receive RSI; patient may receive I-gel/LMA or be intubated. Practice of proper positioning of patient, suctioning, preparation, preoxygenation. In addition, participants will be prompted to reflect upon the equipment their organization carries (bougie and/or stylet, Broselow and/or Handtevy, I-gel or another LMA, etc.).