

# **OSCEs for Medical Students, Volume 3 Second Edition**

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**PasTest**

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Dedicated to your success

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# **Chapter 1: Paediatrics**

# Contents

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# Chapter 1

## Paediatrics

### Paediatric History

When you take a paediatric history, discuss first what is of concern. Use the lists below to find out more about the area of concern, for instance the antenatal, birth and development in a child with fits. Go beyond these questions in an area of interest. There are too many questions here to ask in every situation, but touch on each area. For instance, 'are there any problems with his heart?' can be used rather than asking about scans and murmurs. **The most important aspect of history taking is to listen.**

### Pregnancy

Planned/unplanned/IVF/donor/adopted

Scans – when and any problems

Previous births – gestation and weight

Mode of delivery – induction/SVD/LSCS (emergency or elective), and why

Resuscitation needed

SCBU afterwards

Apgars (but parents unlikely to know)

### Development

Any concerns

Problems at school – academically or in games

Developmental screen (only use in < 5 years unless developmental problem):

Smiling	by	6 weeks (time of concern)
---------	----	---------------------------

Sitting	by	9 months
---------	----	----------

Turns to sound	by	6 months
----------------	----	----------

First words	by	18 months
-------------	----	-----------

Walking	by	18 months
---------	----	-----------

Talking two-word sentences	by	3 years
----------------------------	----	---------

## Growth

Weight at birth

Any problems

Smaller than friends?

## Immunisations

Up to date

Immunisation schedule	2, 3, 4 months – DTP, HIB, MenC, Polio
	12–14 months – MMR
	4 years – DT, Polio, MMR
	12 years – BCG

Who is at home?

Full family tree, with ages

Consanguinity

Any childhood deaths – more questions

Ask specifically about atopy/epilepsy/congenital heart disease/diabetes

## Previous medical history

Sees GP – for what

Seen at hospital outpatients and why

Any hospital admissions, emergency or elective and why

## Social

Housing – ask if any problems

Who looks after children – nanny/au pair/grandparents?

Ask if any involvement with social services; be tactful?

Income support

Parental employment

Pets if allergic or infectious problem.

## Respiratory

Any breathing difficulties

How is he now

Noisy breathing – inspiratory or expiratory

Episodes of cyanosis, apnoea or working hard

What makes it better/worse

Day or night variation

Cough – dry/wet/barking, worse at night

Previous treatments and their effect

## Cardiovascular

Antenatal scans

Murmur heard – how investigated?

Episodes of cyanosis or shortness of breath, especially feeding

Operations?

## Gut and nutrition

Breastfeeding – any problems. Is baby satisfied by feed, how often?

Milk – which formula, how much, how often?

Concerns about growth – (look at 'centiles in red book)

Eating solids (after about 4 months)? Any dietary requirements

Diarrhoea/constipation – consistency, how often – any treatment

Vomiting – what/when/how much

Take a 24 h intake/output history

## Renal

Previous UTIs – any investigations

Unexplained fevers

Irritability/blood in urine

Swelling around eyes or abdomen.

## **Bones and joints**

Any problems running?

Swollen joints

## **Neurological**

How are they doing at school? – development

Any fits – if so, age, type, investigations, medication used

## **Interventions**

Medications and inhalers, special diets



## STATION 1.1

### *Examination*

You are the paediatric PRHO in an outpatient clinic. You have been asked to see a 6-week-old baby with a murmur. Having taken a full history, you now come to the examination. Please demonstrate to the examiner how you would examine a child with this problem.

**(5 minute station)**

## STATION 1.2

### *Examination*

You are the paediatric PRHO in the Emergency Department. A 10-year-old girl with asthma presents with breathing difficulties. She has already had a salbutamol nebuliser. Please assess her respiratory system.

**(5 minute station)**

## STATION 1.3

### *Abdominal examination*

Please examine this 5-year-old's abdomen. His mother has said that his abdomen is becoming more distended.

**(5 minute station)**

# STATION 1.4

## Growth

Michael has been attending the growth clinic. Please can you measure his growth and plot them on a centile chart fig 1.4a. The examiner may then ask you some questions based on this. Please use any of the equipment provided in fig 1.4b.

(10 minute station)

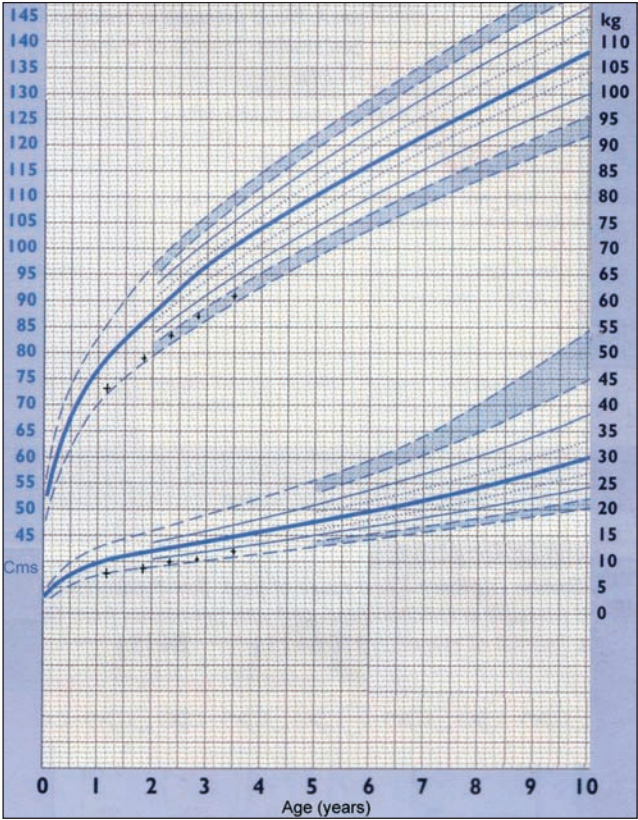


fig 1.4a



fig 1.4bi



fig 1.4bii



fig 1.4biii

## STATION 1.5

### *Examination of the Head*

Please demonstrate to the examiner how you might examine this baby's cranium.

**(5 minute station)**

## STATION 1.6

### *Dysmorphology examination*

Please examine this 4-year-old child with a possible genetic condition.

**(5 minute station)**

## STATION 1.7

### *Neurology examination*

Please examine the limbs of this 5-year-old boy.

**(5 minute station)**

## STATION 1.8

### *Developmental examination*

You are the doctor in a child development clinic. Rory has come for his 9-month check. Please assess his development.

**(10 minute station)**

## STATION 1.9

### *Skin examination*

Look at the five images (figs 1.9a, 1.9b, 1.9c, 1.9d, 1.9e) of various skin appearances. Please complete the following table by selecting one of the available diagnoses and management plans. Each diagnosis and plan can be used once, more than once, or not at all.

**(5 minute station)**



fig 1.9a



fig 1.9b



fig 1.9c



fig 1.9d



fig 1.9e

Meningococcal sepsis	Reassure – it will resolve spontaneously
Herpes simplex	Reassure – it is a birthmark
Chickenpox	Systemic aciclovir
Rubella	Topical aciclovir
Molluscum contagiosum	Surgery
Malaria	Dietary advice
Capillary haemangioma	Topical antifungal
Cavernous haemangioma	Systemic steroids
Eczema	Topical steroids
Café au lait patch	Observe
Pityriasis versicolor	Intravenous antibiotics
(Mongolian) blue spot	

Picture	Diagnosis	Management plan
fig 1.9a		
fig 1.9b		
fig 1.9c		
fig 1.9d		
fig 1.9e		

## STATION 1.10

### *Examination of gait*

Please watch this 7-year-old boy walk and comment on what you see. Then please demonstrate additional clinical signs that you think are relevant.

**(5 minute station)**

## STATION 1.11

### *Newborn examination*

You are the neonatal SHO. Please demonstrate and talk the examiner through how you would examine this 4-day-old baby. He was born after an uneventful pregnancy and normal delivery. He is now breastfeeding well.

**(10 minute station)**

## STATION 1.12

### *Growth faltering/social history*

You are a general practitioner. Mrs Robinson has come to see you because she is concerned about her child's poor growth. Please take a history with a view to making a diagnosis. You will be asked to summarise this at the end and suggest a management plan.

**(15 minute station)**

# **Chapter 1:**

## **Paediatrics Answers**





# Chapter 1

## Paediatrics Answers

### STATION 1.1

#### *Cardiovascular examination*

This station can either use a real baby or a manikin. If a manikin is used, do not score the first row or auscultation findings.

Assessment	Good	Adequate	Poor/not done
1 Appropriate introduction (full name and role)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Candidate washes their hands using the alcohol handwash provided (no marks if candidate only expresses the need to wash if handwash is provided)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Looks and comments on cyanosis, pallor, tachypnoea, scars.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Looks and comments on dysmorphic features	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Feels brachial or femoral pulse, comments on character	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Comments on presence/absence of femoral pulse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Listens to heart in four recognised positions and at the back	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Correctly identifies murmur if present	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Listens for pulmonary oedema	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Feels for liver edge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Offers to measure blood pressure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 Offers to perform growth measurements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13 Does examination in professional manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Comment*

Paediatric cardiovascular examination should be straightforward. The keys are to see if the child is either cyanosed or in heart failure and if the child has a scar. If the child is blue, there is a problem getting blood into the lungs. Most likely, the child has Fallot's tetralogy. If the child is tachypnoeic and pink (and does not have respiratory disease), the child will be in heart failure and is likely to have a VSD or AVSD. Scars may be midline (implying a curative operation such as VSD closure or Fallot's repair) or subclavicular, suggesting a palliative systemic-pulmonary shunt or a coarctation resection.

An alternative presentation will be a child with a murmur who is neither blue nor tachypnoeic. This will either be an innocent or pathological murmur. Innocent ones do not radiate, are quiet and precordial and the child is otherwise well. Some alter with position. If it is not innocent, the position where it is loudest gives a clue as to the cause and also its character. Those loudest below the nipples are pansystolic (VSD, Fallot's, AVSD) and those above ejection systolic (PDA, AS, coarctation). In an examination, never forget the femorals, the blood pressure or the weight.

## STATION 1.2

### *Respiratory examination*

This station can use a patient with no respiratory signs, or one with longstanding illness, such as CF or asthma.

Assessment	Good	Adequate	Poor/not done
1 Appropriate introduction (full name and role)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Candidate washes their hands using the alcohol handwash provided (no marks if candidate only expresses the need to wash if handwash is provided)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Inspects for cyanosis, clubbing, scars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Inspects for tachypnoea, recession, expansion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Listens for crackles, wheeze, breath sounds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Correctly identifies auscultation findings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Feels for expansion, tracheal position	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Percussion (but must justify why)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Feels pulse (but must say for paradoxus or bounding as with CO <sub>2</sub> retention)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Measures peak flow and offers to measure weight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Keeps patient comfortable and at ease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 Does examination in professional manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Comment*

The key to all paediatric examination is good observation. From a distance look for tachypnoea, distress and hyperexpansion (seen best from the side) or asymmetrical expansion. Auscultation is usually best in babies if they are quiet, but in older children expansion, percussion should take place first. Always explain to the child and examiner what you are doing. Never forget the peak flow and weight. Also, if you are doing something, be prepared to say why (there is little point percussing or eliciting vocal fremitus in a child with equal and normal breath sounds).

Common conditions in OSCEs are CF, asthma, chronic lung disease (ex-prem) or possibly a baby recovering from bronchiolitis. In CF there will probably be a mixture of inspiratory crackles and expiratory wheeze (many have asthma too) and may be underweight. Those with chronic lung disease often have some degree of chest deformity and scars on their hands from repeated cannulation.

## STATION 1.3

### *Abdominal examination*

Assessment	Good	Adequate	Poor/not done
1 Appropriate introduction (full name and role)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Candidate washes their hands using the alcohol handwash provided (no marks if candidate only expresses the need to wash if handwash is provided)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Looks and comments on jaundice, anaemia, and amount of body fat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Looks and comments on distension and presence of scars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Feels for superficial tenderness and comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Feels competently for liver, spleen, kidneys, masses and constipation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Listens to abdomen and percusses any mass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Correctly identifies findings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Offers to look in mouth and in perianal area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Inspects groins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Offers to look at penis and scrotum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 Offers to look at growth measurements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13 Does examination in professional manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Comment*

The abdominal examination is relatively easy to set up for an OSCE station, as there are many children with stable splenomegally, jaundice, nephrotic syndrome and constipation. As with the other systems to be examined, observation is the key. Here this means systemic signs – jaundice, anaemia and weight loss, and looking for abdominal distension, visible peristalsis and scars. Ensure that you look for inguinal and renal scars. A competent examination should always be directed towards the presenting complaint – in this case distension. Causes could be organomegaly, a mass, constipation or ascites. Students frequently forget to properly examine the groin, anus, penis and testes. You will not be required to do a paediatric rectal, but you should offer to look at the perianal area and genitalia.

Other openers for a paediatric abdominal examination are jaundice (look for other signs of liver involvement, measure liver span) and weight loss. (Also look at body fat, listen for a murmur and for signs of chest involvement in CF.)

## STATION 1.4

### Growth

This station can be run with a child of any age, but will work best over 4 years. For a baby, a manikin will be used. For a manikin, the first item is not used.

Assessment	Good	Adequate	Poor/not done
1 Appropriate introduction (full name and role)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Candidate washes their hands using the alcohol handwash provided (no marks if candidate only expresses the need to wash if handwash is provided)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Explains what about to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Measures head circumference (three attempts)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Selects appropriate length/height device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Uses correct technique for length/height	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Weighs correctly, ensuring properly undressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Obtains all measurements with small error	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Plots three measurements accurately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Describes current and past measurements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Provides differential diagnosis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 Does examination in professional manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



*Comment*

Growth assessment in children should be very easy, but may be difficult to do accurately. The head circumference is the largest repeatable circumference between the occiput and forehead. Three attempts should be used. Height is used over 2 years old and supine length under 2 years old. The eyes and ears should be horizontal (or vertical if supine), the heels together and gentle traction should be put on the mastoid process (and feet if supine). Weight should be done with only underclothes and no nappy.

Plotting on the centile chart is done with weeks under 1 and months thereafter. If there is information that the child was born early, it is worthwhile for the first year to allow for this when plotting the measurements.

In a growth station you are most likely to get a normal child or a manikin. A child with a syndrome is a possibility (small, light, small head), or one with microcephaly alone, or perhaps a hormonal problem (short and fat). Another possibility is a child failing to thrive with a systemic disease (relatively light, but height and head circumference maintained). The growth chart here shows a small child with normal growth.

## STATION 1.5

### *Examination of the Head*

This station can use a real neonate or a model. If a model is used, do not score the first row.

Assessment	Good	Adequate	Poor/not done
1 Appropriate introduction (full name and role)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Explains purpose of examination to parent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Candidate washes their hands using the alcohol handwash provided (no marks if candidate only expresses the need to wash if handwash is provided)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Inspects for overall shape of head	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Looks for facial dysmorphic syndrome and position of ears	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Feels sutures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Feels for anterior, posterior and third fontanelle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Checks for fusion of the sutures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Measures head circumference	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Does examination in professional manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Comment*

This is a basic part of the baby check and any examination of a baby. You are looking for craniosynostosis (asymmetric shape, fused sutures); syndromes that cause a small head (most chromosomal ones, often associated with a third fontanelle between the anterior and posterior one); hydrocephalus (large head, splayed sutures, 'sunsetting' eyes); and signs of raised intracranial pressure (splayed sutures, bulging fontanelle).

You will get asked when the sutures close (6 weeks), when the posterior and anterior fontanelle close (3 and 9 months on average, respectively). You may also have to comment on an asymmetric head and give it a name. There are only five that you would be expected to know: brachycephaly, which is the head shape associated with Down's, which is short in the A-P dimension; microcephaly, which is just small; plagiocephaly, which is rhomboid when viewed from above; and scaphocephaly, which is elongated in the A-P dimension and short in the transverse dimension.

## STATION 1.6

### *Dysmorphology examination*

This station can be run with any major syndrome, but numerically there are far more with Down's and Turner's than any other. Beyond these you will not be expected to get a diagnosis, just to describe the features.

Assessment	Good	Adequate	Poor/not done
1 Appropriate introduction (full name and role)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Explains purpose of examination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Candidate washes their hands using the alcohol handwash provided (no marks if candidate only expresses the need to wash if handwash is provided)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Looks at face, examining eyes, nose, ears, mouth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Looks and palpates abdomen and justifies why	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Looks at head shape, feels fontanelles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Looks at neck and arms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Looks at hands for creases, shape and shape of fingers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Looks at chest and listens to heart	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Examines feet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Examines spine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 Offers to measure and weigh the child	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13 Does examination systematically and in a professional manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Comment*

The key to a good dysmorphology examination is to have a system. Start with the face, looking individually at the eyes and the palpebral fissure, nasal bridge, philtrum, mouth, ears (shape and position) and cranium (anterior fontanelle, sutures and head size). Next look at the neck for webbing, the arms for a wide carrying angle and the hands for a single palmar crease and their shape. The fingers and knuckles are sometimes affected in syndromes. The chest is next, looking for widely spaced nipples or scars suggesting heart surgery and listening for a murmur. Look in the abdomen for scars (duodenal atresia in Down's) and feel for organomegaly that may point towards a storage or metabolic disorder. Look at the feet for a sandal gap. Lastly look at the back for spina bifida. Don't forget to weigh and measure the patient.

In terms of presenting such a patient, if it is obvious that they have Down's, say so and then demonstrate the features. If not, it is acceptable to go through the findings without reaching a diagnosis.

## STATION 1.7

### Neurology examination

Assessment	Good	Adequate	Poor/not done
1 Appropriate introduction (full name and role)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Explains purpose of examination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Candidate washes their hands using the alcohol handwash provided (no marks if candidate only expresses the need to wash if handwash is provided)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Looks and comments on posture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Briefly looks at child overall (blindness, syndrome, gastrostomy, failure to thrive)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Asks child to take toy and comments on ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Feels tone of upper and lower limbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Examines power and reflexes competently	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Looks for contractures and scars from their release	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Assesses primitive reflexes (grasp, plantars)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Asks child to walk and run if appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Comment*

Neurology cases in paediatric OSCEs will almost always be children with cerebral palsy. Other possibilities include: spinal muscular atrophy (lower motor neurone weakness only) and Duchenne muscular dystrophy (boys only, predominantly proximal weakness, occasional pseudohypertrophy of calves).

The paediatric neurology examination is fairly similar to the adult format. As before, observation is key. From the end of the bed look for an upper motor neurone or a hypotonic posture. Look also for associated defects, such as blindness, failure to thrive and deafness. The rest of the examination identifies the type of defect (UMN/LMN), its location (mono-, di-, hemi- or quadriplegia) and the extent to which this is limiting function. Arm function can be assessed with toys or writhing and leg function by walking.

Hypertonia tends to develop over time after the insult that caused the cerebral palsy, and affected children are often hypotonic in infancy.

## STATION 1.8

### *Developmental examination*

Most children used for such a station will be developmentally normal. But a child with cerebral palsy or a syndrome can be used or one who is younger than advertised, creating the impression of developmental delay.

Assessment	Good	Adequate	Poor/not done
1 Appropriate introduction (full name and role)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Explains purpose of examination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Candidate washes their hands using the alcohol handwash provided (no marks if candidate only expresses the need to wash if handwash is provided)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Observation of child with comment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Offers child bricks and comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Comments on hearing and vocalisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Demonstrates lack of head lag, sitting posture, inability to stand, attempt at crawling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Comments on social interaction of child	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Presents findings to examiner in organised manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Accurate with assessment of developmental age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Does examination in professional manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



*Comment*

Developmental examination has a reputation as one of the harder stations. It need not be. Examiners are looking for order and careful observation. Development is split into four scales or systems: gross motor, fine motor/vision, hearing/speech and social. You will need to know a few normal milestones in each scale.

The best approach is to start by observing the child from a distance and seeing what they are able to do in each scale. Then allow the child to take a silent toy from you and see what their hands do (type of grip, transfers, casting). Next assess if the child is able to turn to sounds, although a silent room and special rattles are needed to do it properly. Then check the gross motor system, starting with the child on its back, lifting into a sitting position by its shoulders to look for head lag. In the sitting position look at the curvature of the spine and check for sideways sitting reflexes. Then pull to stand and see if they can stand and with how much support. Lastly put prone and see if he or she will lift the head, chest or even crawl off. Socially you may notice a smile or stranger wariness.

The examiner may want you to comment or present the examination. Stick to the developmental systems and is the most advanced skill they have in each and how old this makes them developmentally. You can then say if the child is appropriate for age, globally delayed or asymmetrically delayed.

## STATION 1.9

### *Skin examination*

Picture	Diagnosis	Management plan
fig 1.9a	Chickenpox	Reassure – it will resolve spontaneously
fig 1.9b	Meningococcal sepsis	Intravenous antibiotics
fig 1.9c	Café au lait patch	Reassure – it is a birthmark
fig 1.9d	Molluscum contagiosum	Reassure – it will resolve spontaneously
fig 1.9e	(Mongolian) blue spot	Reassure – it is a birthmark

### *Comment*

It is worthwhile scanning through a picture atlas of birthmarks in paediatrics as children are easy to find with birthmarks, some of which may be associated with syndromes. Also children with another problem may have a birthmark that you are asked to comment on. Common ones are the blue spot (typically on the buttocks in dark-skinned children), the capillary haemangioma (also known as the port wine stain), which is commonest in the nape of the neck, the cavernous haemangioma (strawberry mark) and café au lait patches, which, if numerous, point to neurofibromatosis and other syndromes.

There are three neurocutaneous conditions – neurofibromatosis, Sturge–Weber syndrome and tuberous sclerosis.

STATION 1.10

Examination of gait

Assessment	Good	Adequate	Poor/not done
1 Appropriate introduction (full name and role)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Explains purpose of examination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Candidate washes their hands using the alcohol handwash provided (no marks if candidate only expresses the need to wash if handwash is provided)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Observation of child with comment on facies, signs of UMN posture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Observation of gait walking away and towards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Examines balance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Asks and observes run	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Categorises gait correctly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Examines leg muscle tone, reflexes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Offers to measure leg lengths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Does examination in professional manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comment

Gait is a hard station, but fortunately in paediatrics it will almost always be a child with cerebral palsy, and just occasionally with a muscular or LMN weakness. As with most other examination stations, a systematic approach is needed. Ask the child to walk about 10 metres away and then return. Things to look for are scissoring gait (legs adducted), toe-walking and the arms in an UMN posture, all suggesting hypertonia, often found with cerebral palsy. Occasionally there may be a cerebellar or co-ordination problem that can be examined with heel toe-walking or balance with eyes closed.

Confirm your findings with a brief neurologic examination on the couch. Look for scars of tendon releases, for increased tone and reflexes.

## STATION 1.11

### *Newborn examination*

Assessment	Good	Adequate	Poor/not done
1 Appropriate introduction (full name and role)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Explains purpose of examination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Candidate washes hands using the alcohol handwash provided (no marks if candidate only expresses the need to wash if handwash is provided)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Observation of baby with comment on colour, respiratory rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Looks at facies – comments on eyes, ears, mouth, nose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Feels cranium, fontanelle and sutures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Undresses baby, looks for signs of respiratory distress, tachypnoea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Listens to chest and heart in an orderly fashion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Feels for femorals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Observes abdomen for distension, palpates for masses and organomegaly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Looks and comments on umbilical stump	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 Examines genitalia and that anus is patent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13 Examines limbs, looking for extra digits and abnormal creases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14 Turns prone and looks and feels for spinal anomaly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15 Offers to examine hips with Barlow's and Ortolani's tests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 Offers to look for cataracts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17 Checks grasp reflexes, offers to elicit startle reflex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18 Measures head circumference	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19 Does examination in professional manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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*Comment*

There is quite a lot to a good neonatal examination, but preparing for it is essential – not only might it come up in an OSCE, but it is the basis of most examination stations in babies.

As with many other stations, order is the key. Most paediatricians start at the top and work down to the genitalia. Then they turn the child prone and check the spine and lastly check the hips. This has usually woken the baby up and allows fundoscopy. Try to do the observation and auscultation before the baby is upset.

# STATION 1.12

## Patient history

I am a 23-year-old mother of three. The family is my son, Carl, 5, Jayne, 3 and Emmie, 9 months old. My partner and I have recently separated. All the family are well apart from Jayne, who has mild asthma (controlled with a blue puffer when needed) and me, as I also have asthma and frequent chest infections.

I am worried that Emmie is not growing properly and is a very picky eater. In my red book, the growth chart shows she is very small for her age. Emmie has a 6 oz bottle of milk when she wakes up, midmorning, at lunch time, teatime and just before bed. Although I offer her jars of food, toast, porridge she will not take more than a spoonful before turning her head away. The only solid food she will eat is chocolate and crisps.

She has been otherwise well. She was born at 35 weeks but left hospital after 10 days. There were no problems. She was found to have a heart murmur but this had gone at her 6-week check. There are no concerns about her development.

I have felt quite low recently, since my partner left and am getting frustrated by the children. Carl is very boisterous and runs around the flat. He often hits his sister. Emmie cries frequently and is difficult to settle. Sometimes I am tempted to hit her hard just to shut her up. I am feeling very isolated, and am not getting support from anyone – either friends, family or social services.

Assessment	Good	Adequate	Poor/not done
1 Appropriate introduction (full name and role)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Establishes nature of problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Takes comprehensive failure to thrive history	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Establishes mother's isolation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Takes adequate diet history	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Takes full family and social history	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Uncovers potential non-accidental injury	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Checks with mother information correct	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9 Takes history in empathic manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Makes reasonable management plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Does all in fluent and professional manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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*Diagnosis*

Non-organic growth faltering. Unsupported and possibly depressed mother. Milk drinking baby.

*Comment*

A paediatric history station can be a challenge, but is fairly easy for examiners to create scenarios for actors that test communication skills and applied knowledge in a variety of specialites and acute and chronic settings. Fortunately, a considerable number of marks are always available for good practice and this means a proper introduction – full name, designation and purpose of interview. You need to ask open-ended questions, listen properly, be empathic and check the information you have received. If you are asked to summarise, only mention the key facts. There is often concern about the order of a paediatric history. The truth is that it does not matter much, as long as there is completeness and a flow to it. Start by looking properly into the presenting complaint, then ask most relevant questions – probably the PMH or FH, maybe the neonatal history. Tidy up loose ends at the finish, such as immunisation or development unless these are relevant to the presenting problem.

Failure to thrive is a common paediatric presentation. A non-organic cause is most likely, as with Emmie, who has a poor diet and stress at home. Coeliac disease, cystic fibrosis, cerebral palsy and VSDs are the commonest organic causes. A good history will ask about the diet, stools, infections, murmurs and development.