

1. Lead examiner

Candidate No:

2. Co-examiner

Final Mark:

SCENARIO

You are asked to see a 61 year-old man on holiday from the United Kingdom. He presents with recent onset of sharp left-sided chest pain, worse with breathing. He is a smoker. There is no history of trauma. Sent to x-ray from triage, he has returned with the films.

Question 1: Describe and interpret the x-ray (included in stem).

Expected Response	Details & Comments	
Small L pneumothorax	Prompt to estimate size.	
Small haemo / hydrothorax	Left sided horizontal air-fluid level	
Relevant negatives	No pneumo-mediastinum; no radiological features of tension; no rib #s	
Interpretation	Small simple PTx Appears to be spontaneous, but subject to further assessment. Recent and impending air travel are relevant to his condition.	

Question 2: How would you assess this man with respect to the possible treatment options?

Expected Response	Details & Comments	
History	Lung disease, past PTx, chest surgery, duration of symptoms	
Medication	Anticoagulation	
Social	Travel plans, accommodation	
Examination	Vital signs, level of pain	

Question 3: History and examination reveals a well patient. Outline the information you would provide him about his treatment options?

Expected Response	Details & Comments	
Options	Nothing – expectant only Needle aspiration Small indwelling catheter Conventional ICC Surgery – not an option	
Expectant Only – supplemental O ₂	Pros: Non invasive. Small lesion, may resolve spontaneously. Depends on duration and natural progress. Cons: If recurrent, or pt has structural lung disease, less likely to be successful. Time-consuming – relevant if pt has to fly soon, or is itinerant in his plans. Needs close follow up, which may be logistically difficult for traveller.	
Aspiration Only	Pros: High chance of re-inflation on first attempt. Less invasive and painful. Less risk of Cxs. Cons: However, higher chance of recurrent collection. Variation in practice re value of repeat aspiration if first attempt not successful.	
Small Indwelling Catheter	Pros: Increasingly popular and acceptable. Suitable for simple PTx. Commercial kits available. Allows repeated aspirations without needles re-insertions. Cons: Small PTx may require imaging-guided insertion. Indwelling device increases risk of infection, bleeding. Care and support required if pt discharged, which is less available for traveller.	
Formal ICC	Pros: Gold standard Rx. Allows continuous drainage of air and fluids. If recurrent PTx, pt is likely to be familiar with this procedure. Cons: Invasive, higher risks of complications such as infection (empyema is a significant issue), bleeding, misplacement. Procedural skill required. Requires formal admission.	
Surgery	Very unlikely to be feasible or reasonable first option in this scenario.	

Question 4: You opt to aspirate the pneumothorax. A repeat CXR 4 hours post procedure is done. Describe and interpret this XR.

Expected Response	Details & Comments
Significantly larger PTx	
Relevant negatives	Absence of re-inflation!
Interpretation	Failed aspiration Prompt for next action - probably requires ICC, or indwelling catheter. <i>Candidates should justify their option.</i>

Question 5: Unrelated to this case, your department decides to reduce the complication rate of large-bore ICC insertions by ED staff. Outline the relevant issues in this task.

Expected Response	Details & Comments
Scope current problem	Current complication rate; details of complications ? Relevant to skills / seniority of proceduralists Other systems factors, such as supervision after hours, techniques used, or higher incidence in special settings such as trauma
Targets	Benchmarks and timelines Comparable to like services
Resources	Expertise, such as cardio-thoracic service Time and money for training
Strategies	Evidence based; best practice Training and credentialing, esp for staff on unsupervised shifts and in high turn-over (ie rotating) Procedural log books for all clinicians Practical / simulated teaching is best Level of supervision Ongoing monitoring: audits and register
Risks	Adverse event monitoring Poor buy-in from staff Resource-consuming Compromised inter-departmental relationships (eg from highlighted problems)
Other	

Comments: (if you fail the candidate, please state why)

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If the candidate fails the exam overall, what feedback would you suggest CIC provide for this SCE?

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Question 1: Describe and interpret the x-ray (x-ray in exam room).