

SAQ 1

A 33yo male is brought to ED following a suicide attempt with ingestion of an unknown substance 4hrs prior to presentation.

Vital signs:

HR 105

BP 142/79

RR 30

SaO2 94% 6L HMO2

GCS E2V3M4 = 9

An urgent ABG and bloods are collected with the following results:

pH	7.02
pCO2	20
pO2	85
HCO3	8
Lactate	8.2
Glucose	8
Urea	24
Creatinine	210
Osmolarity	299
Na	142
K	4.0
Cl	106
Ca	1.9
Mg	0.8

- i. Describe the acid-base disturbances (2 marks)
- ii. What 3 other abnormalities are present on the ABG? What is the likely diagnosis and why? (5 marks)
- iii. List 2 other investigations you would request and your rationale for each. (4 marks)

- ii. The patient goes on to have a generalised tonic-clonic seizure lasting 5mins.
Describe 6 steps in your management of this patient. (6 marks)

SAQ 2

You are the consultant on duty in an urban district ED. You are called to triage where an angry father is shouting 'this hospital missed that my son has a broken hand'. The father is accompanied by a 12 year old son, Max, who carries a letter from GP stating that the GP has looked up the x-ray report for Max, who was seen in your ED 3 days prior with hand pain after a fall. The x-ray report states there is a displaced scaphoid fracture.

- i. How do you initially manage this situation at triage? (2 marks)

- ii. What are your immediate clinical priorities? (3 marks)

- iii. Max's father puts in a formal complaint about Max's care during his initial presentation to ED. What are your next steps in terms of investigating this matter further? (5 marks)

- iv. You wish to develop a policy to formalise the radiology results checking process for the department. What are the main features of a policy document? (4 marks)

SAQ 3

You have observed a trainee perform a physical exam on a 70-year-old gentleman who had a syncope walking up stairs. He has been breathless on exertion for 1 year.

Your trainee finds no abnormality on examination and considers that he is suitable for discharge if baseline blood tests, 12 lead ECG and a period of monitoring do not reveal any abnormality.

You decide to examine him yourself. You find a mid-systolic murmur, that radiates to the carotids and crepitations (crackles) to the midzones in both lung fields.

- a) What is your differential diagnosis of this murmur and the significance of each option? (8marks)

Condition	Typical features on auscultation (half mark per point -total 1mark)	Clinical significance (1 mark)
Aortic stenosis		
Aortic sclerosis		
Hypertrophic obstructive cardiomyopathy		
Mitral regurgitation		

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b) What is your advice to the trainee on this patient's disposition, including your rationale? (2 marks)

a. Your advice:

b. Your rationale:

c) Your trainee had asked for this case to be a CEX but now doesn't want to because they did poorly. You become aware that other consultants have had the same issue regarding underperformance. As the DENT you decide to meet with the trainee and discuss a performance plan.

a) List 4 early warning signs of a trainee in difficulty (2 marks)

b) List the parts of a performance plan. (4 marks)

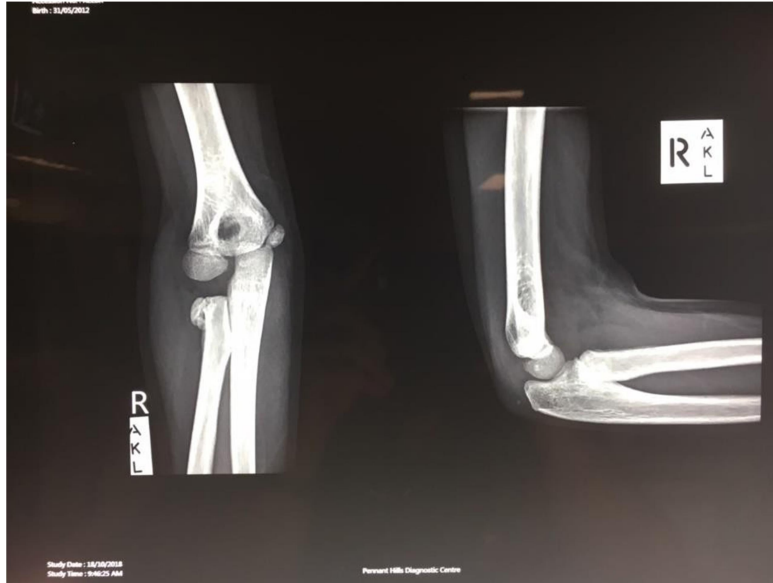
- iv. What criteria would need to be met to safely discharge this child from ED? (3 marks)

SAQ 5

A 7 year old girl returns to the ED with private films. She was seen four weeks ago with elbow pain and diagnosed with a sprain.

An x-ray is reproduced in the Props Book

- i. Describe both x-rays noting relevant negatives (4 marks)



- ii. The doctor involved has had a number of missed injuries recently and you are concerned about burn out. List five symptoms or signs of burn out (5 marks)

- iii. Shift work is a possible contributor to burn out. Night shifts present specific challenges to well-being. List four personal and four organisational strategies that can be implemented to minimise these difficulties (8 marks)

SAQ 6

A 25yo male is brought to ED following assault with a cricket bat one hour ago. He had a witnessed loss of consciousness for 5mins at the scene, with current GCS 14 (E4V4M6).

- i. Aside from intracranial haematoma, list three possible early complications of head trauma, and give two signs that would suggest the presence of each complication: (6 marks)

Complication	Sign

- ii. List the five high risk and the two medium risk features of the Canadian CT Head Rule (5 marks)

- iii. If a significant traumatic brain injury is detected in this patient, what measures should be taken to prevent secondary brain injury? (5 marks)

SAQ 7

A 36 hour old neonate presents with a community nurse because of failure to pass meconium. There has been mucous-like vomiting but the neonate otherwise looks well. PR, BP, RR and saturations are within normal ranges.

i. With regard to this presentation, (4 marks)

(a) A normal digital rectal examination excludes which diagnosis?

(b) The successful passage of an NG tube excludes which diagnosis?

(c) What is the characteristic X-ray appearance of duodenal atresia?

(d) Name a congenital condition associated with neonatal bowel obstruction.

ii. Prior to transport to a specialist paediatric centre name 5 essential actions you should perform in ED to ensure the safety of the neonate in transfer (5 marks)

iii. Describe the intravenous maintenance fluid choice and maintenance fluid rate you would prescribe for this neonate prior to transfer. (2 marks)

iv. Name 2 other potential causes of neonatal intestinal obstruction at this age not

SAQ 8



A 48 year old female presents to your emergency department with 24 hours of mild chest discomfort and exertional dyspnoea. She is normally well without significant past history or regular medications. She occasionally smokes cigarettes Her observations at triage are

Pulse 80 bpm BP 137/70 mmHg Afebrile RR 22/minute Sats 94%

- i. Describe and interpret her PA CXR (2 marks)

ii. In the following table list 2 historical features and their implications for your management decisions (4 marks)

iii. Describe a radiological feature that may influence your management (2 marks)

iv. List and justify 2 possible management strategies (4 marks)

- v. You decide she can be discharged based on your assessment and management.
What discharge advice would you provide to her? (4 marks)

SAQ 9

A 29 year old female is brought to your emergency department by ambulance with a sudden onset of severe shortness of breath one hour prior to presentation. She is previously well and her only medications are the oral contraceptive pill. She has no allergies.

Vital Signs

- Temperature - 36.5
- Pulse rate -130 bpm
- Blood pressure - 80/ 60 mmHg
- Saturations - 82% on room air
- Respiratory rate -55 bpm

She is cyanosed and talking in short sentences only

- i. List three differential diagnoses in order of probability (3 marks)

- ii. List 4 possible indications for thrombolysis in patients with pulmonary embolus. Indicate the one most clearly shown to decrease mortality (5 Marks)

- iii. List 3 diagnostic tests for pulmonary embolism along with a description of what a positive result would look like for each test. (6 marks)

<i>Test</i>	<i>Positive result</i>
<i>Bedside echo</i>	
<i>CTPA</i>	
<i>V/Q</i>	
<i>D Dimer</i>	
<i>Pulmonary angiogram</i>	
<i>MRI pulmonary angiogram</i>	
ECG	

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iv. Indicate which test you would use to make the decision to thrombolyse *in this case* and why (2 marks)

v. List 2 contraindications to thrombolysis for pulmonary embolism. Indicate if they are absolute or relative (2 marks)