

Scenario template: A 4.1 paediatric		
<b>Scenario:</b> Sepsis	<b>Patient:</b> 4 year old, Tim Finn	<b>Simulator</b> SIMM Junior
<b>Case Summary:</b> 4 year old boy, awaiting bed in paediatric ward for management of fever secondary to pneumonia. He has been in the ED for 2 hours and has received IVABs, but no fluid bolus and has been becoming increasingly unwell during his stay. This has not been recognised by the junior staff looking after him. Increasing respiratory effort with decreasing level of responsiveness. Sats 90% on 6 L Oxygen, RR 35, HR 140, BP 75/45. Needs management of ensuring IV Antibiotics, IV fluid bolus and management of the airway with intubation.		<b>Participant Briefing:</b> Tim Finn 4 year old boy, awaiting admission to the paediatric ward with pneumonia. The RMO managing the patient requesting review as Tim has become less responsive.

*This project was possible due to funding made available by Health Workforce Australia*

Clinical Issues	Human factors / Non technical issues
Management of the sepsis in paediatrics Fluid management in septic shock Assessment and management of the airway and respiratory reserve in the hypoxic child	Communication within a team and leadership Dealing with parental anxieties
<b>Learning Objectives:</b> To review recognition of clinical change in the paediatric population To recognise and manage differences in paediatric airway management To demonstrate a structured approach to intubate a child using correct techniques and planning for difficult airway To review management of paediatric sepsis and pneumonia	
<b>Faculty Actors:</b> Faculty RMO who will be helpful and ask appropriate questions, Mother of the child concerned faculty member, Child will be drowsy	
<b>Patient Moulage:</b> IV line in situ	

<b>Equipment &amp; Props:</b> EdWISE airway box and extras Medication chart with appropriate antibiotics charted as given per local protocol ED Observation chart with obs written with HR 130, BP 85/60, Sats 93%, RR 30, T 39 on arrival, 30 minutes later – HR 140, Sats 94% on 4L, RR 35, T 38, 30 minutes again HR 140, Sats 92% on 6L, RR 38, T 37		
<b>Monitor:</b> ED setup ECG SPO2 CO2 ready NIBP	<b>Investigations:</b> CXR – Paediatric pneumonia	

This project was possible due to funding made available by Health Workforce Australia

Patient presentation	Expected response by participants	Faculty /Actors Notes
<p><b>Initial Presentation</b></p> <p>Airway patent, RR 35/min Spo2 90% on 6l/min SR 140, BP 75/40, Cap refill 4 secs Responds to voice on AVPU</p>	<p>Accepts handover from the RMO managing the patient. Structured approach to assess child Recognise the critical illness of the child IV fluid bolus-10-20ml/kg Consider changing to NRB oxygen IV antibiotics and to ask if blood cultures and investigations have been taken which they have by RMO</p>	<p>Faculty RMO – provides handover and clinical state of the patient. Hasn't had a chance to write notes yet.</p> <p>Point out the increased work of breathing</p> <p>Parent – anxious but able to be calmed by team.</p>
<p><b>Progression</b></p> <p>Airway patent, RR 35/min, Spo2 90% on 6L o2 HR 145, BP 75/45</p>	<p>Increase o2 Plan for intubation and need for RSI Prepare appropriate drugs Inotropes, anaesthetic drugs Ensure adequate IV access Call for help and retrieval Explain to and reassure parent</p>	<p>Faculty RMO helpful and knows location of much of the equipment needed.</p>
<p><b>Deterioration</b></p> <p>If expected response is not elicited by participant then Spo2 90-85 and RR 40/min</p>	<p>Increase oxygen Intubation with drugs – only if appropriate for skill level. Check ETCO2</p>	<p>NETS to prompt for senior input or appropriate airway management to match skill level of the team.</p>

This project was possible due to funding made available by Health Workforce Australia

<p><b>Recovery</b></p> <p>If Only if intubation occurs</p> <p>Spo2 96%, BP 70/40</p>	<p>Once intubated , think of ongoing sedation</p> <p>Inotropic support-if no CVC think of low dose dopamine peripherally( 2mg/kg dopamine in 50 mls Nacl and 1ml=1mcg/kg/min titrate up to 10mcg/kg/min)</p>	
<p><b>Debrief Guide</b></p>		
<p><b>Key clinical issues</b></p> <p>Treatment of sepsis in children</p> <p>Intubation and RSI-incl drugs</p> <p>Appropriate inotropic support</p> <p>Organise and prepare for transfer</p>	<p><b>Key Non-Technical issues</b></p> <p>Anticipate and plan A/B</p> <p>Communication within team and with parent.</p> <p>Leadership and call for senior help</p> <p>Distribute workload and utilising all available resources</p>	

*This project was possible due to funding made available by Health Workforce Australia*