Illness Scenario 3 Refresher Course

This is a Teaching Scenario. Some flexibility in how it progresses is possible according to individual learner needs

History {initial candidate briefing prior to arrival of child}
A 10 year old girl with asthma, is in transit by ambulance to emergency with a 2 day history of increasing cough, wheeze, fever and lower respiratory tract infection. Ambulance called to home because of severe breathing difficulties. They are giving nebulized salbutamol and oxygen in transit.
Guide Weight: 30 kg

Initial impression {provide information as candidate assesses child and applies monitoring}
Ambulance officers report little response to salbutamol. She is pale. Only able to say a few words. RR 40. HR 150. Tracheal Tug. Saturation 90% in oxygen on ambulance monitor.

Additional History & Observations
There is a history of multiple admissions to hospital as young child and infant. She has been not taking preventers for two years. Over the last two days she has been taking frequent doses of inhaled salbutamol. She is unable to find her spacer. She saw her GP today who re-instituted her preventer (salmeterol + fluticasone), provided a spacer and commenced her on cephalexin.

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

There is no improvement with a further dose of nebulised salbutamol and ipratropium. Oxygen saturations remain 91% in oxygen. Despite continuous nebulised salbutamol and ipratropium, she deteriorates. Corticosteroids and intravenous bronchodilators should be commenced.

For a more challenging scenario, the child can deteriorate and alternative diagnosis including anaphylaxis can be considered and managed.

Unless escalation of therapy with IV $MgSO_4$, aminophylline or salbutamol then deterioration with desaturation, increasing respiratory distress and eventually bradycardia with severe desaturation.

INSTRUCTORS INFORMATION
Key Treatment Points

Airway & Breathing	Establish airway patency	
	High flow O2 via face mask commenced early Titrate O2 therapy to SpO2 94-98% when stable Position child to maximise breathing	
Circulation	Intravenous access	
Specific Therapy	Nebulised salbutamol and ipratropium IV steroids IV infusion $MgSO_4$, aminophylline or salbutamol. Consider I.M adrenaline if not responding	

Diagnosis: Severe acute asthma, potential cephalexin anaphylaxis

Learning objectives

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

- Apply the structured approach to assessment, management, and diagnosis of severe asthma
- Apply the structured approach to assessment, management, and diagnosis of alternative pathologies in poorly responsive asthma
- Recall and apply the principles of management of severe asthma in their own practice

Potential Issues to be Discussed/Resources

- Escalation of therapy.
- Intravenous therapy $MgSO_4$, aminophylline or salbutamol
- IM adrenaline
- Management of acute asthma. Used with permission and endorsed by the Paediatric Improvement Collaborative

https://www.rch.org.au/clinicalguide/guideline_index/asthma_acute/