
Station Number Two: Teaching

Candidate Instructions

This is a 7 minute teaching station.

You are a consultant in a major teaching hospital. Alex is a junior registrar in your Emergency department who has asked you for some teaching about Advanced Airway management. They were recently involved in a case where they were unable to intubate a patient and would like to ask you about this situation, and what they should do if they come across a similar scenario in future.

During a recent night shift a morbidly obese male in his 20's presented after being involved in a motor vehicle collision. He had a reduced GCS and was assessed as requiring intubation on arrival. The senior ED reg was team leader and assigned the airway to Alex, pending the arrival of an anaesthetics reg to provide assistance. Alex has completed an anaesthetics term so this was not an inappropriate role allocation in this teaching hospital. Alex was asked to complete an assessment of the airway, and proceed with intubation. Alex failed an initial attempt. Then the anaesthetics reg arrived and was successful using a hyper-angulated blade. The anaesthetics reg documented a grade one laryngoscopy view, and used a bougie to intubate. The patient had no significant injuries after full evaluation and was felt to likely be substance affected leading to the altered conscious state, and they had a good outcome.

You have no concerns about the overall management of the patient and are only required to teach Alex about their specific role in managing the airway.

Your tasks are to:

- Teach Alex how to perform an assessment of a patient's airway prior to intubation
- Answer Alex's questions regarding use of advanced airway techniques

This OSCE will assess the following domains:

- Medical Expertise (60%)
 - Procedural Expertise 30%
 - Assessment: focussed assessment of airway 30%
 - Teaching and Scholarship (40%)
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Role player instructions- Background information

You are a junior registrar with limited critical care experience, but have done a 3 month term in anaesthetics and have basic intubation skills.

During a recent night shift you were on the treating team for a patient who came in after a motor vehicle collision. He sustained a head injury and arrived with a reduced GCS. The decision to intubate was made in conjunction with a senior reg, who acted as team leader whilst you were assigned to the airway. Anaesthetics were called but were unable to attend immediately. You are not concerned about the decision to intubate and do not need teaching about this aspect. The senior reg checked with you before assigning you to intubate, and at the time you felt comfortable with this.

The senior reg asked you to make an assessment of the airway, but you lacked confidence doing this and didn't feel able to ask for help in the heat of the moment. You initially attempted laryngoscopy with a video laryngoscope using a standard (size 4) blade. You weren't able to get a view of the epiglottis and did not know what to do to optimise your view. You made an attempt at intubation using a standard endotracheal tube, as you didn't get much experience with a bougie during your anaesthetics term. The anaesthetics reg then attended and used a hyper-angulated blade to intubate the patient successfully without difficulty. They reported a 'grade one view'.

You didn't get any debrief at the time and have since felt your confidence is knocked regarding airway management. The patient had no life threatening injuries (felt likely substance affected) and had a good outcome (ie you don't need counselling or teaching about this aspect, only the procedure).

You will ask the candidate to teach you how to perform an airway assessment, how to optimise your laryngoscopy view and how to use a bougie and hyper-angulated blade.

Role player Instructions - continued

1) Airway assessment - allow up to first 4 minutes

“Thanks for your help with this. My first question is about the airway assessment, which I didn’t feel very confident with in this situation. Could you please describe how I should perform an assessment of a patient’s airway prior to an intubation attempt?”

The candidate should be prompted to move on if this takes longer than 2 minutes. They are not required to discuss physiological difficulty, or difficult BVM/LMA and should be prompted to move back to anatomical predictors of intubation difficulty if required.

2) Optimising Laryngoscopy (2 minutes)

“During my intubation attempt I could only get a grade 4 view. What can I do during an intubation attempt to improve my view of the vocal cords?”

Again prompt if they move away from techniques specifically to optimise laryngoscopy view - pre-intubation positioning, laryngoscope technique and BURP are the main points they should touch on.

3) Advanced airway techniques (1 minute)

Give the candidate picture of CMAC D-blade:

“When the anaesthetics reg came they used a hyperangulated blade to intubate the patient, but I don’t know much about this. Can you tell me in what situation this is useful and how a hyperangulated blade is used?”

“Could you tell me more about when a bougie is used, and what is the technique for using this adjunct?”

Examiner instructions

1) Airway assessment

Candidates may have a range of responses to this, any reasonable approach will pass eg LEMON/LEON -

- look externally for signs of difficulty eg facial trauma
- Evaluate 332 rule - inter incisor distance <3 finger breadths, hyoid to mental distance <3 finger breadths, thyroid to hyoid distance <2 finger breadths
- Mallampati score
- Obstruction
- Neck mobility limited

Risk factors for difficult airway management, including

- Documented difficulty on prior intubation attempts
 - Upper airway obstruction eg anatomical abnormality
 - Infections of oropharynx and neck
 - Previous surgery or radiotherapy to neck
 - Problems with mouth opening – e.g. trauma, soft tissue disorders, arthritides
 - Problems with neck mobility – e.g. cervical spine disruption, rheumatoid arthritis, cervical fusion (e.g. operative, ankylosing spondylitis, scleroderma)
 - obesity, OSA
 - oropharyngeal or neck masses
 - difficult dentition
 - pregnancy
 - recent intubation (swelling, trauma)
 - angioedema
 - craniofacial syndromes
 - Burns
 - Airway trauma – blunt or penetrating
 - Airway obstruction
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Also

- Upper lip bite test
- Teeth - removable dentures
- Physiological difficulty may also be discussed briefly but isn't the main focus here

2) Optimising Laryngoscopy view

Prior to attempt:

- positioning, head up - sniffing position where possible ie not trauma. Ear to sternal notch.
Ramping for obese patients
- Bed height
- Correct laryngoscope blade type and size
- Laryngoscope held in left hand as low as possible, elbow kept in to your side

Initial attempt:

- Inserting laryngoscope into right of patient's mouth and sweeping tongue across
- Use short handled laryngoscope if breast tissue impedes insertion
- Move progressively down the tongue identifying anatomy as you go
- Lifting movement after the blade is past the base of the tongue
- Blade position in vallecula is the most important factor in lifting epiglottis, rather than force

If poor view:

- **BURP/bimanual laryngoscopy** - must be mentioned and described so that a learner could understand the technique
 - Suction if camera obstructed by blood or secretions
 - Remove cricoid if it was used
 - Insert blade past epiglottis and pull back slowly
 - Dynamic head elevation - (not in trauma, or obese)
 - Use blade to lift epiglottis, like a miller blade technique
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3) Advanced airway techniques

Hyperangulated blade

- Curvature is more acute than standard Mac blade
- Useful for:
 - patients with anterior larynx, or short thyroid to hyoid distance/neck
 - Neck mobility restricted eg Cervical spine immobilisation
 - Large or swollen tongue
 - Second attempt after difficult laryngoscopy

Technique

- **video view only possible, not direct**
- Advanced 'around the corner'
- Glottic view is likely to be better than standard blade but is at a more acute angle
- Must use **rigid stylet** (or preshaped bougie also acceptable)
- Can railroad bougie down tracks on some models
- Can create too steep of an angle, if cricoid ring visible beyond cords you need to lessen the angle of approach
- Difficulty can be encountered when passing the ETT through the cords. Trouble shooting by feeding the ett off and withdrawing the stylet/bougie gradually or performing an overhand turn.

Bougie

Uses:

tracheal intubation via direct or video laryngoscopy, especially in difficult airways or during CPR

tracheal intubation via supraglottic airway device

surgical airway (cricothyrotomy)

selective endobronchial intubation

blind digital intubation

endotracheal tube exchange

Technique of bougie assisted intubation:

- held 20-30cm proximal to tip
- Inserted directly into trachea and used as a 'guidewire' to pass ETT over
- Can be preloaded
- Often need to rotate the ETT 180 degrees as it passes through the cords over the bougie
- Can feel the tracheal rings 'click' confirming tracheal placement

Minimum pass criteria:

- robust knowledge of airway assessment, and factors associated with difficult intubation
 - Good description of optimising laryngoscopy, and mention of bimanual techniques
 - Demonstrates at least a sound working knowledge of hyper-angulated blade and bougie use
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Examiner name(s):

Candidate Name:

OSCE Station:

For each domain below select the **ONE** option which best represents this candidates performance. The option **‘Minimum level of competency displayed’** represents the minimum level of safe independent practice as a junior FACEM in Australasia.

Response Category	Percentage
Very poor	10%
Well below minimum standard	15%
Below minimum standard	25%
At minimum standard	30%
Above minimum standard	15%
High standard	5%
Very High standard	5%

[illegible]

GLOBAL ASSESSMENT RATING

Please rate this candidate's OVERALL performance in this OSCE:

In terms of a **safely practising junior emergency physician** please select the ONE option which best reflects this candidate's performance in this station

**Well
Below
Standard**

☐

**Below
Standard**

☐

**Just at
Standard**

☐

**Above
Standard**

☐

**Well
Above
Standard**

☐



The Royal
Melbourne
Hospital

2020 NOVEMBER FELLOWSHIP CLINICAL EXAMINATION TRIAL OSCE



