

OSCE 3

Candidate Instructions

This station is a structured case based discussion. You will be asked questions directly by one of the two examiners. You will be required to outline your approach to the following clinical situation and to outline your reasoning where appropriate. You will be provided with prompts by the questioning examiner as the case evolves.

You are a junior consultant working in tertiary emergency department. An 83 year-old male is brought to your department by ambulance with brisk epistaxis. He has a history of atrial fibrillation, hypertension, and emphysema. Direct pressure from the ambulance officers has eventually controlled the bleeding. The ambulance officers estimate at least 500mL of blood loss.

Vital signs on arrival to the ED are:

Temp	36.3
RR	24 breaths/minute
SaO2	92% on room air
HR	121 beats/minute
BP	129/95 mmHg
GCS	15

This OSCE will assess the following domains:

- Medical Expertise (70%)
 - Initial assessment (35%)
 - Resuscitation & Stabilisation (35%)
- Prioritisation & Decision Making (30%)

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Examiner Instructions

This station is a structured case based discussion which is designed to examine higher-level clinical reasoning and clinical decision making skills.

Two examiners will mark the station. One of the examiners will lead the case-based discussion and will provide the candidate with questions and further clinical information as outlined in the role player instructions.

The clinical case examined in this station is of an anti-coagulated 83 year-old male with a difficult to control epistaxis being managed in a tertiary ED. The case will progress to requiring intubation for airway protection.

The candidate should be able to outline their assessment and management decisions and provide a clear rationale for their decisions.

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To be deemed Just at Standard/Minimally Competent, a candidate would have to:

- List key clinical features in epistaxis assessment
- Describe their process to perform a nasal examination on an epistaxis patient
- Outline a structured approach to intubating a patient with ongoing life-threatening epistaxis
- Describe anticoagulation reversal options for dabigatran and other haemorrhage control techniques

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Examiner Role Player Instructions

- Gender: Male or female
- Age range: 30 – 60
- Role to be played by: FACEM Examiner

You will be required to take the candidate through the scenario stages listed below. You must provide each prompt as written. Specific follow-up questions for each stage are provided. If the candidate provides a partial response or an incorrect response then you should repeat or paraphrase what the candidate has said (eg. “*you mentioned you would do xxxxx test / you have outlined that your management of xxxxx is abcd*”). This is to allow candidates to correct errors or elaborate on their answers without clearly indicating an error or omission has occurred.

Stage 1: Initial assessment (0:00 - 2:00 minutes)

Prompt: *The patient has been placed into a monitored cubicle. His vital signs are otherwise unchanged. The epistaxis is currently controlled.*

Question 1: *Prior to examining the nose itself, what features would you assess for on history and examination to determine the severity of the bleed?*

Expected actions:

- History
 - Duration of bleeding
 - Uni- or binasal bleeding
 - Estimated blood loss
 - Symptoms of blood loss - dizziness, syncope, dyspnoea, chest pain
 - Trauma history
 - Previous episodes / interventions
 - History of bleeding diatheses (VWD, haemophilia, liver disease)
 - Current medications including anticoagulants

- Examination
 - Reassess vital signs – hypotension or tachycardia (may only be postural)
 - Airway compromise - dyspnoea, stridor, wheeze, acc muscle use
 - Peripheral circulation – cool, shut down suggesting compensated shock

Prompt (if the above is not adequately explored by the candidate): Is there anything else you would assess in this patient?

Stage 2: Nasal examination (2:00 - 3:30 minutes)

Prompt: The patient has a history of atrial fibrillation, hypertension, and emphysema. His medications include dabigatran, sotalol, and perindopril.

***Question 2:** Both nostrils contain clotted blood. You are going to examine the patient's nose. How would you go about preparing to perform this procedure?*

Expected Actions:

- Explain procedure to patient
- IV access prior given estimated blood loss and abnormal vital signs
- Monitored area
- Nursing staff member for assistance
- Equipment prepared
 - PPE
 - magnified light source
 - suction
 - topical vasoconstrictors (eg. co-phenylcaine)
 - dressing pack / epistaxis tray
 - nasal speculum
 - packing materials/devices (ribbon gauze, Merocel, Rapid Rhino, IDC), AgSO₃ sticks, suctioning devices
- Provide analgesia
- Positioning - upright, head/neck supported

- Have patient blow out clots

Prompt (if the above is not adequately explored by the candidate): Is there anything else you would do to help with performing your examination?

Stage 3: Deterioration (3:30 - 5:30 minutes)

Prompt: You have been unable to determine a bleeding site. The patient begins to bleed profusely. His vital signs are as follows (give candidate paper copy).

***Question 3**: You are unable to stop the bleeding and elect to intubate the patient. What difficulties may you encounter during the intubation and how will you address these?*

Expected Answers/Actions:

- Patient distress
 - difficult to position
 - RSI needed – propofol / ketamine, suxamethonium / rocuronium
- Staff stress
 - team leadership required
 - closed-looped communication
 - clear plan A, B, C
 - situational awareness
 - most experienced intubator, call anaesthetics if immediately available
- Bleeding likely to obscure airway
 - suction
 - expect poor view with both direct laryngoscopy and video laryngoscopy
 - need adjuncts, eg. Bougie
 - rescue devices, eg. LMA
 - front-of-neck approaches – mark, have needle/surgical kit prepared
 - need to pack posteriorly and anteriorly, timing determined by intubation urgency
- Pre-existing airways disease
 - rapid desaturation, unable to pre-oxygenate

- apply high-flow nasal prong oxygen
- Aspiration
 - may have already occurred
 - suction
 - cricoid pressure
- Body fluid exposure risk to staff
 - PPE
 - Eye protection

Prompt (if the above is not adequately explored by the candidate): Are there any other difficulties you expect to encounter when intubating this patient? How will you address that?

Probe (to allow exploration of candidate's thinking): Why have you chosen that management decision?

Stage 4: Post-intubation Care (5:30 - 7:00 minutes)

Prompt: You have successfully intubated the patient and placed anterior and posterior nasal packs. The patient continues to bleed.

***Question 4:** What other management options will you take to control the bleeding and why?*

- Topical agents
 - tranexamic acid
 - adrenaline
- Change packs
- Anticoagulation reversal
 - idarucizumab (Praxbind)
 - ✦ if available
 - ✦ 5g intravenous
 - tranexamic acid 1g intravenous stat, then 1g 8/24 infusion
 - Prothombin concentrate
 - Haemodialysis

- ENT referral
- Haematologist consultation
- Angioembolisation

Prompt (if the above is not adequately explored by the candidate): Are there any other management options to control the bleeding? What options are available to reverse the patient's anticoagulation?

Probe (to allow exploration of candidate's thinking): Why have you chosen xxx management choice? Why have you chosen that management choice first?

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Examiner Script Summary

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Stage 2: Nasal examination (2:00 - 3:30 minutes)

Prompt: *The patient has a history of atrial fibrillation, hypertension, and emphysema. His medications include dabigatran, sotalol, and perindopril.*

Question 2: *Both nostrils contain clotted blood. You are going to examine the patient's nose. How would you go about preparing to perform this procedure?*

Stage 3: Deterioration (3:30 - 5:30 minutes)

Prompt: *You have been unable to determine a bleeding site. The patient begins to bleed profusely. His vital signs are as follows (give candidate paper copy).*

Question 3: *You are unable to stop the bleeding and elect to intubate the patient. What difficulties may you encounter during the intubation and how will you address these?*

Stage 4: Post-intubation Care (5:30 - 7:00 minutes)

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Question 4: *What other management options will you take to control the bleeding and why?*

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Props list

- Revised vital signs

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Vital Signs

RR 31 breaths/min

SaO₂ 82% R/A

HR 138 beats/min

BP 117/60 mmHg

OSCE 3 Examiner Marking Sheet

COMPONENT ASSESSMENT

For each Domain below, select the ONE best option that best represents the candidate's level of performance. The option "**minimum level of competency displayed**" represents the level of safe independent practice as a **junior FACEM** in Australasia



Please rate ALL the following domains:

Medical Expertise – Initial Assessment	☐	☐	☐	☐	☐	☐	☐
Medical Expertise – Resus & Stabilisation	☐	☐	☐	☐	☐	☐	☐
Prioritisation & Decision Making	☐	☐	☐	☐	☐	☐	☐

[Detailed assessment criteria](#)

Please use the following criteria to inform your ratings above (mandatory items in ***bold italics***)

Medical Expertise – Initial Assessment (35%)

- Key features on history/examination (**at least 5 required**)
 - Bleeding duration and location unilat/bilat
 - Estimated blood loss(already stated in stem)
 - Symptoms of blood loss - dizziness, syncope, dyspnoea, chest pain
 - Trauma history
 - Previous episodes / interventions
 - History of bleeding diatheses (VWD, haemophilia, liver disease)
 - Current medications including anticoagulants
 - Vital signs(already stated in stem) – hypotension or tachycardia (may only be postural)
 - Airway compromise - dyspnoea, stridor, wheeze, acc muscle use
 - Peripheral circulation – cool, shut down suggesting compensated shock
- Approach to nasal examination (**at least 5 required**)
 - Explain procedure to patient
 - IV access prior given estimated blood loss and abnormal vital signs
 - Monitored area
 - Nursing staff member for assistance
 - Equipment prepared – PPE, magnified light source, suction, topical vasoconstrictors (eg. co-phenylcaine), dressing pack / epistaxis tray, nasal speculum, packing materials/devices (ribbon gauze, Merocel, Rapid Rhino, IDC), AgSO₃ sticks, suctioning devices
 - Provide analgesia
 - Positioning - upright, head/neck supported
 - Have patient blow out clots

Medical Expertise – Resuscitation & Stabilisation (35%)

- Intubation Approach (at least 6 of the bold items required)
 - Patient distress** – difficult to position, **RSI** needed (propofol/ketamine, suxamethonium/rocuronium)
 - Bleeding likely to obscure airway** – **suction** (double), expect poor view with both direct laryngoscopy and video laryngoscopy, need **adjuncts** (eg. Bougie), **rescue devices** (eg. LMA), front-of-neck approaches (mark, have needle/surgical kit prepared)
 - Pre-existing **airways disease** – rapid desaturation, unable to pre-oxygenate, apply **high-flow nasal prong oxygen** (may be ineffective)
 - Aspiration** – may have already occurred, suction, cricoid pressure
 - Body fluid exposure** risk to staff – PPE, Eye protection
- Haemorrhage control techniques (at least 4 of the bold items required)
 - Topical agents** – tranexamic acid, adrenaline
 - Anticoagulation reversal** - **idarucizumab** (Praxbind) if available, 5g intravenous; tranexamic acid 1g intravenous stat, then 1g 8/24 infusion; Prothombin concentrate; Haemodialysis
 - ENT referral**
 - Angioembolisation**
 - Haematology consultation**

Prioritisation & Decision Making (30%)

- Ties findings on history & examination to risk for large bleed / rebleeding / airway compromise (**at least 4 required**)
 - Looks for features of posterior bleed
 - Symptomatic anaemia
 - Previous difficult to control bleeds
 - History of bleeding diatheses (VWD, haemophilia, liver disease)
 - Anticoagulation history
 - Features of shock or impending shock
 - Airway compromise – dyspnoea, stridor, wheeze, acc muscle use
- **Provides a rationale to explain and justify decisions regarding intubation management and timing balanced against haemorrhage control**
- **Reasonable justification for order of haemorrhage control techniques**
 - Topical agents / change packs
 - Early ENT involvement/referral
 - Angioembolisation
 - Anticoagulation reversal may take longer than ENT/angio involvement

INFORMATION

Station Summary: Structured case-based discussion of life-threatening epistaxis

EXAMINER NOTES (For examiner reference only)

OSCE 'incident reporting' notes: Please provide details if an issue occurs which may influence the candidate's exam outcome e.g. protocol breach, candidate illness, etc.

GLOBAL RATING FOR STANDARD SETTING:

This scale is used in the standard setting process for the OSCE. Please rate the candidate's OVERALL performance in this OSCE. The rating should take into account the entirety of the OSCE, rather than just a sum average of the individual domain scores. This element MUST be completed for the standard of the examination to be set.

	Well Below Standard	Below Standard	Just at Standard	Above Standard	Well Above Standard
In terms of a safely practicing junior emergency physician , select the ONE option that best reflects the candidate's performance in this station:	☐	☐	☐	☐	☐

EXAMINER SIGNATURE: