

Instructions to Candidates – Aim for 8 minutes

You are a Foundation doctor working in a GP practice.

It is 9am. Your next patient is Dina Wallace, a 4-year-old girl brought in by her father due to having shortness of breath.

Please take a history from her dad and formulate your differential diagnoses.

At 6 minutes the examiner will ask you questions.

Script for simulated patient:

Patient Name: Dina Wallace Dad's name: Will Wallace

Age: 4

C/O: Shortness of breath

HOPC: (collateral history from dad)

You report that your child has been having shortness of breath which started around 6am this morning. She appears to be 'sucking in' her chest when she breathes. It all started with a cold and having a snotty nose for the past three days. Now, it sounds like she is chesty with a wet cough. No phlegm coming up, but you think that she swallows the phlegm. She feels hot today and appears quite lethargic but you did not measure her temperature. She also has reduced feeds. She usually has some Weetabix for breakfast and vegetables in the afternoon, then rice and mashed meat at night. For the past 3 days, she only eats some of her breakfast and refuses food for the rest of the day. She is also drinking less than usual – her normal is a total of two 500mls bottle of milk or water. She only had 400mls of fluid today.

Bowels opened yesterday; it was of normal consistency. Her normal is to open her bowels once every other day, no new changes. Passed some urine earlier today – not smelly but appears dark. No complains of chest pain / sore throat.
Noone at home is unwell.

PMH:

2 episodes of Bronchiolitis when she was less than 1 years old.

DH: Nil.

Allergy: NKDA - Cow's milk protein intolerance.

FH:

No family history of asthma, eczema, hay fever. Has two older siblings – both of them are well in themselves.

BINDS (Paediatrics history)

Birth hx – Born via C-section as her other siblings were all born via this method. No issues with pregnancy/antenatal scans. Passed meconium within first 48 hours.

Immunizations – Up to date.

Nutrition – usually drinks about 2x bottles of fluid (water/juice/milk) - 500mls each. Introduced solid ~7months old.

Developments – no concerns, met all milestones thusfar.

SH (LOST): Living situation: || Occupation n/a. || Social: Smoking, Alcohol, Recreational drugs, Exercise || Travels:

Lives with siblings, mum and dad. No one smokes at home. No travels. No pets.

ICE

I: You think she might have asthma.

C: You are worried because you know asthma is a life-long condition.

E: You hope the doctor can provide a different diagnosis from asthma.

Question(s):

1. What are your differential diagnosis?

Viral induced wheeze, pneumonia, early infective exacerbation of asthma, upper respiratory tract infection.

What is your top diagnosis? Viral induced wheeze

2. How will you manage this child?

The candidate should offer to examine the child and have the child's observations recorded. Using the [traffic light system](#), identify the risk of serious illness in this child and act accordingly.

Dina will need to be prescribed with short acting beta-2 agonist (i.e. Salbutamol) inhalers via spacer PRN to relieve her symptoms as well as antipyretic agents if she is pyrexial. She should also be monitored whether she needs a fluid challenge.

Answer sheet:

Area	Clear Fail	Fail	Satisfactory	Good	Excellent
C/O & HOPC					
PMH					
DH					
BINDS + (LOST)					
FH					
ICE					
Differential dx					
Rapport/ Comm skill					
Overall					

Feedback

Up to 50% of children have at least one episode of wheeze before the age of 6.¹ Viral-induced wheeze are most common in children between the age of 6 months and 5 years.¹ Symptoms include wheeze and coryzal symptoms. Children often responds to bronchodilators (i.e Salbutamol). The main aim is to assess the child and sieve out children who needs hospital admission.

Findings which can support the need for hospital admission:

General inspection:

- Drowsy, exhaustion, cyanosis, pallor
- Usage of accessory muscles (mod-severe intercostal/subcostal recession), grunting

PEWS:

- Respiration rate >60 (please check normal range for child's age)
- Oxygen saturations <96% in room air
- Temperature (>38C in age <3 months or >39C in age >3 months)
- Capillary refill time ≥ 3seconds (reduced perfusion)

Clinical dehydration (from reduced feeds)

Often the term 'wheeze' is a sound heard when auscultating the lungs – it is associated with Asthma. Most children do not get diagnosed with asthma before the age of 5 as it is difficult to perform objective tests for it. Misdiagnosis of asthma can potentially label a child to have asthma for the rest of their lives. Hence, it is important to use clinical judgement, available information about the child's past medical history and family history of atopy can help determine the likelihood of asthma.

References:

1. <https://cks.nice.org.uk/topics/cough-acute-with-chest-signs-in-children/>