SIMulatED

Royal Darwin Hospital Emergency Department

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# Scenario Run Sheet: Asthma-phylaxis

## Scenario Overview

**SIM Run time:** 10 mins

**Estimated Guided Reflection Time:** 10-15 mins

**Target Group:** Paed and ED Registrars, ED Nurses

**Brief Summary:** 7 year old boy with known asthma presents with 2 days of a viral prodrome, seen by GP at home at 11pm and started on amoxicillin/given a neb with good effect. GP wanted to sent to hospital but he was improving and very tired so they opted to stay at home. Has had amoxil once before. Became increasingly SOB and wheezy after the amoxil started (15mins post), had ventolin 3x 12 puffs in next 30mins “like the doctor said” if ever unwell. Previously hospitalised for asthma x2 – ICU once but not intuabted. Now has a rash, itch and is increasingly wheezy despite ventolin “which usually works well”. On redipred already.

## Learning Objectives

**General –** Interdisciplinary communication and team work/role allocations/team leading/

**Scenario Specific –**

**-** Recognise that not all that wheezes is asthma (formulate a differential that includes anaphylaxis/viral induced wheeze/foreign body)

- Recognise that itch /rash/hypotension not usually features of asthma and point to allergic/anaphylactic presentation

- Recognise the need for adrenaline IM including knowledge of paed dosing and sometimes the need for repeated IM or IV dosing

- Know treatment approaches for asthma and anaphylaxis

- Be confident using the Broselow charts and trolley for equipment

**-** To calculate child’s weight based on age

- To take a thorough paediatric Hx from a parent, and manage parental concerns appropriately

## Equipment Checklist

**Equipment**

**-** Standard SIM room set up for intubation/cannulation/IV Fluids

**Medications and Fluids**

**-** Ventolin/Atrovent/Pred/HC/Adrenaline IM&IV

**Documents and Forms**

**-** Triage sheet

- Obs sheet

**Diagnostics Available**

VBG – child gets distressed and sats drop if taken

CXR/BSL

## Scenario Preparation/Baseline Parameters

**Initial Parameters**

P 170 (rising to 190 if not acted upon)

BP 60/30 – Only if they specifically put on a cuff

Sats 91% on RA (dropping to 80% if not treated)

RR 38

Temp 37

**Initial Progress**

Becomes more wheezy and SOB, itchy and progressive rash

Eventually develops facial swelling and stridor but only if not treated appropriately for anaphylaxis

## Participants

**Staff**

Nurses x2

Paed Reg x1 (walks past at 2 mins into SIM and notices the v. sick child –offers to help)

ED Reg x1

**Instructor Roles (x2 people, 1 in SIM room, 1 in feedback room)**

- As confederate to give exam findings

- Provide VBG and XRay

- To act as ICU/ED/Paed support on the phone – “will be there in 10 mins”

- SIM feedback

**Mother**

**-** “its his asthma doc, it was really bad last time like this and he went to ICU”

- If prompts not taken for asthma and sats drop v.low can state “do you think his lips look a bit swollen”

- Notices some voice change in the child

## Additional Information/Medical History

**Demographics**

Caucasian child from Palmerston.

**HPC**

Unwell for 2 days with a dry cough, runny nose and sore throat. Complained of a sore ear. Been using 2 hrly ventolin with good effect. GP gave amoxil – first dose at 11pm. Has had amoxil before once without event. No Fevers. Seemed to get more unwell after the amoxil

**PMH**

Asthma – previously admitted to ICU for BiPap, Nearly got “that tube down the throat”

Allergic to tree nuts, fully vaccinated, normal birth and early childhood Hx

Mother has asthma, as do siblings. No recent travel/ill contacts

Unsure of weight – think about 20kg 2 mths ago

## Proposed Scenario Progression

- Child arrives with significant respiratory distress – mother describing a presentation akin to his usual asthma exacerbations. Until around 11pm when deteriorated rapidly

- Expectation that child gets asthma management with bronchodilators and steroid, oxygen and a fluid bolus for hypotension

- Sats to drop, BP to drop despite asthma management

- Mother to note that there is a widespread red rash and if cues not taken, that there is also some mild lip swelling

- If anaphylaxis treatment is instituted (BUT scenario time is running short) he will have a significant improvement in his clinical status

- \*\*\*IF THE TEAM ARE PERFORMING PARTICULARLY WELL/PROGRESSING RAPIDY, AND THERE IS ADEQUATE TIME, THE CHILD CAN CONTINUE TO DETERIORATE TO NEEDING INTUBATION AND INTRAVENOUS ADRENALINE FOR A PERIARREST SITUATION\*\*\*

## Debriefing/Guided Reflection Overview

**General Opening Questions**

* How was the scenario? (each team member reflects)
* What happened in the scenario – i.e. relay the story to a workmate who wasn’t there
* Did you feel confident that this child was in safe hands?

**Scenario Specific Questions**

* What was wrong with the patient?
* What medications/investigations may be required?
* Where does the patient need to go?

**General Wrap-Up Questions**

* What did you find most beneficial about this scenario
* What was the most challenging point in this scenario?
* What would you do differently next time?

## Case Considerations

- How to tell the difference between asthma and anaphylaxis ?

- What are the defining features of anaphylaxis?

- When should you give IV adrenaline?? (multiple doses of IM, periarrest, temporising till can intubate, not improving)

- Is it unusual for the child to get anaphylaxis when they didn’t have a problem with amoxil on a previous exposure?

- Where should the childs disposition be?

- What factors need to be addressed/what conditions met before this child can be discharged?