

## MMed (Anaes) Part B OSCE Examination Candidates' Guide for the Crisis Management Station

### 1. Purpose of this Document

This purpose of this Guide to help candidates to prepare for the **OSCE Crisis Management Station** through understanding the range of clinical scenarios that may be presented as questions, for which they must demonstrate their competencies to manage the patient in such situations.

### 2. Purpose and Nature of the Crisis Management Station

2.1. **Context** This station ascertains the candidate's clinical competency as a senior resident in the initial management of a patient with **deranged critical physiology**, in the following context:

- a. The scenario occurs in a clinical area commonly involving Anaesthesiologists.
- b. The candidate answers questions as the Anaesthesiology senior resident present at the scene, where a more senior specialist is reachable only via phone.

2.2. **The competencies to be assessed may include a combination of the following:**

- a. Clinical assessment, differential diagnosis, analysis for working / definitive diagnosis and management of the patient.
- b. Prioritization of actions in an urgent situation.
- c. Crew resource management of the care team (eg. surgeon, junior doctors and nurses)
- d. Communications with other co-managing colleagues, which may include:
  - i. Senior anaesthesiologists
  - ii. Colleagues from other disciplines
  - iii. Junior doctors and nurses
- e. Appropriate application of prevailing international or national Standard of Care Guidelines (eg. Advanced Cardiac Life Support, Difficult Airway, etc).

2.3. **Format of OSCE** Currently, this OSCE will be conducted as a Viva with the following features:

- a. Timing: 2 min: Pre-reading for candidate  
12 min: Q+A
- b. Candidate will respond verbally to questions. No practical actions are required.
- c. Examiners may show patient's clinical information to the candidate in the following forms:
  - i. Simulated physiological parameters on computer screen
  - ii. Verbal descriptions of symptoms and signs
  - iii. Investigation results (eg. CXR, ECG, blood investigation results)
  - iv. Pictures, videos (presented on print or computer screen)
  - v. Case notes
- d. The use of more simulation aids (eg. manikin, equipment, simulated patients, confederates) will be reserved for future OSCEs.

### 3. Potential Clinical Scenarios for the OSCE

The following clinical scenarios may be used for the OSCE (not exhaustive):

No	Setting	Presentation / Pathology	Remarks
1	Associated with regional anaesthesia	High spinal Local Anaesthetic Systemic Toxicity Pneumothorax	
2	Associated with General Anaesthesia	Airway Obstruction including CICO Laryngospasm Gastric regurgitation ± pulmonary aspiration Bronchospasm	

No	Setting	Presentation / Pathology	Remarks
		Pneumothorax Cardiovascular insufficiency or collapse Anaphylaxis Malignant Hyperthermia	
3	Associated with surgery / Invasive Procedures	Pneumothorax Venous Air Embolism Cardiac tamponade Bone Cement Implantation Syndrome	
4	Complications from pre-existing pathologies / injuries	ACS ⇒ arrhythmias, shock, pulmonary oedema Asthma, COPD Neuro emergencies: Intracranial Bleed, ischaemic CVA Pulmonary Embolism Trauma Sepsis	May occur preop, intraop or postop.
5	Post Anaesthesia (eg. in PACU)	Airway obstruction Hypoxaemia Cardiac (eg. arrhythmias, pulmonary oedema, shock) Inappropriate altered mental state Seizures	

#### 4. Domains to be Assessed

- 4.1. The OSCE scenario and questions will progress in domains, where each requires the candidate to demonstrate specific competencies stated in point 2.
- 4.2. The following table is an example of the Domains that the candidate may encounter over 12 minutes.

Domain	Scenario + Exam Material	Capabilities and Performance to be assessed	Remarks
<b>Domain 1:</b> Situational response	<b>Clinical presentation of physio abnormality:</b> May be combination of: 1. Physio parameters on monitor 2. Physical sign 3. Symptoms 4. Investigation results	1. <b>Recognition</b> of abnormal presentation 2. <b>Interpretation</b> of abnormality, may include: a. spot diagnosis vs differential diagnosis b. describe pertinent presenting features c. analysis of composite info (eg. HR vs BP, Resp status, ECG changes, etc) d. calculations	
<b>Domain 2:</b> Situational response	<b>Correlate presentation with patient's physio status, needs and potential pathologies</b>	1. <b>Describe implication</b> of presentation to patient's physiological derangement 2. <b>Prompt and efficient assessment</b> of patient's status and need for intervention, through eliciting relevant clinical info, eg: a. Symptoms b. Physical signs c. Physio parameters d. other investigations 3. <b>Analysis of differential diagnosis vs implications for management</b>	

Domain	Scenario + Exam Material	Capabilities and Performance to be assessed	Remarks
<b>Domain 3:</b> Situational response	<b>Initial management to support relevant physiology</b>	Management may include: 1. <b>Standby</b> drugs / equipment for potential deterioration + monitor for change 2. <b>Physio support</b> for derangements 3. <b>Therapy</b> for pathology	
<b>Domain 4:</b> Situational response	<b>Responses to sudden change or deterioration in physio status</b>	1. <b>Prioritized assessment re. need and urgency for intervention:</b> 2. <b>Prioritized management which include:</b> a. To rapidly normalize specific critical physio derangement b. To improve and sustain critical physiology c. To rapidly diagnose / treat pathology d. To avoid irrelevant actions that delay pertinent management e. To avoid mistakes leading to: i. Correct but ineffective management ii. Harm	
<b>Domain 5:</b> Management details	<b>Details of specific management</b>	Detailed description of the process of a specific management for this patient (eg. steps in pacing, airway procedure, management process in MH)	
<b>Domain 6:</b> Discussion	<b>Summary of patient's issues to senior / colleague</b>	Effective communication that enables senior / colleague (eg. referral specialist) to appreciate pertinent issues and make continued decisions, which includes features of: 1. Inclusion of all relevant information 2. Concise and omission of irrelevant information 3. Effectively organised communications (eg. using SBAR) 4. Clarity of purpose towards the recipient	Opportunity for examiner to seek clarification on candidate's thoughts process in previous domains

Domain	Scenario + Exam Material	Capabilities and Performance to be assessed	Remarks
<b>Domain 7:</b> Discussion	<b>Discussion on continued management for patient</b>	Communicating plans for continued management to senior (for approval), colleague (for co-management), to junior doctor or nurse (clarify of instruction). Potential areas for assessment include: 1. <u>Management plan</u> , which may include the following: a. Current and continued monitoring plan for progression of patient's status b. Plans for continued improvement of physiology c. Diagnostic process and management for relevant pathology(ies). d. Care location for patient. 2. <u>Prioritization</u> according to urgency of patient's needs 3. <u>Effective and efficient communication</u>	

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