



AUSTRALASIAN COLLEGE
FOR EMERGENCY MEDICINE

2016.1B FELLOWSHIP CLINICAL EXAMINATION (OSCE)

STATION 13 AIRWAY SKILLS

1. STATION SUMMARY

Correct demonstration of anatomy, preparations and procedure for emergency cricothyroidotomy and safe approach to anticipated difficult airway.

Correct explanation of indications for emergency cricothyroidotomy and example e.g. airway burns (can't intubate, can't ventilate).

2. CANDIDATE INSTRUCTIONS

You are a FACEM at a tertiary teaching hospital.

One of your registrars will be seconded next term to a rural hospital ED.

The registrar is concerned that they be working alone at night and, despite having competent airway skills, they have never performed a surgical airway. They have an awareness of the different approaches to cricothyroidotomy.

Your tasks are to:

- Teach the registrar how to perform an emergency cricothyroidotomy on a task trainer using the equipment in the room. You are only required to teach 1 approach. (should be 5 minutes maximum)
- Discuss with the registrar how you would approach a situation where emergency intubation is required and you anticipate there is a high chance of a cricothyroidotomy being required (approximately 2 minutes)

This OSCE will assess the following domains:

- Medical Expertise
- Scholarship & Teaching

3. ROLE-PLAYER INSTRUCTIONS

You are an Advanced Trainee working in the emergency department (ED) of a tertiary teaching hospital. You will be seconded next term to a rural hospital ED.

You are concerned that during the secondment you may work alone on night shifts and despite having competent airway skills, you have no experience with surgical airways. You have been shown how to do both a surgical (blade-based) and percutaneous technique in the past but cannot remember the details.

You are a conscientious trainee and are keen to learn how to perform an emergency cricothyroidotomy.

The candidate's task is to:

- Teach you (the ED registrar) how to perform an emergency cricothyroidotomy on a task trainer using the equipment in the room. (5 minutes) The main aim is to assess their ability to competently perform the procedure (the candidate can select which one they prefer to teach) and describe the key elements to you as they go. They should only have 5 minutes to do this so it is important that you 'move them through it' and encourage them to *'show me how you do it and tell me what you are doing as you go'*.
- Outline how to approach the situation where emergency intubation is required and there is a high chance of a cricothyroidotomy being required = the anticipated difficult airway (2 minutes).

The candidate must clearly describe a 'safe' approach to the intubation of a patient with a high chance of failure requiring cricothyroidotomy. There are a number of acceptable responses.

Specific instructions/prompts are on the page/s that follow.

Cricothyroidotomy Demonstration / Teaching: (should be completed in 5 minutes)

- You are aware that there are surgical and percutaneous approaches – you have seen them demonstrated a few years ago but cannot remember the details.
- Ask the candidate to demonstrate the technique they prefer (the candidate can select which one they prefer to teach) and talk you through the key steps as they go. The candidates must outline the following key aspects. If they are not providing the following information then ask clarifying questions at the appropriate time to minimise interrupting their flow or procedure.
 - Anatomical landmarks. Ask the following if required:
 - *'How do I find the right place?'*
 - *'What if the anatomy is difficult or there is swelling?'*
 - The candidate should be able to identify the landmarks for the cricothyroid membrane including the thyroid cartilage, cricoid cartilage and Cricothyroid membrane between the 2
 - Procedural steps for surgical cricothyroidotomy
 - Ask clarification if any step is not clear
 - Scalpel through skin and CT memb (can be horizontal or vertical)
 - Dilate with forceps
 - Insert Bougie or ETT
 - Confirm placement (capnography) and clinical
 - Troubleshooting
 - *'What might go wrong?'*: bleeding/ false passage etc
 - *'What if I am having trouble getting the tube in through the skin?'*: larger skin incision/ forceps/ pre-dilation
 - Tube position confirmation/securing
 - *'How do I confirm it is in?'*
 - *'How to secure it?'*

Anticipated Difficult Airway: (approximately 2 minutes)

Ask them *'Can you talk me through how you would approach the situation where you need to perform urgent intubation and you think there is a high chance of needing to do a cricothyroidotomy?'*

- If they suggest calling for help etc. say *'When there is no one else but ED staff and you need to intubate now'...* *'airway swelling or a burn or something'*

Candidate must outline key aspects (may be in any order) of safe decision making. Trouble-shooting. Ask the following prompts as required (minimise interruptions):

- Patient preparation: Optimal pre-oxygenation, sitting up, neck preparation including landmarks, ?LA.
 - *'What position would you have them in?'* If they suggest lying flat ask *'If their airway's threatened won't they want to sit up?'*
- Equipment preparation: Difficult airway equipment + cricothyroidotomy equipment laid out ready
- Approach to intubation
 - RSI + 1 best go
 - Should describe 'difficult airway technique': optimal position patient position + Bougie/laryngeal manipulation or videoscope
 - May describe intubating LMA/use for ongoing ventilation
 - *'I was wondering about paralysing them if I thought the tube was going to be hard'*
 - Sedation and have a look (+/- LA) 1st
 - *'What if you can't see anything?'*
 - Primary cricothyrotomy under LA (+/- sedation)
 - *'Why would you do that?'*
- Decision of when to proceed to cricothyroidotomy if initial attempt at intubation fails: ask *'If I don't get the tube in 1st go?'* (may not be relevant depending on approach)
 - Must say definite indication for surgical airway is *'Can't intubate and can't ventilate'*
 - And give one example such as *'airway swelling due to airway burns or anaphylaxis'*
 - If able to ventilate: may describe alternate approaches
 - Ask *'How many goes before I should go for the cric?'*
 - If unable to ventilate → immediate
 - *'If I can't ventilate?'*

4. EXAMINER INSTRUCTIONS

This OSCE assesses the ability of the candidate to perform/teach an emergency cricothyroidotomy on a task trainer to an emergency medicine advanced trainee (a role player).

The equipment to perform an emergency cricothyroidotomy will be in the room.

1. Surgical equipment (scalpel/forceps/bougie/size 6 ETT)
2. Cuffed 6 mm Seldinger cricothyrotomy kit (Cook/ Melker)

The candidate's tasks are to:

- Teach the ED registrar how to perform an emergency cricothyroidotomy on a task trainer using the equipment in the room. (approximately 5 minutes)

The main aim is to assess their ability to competently perform the procedure (the candidate can select which one they prefer to teach) and describe the key elements to you as they go. They should only have 5 minutes to do this; the RP will prompt them to 'show me how you do it and tell me what you are doing as you go'.

- Outline how to approach the situation where emergency intubation is required and there is a high chance of a cricothyroidotomy being required (= the anticipated difficult airway). (approximately 2 minutes)

The candidate must clearly describe a 'safe' approach to the intubation of a patient with a high chance of failure requiring cricothyroidotomy. There are a number of acceptable responses.

I guess a key issue is when do they lie the patient down to do the cricothyroidotomy? If they are going to try to intubate them first (as most would), it may be reasonable to use thio/sux or just propofol/fentanyl for rapid induction and then be ready with all equipment to go on and do the cric if they fail to intubate and can't ventilate.

I don't think a "needle" cric will be sufficient to ventilate the patient, so maybe the registrar has to insist the FACEM teaches them the scalpel, dilator, bougie and ETT technique?

This OSCE will assess the following domains:

- Medical Expertise
- Scholarship & Teaching

Examiner Mark Sheet

CONFIDENTIAL Examiner Rating: OSCE 13



EXAMINER 1
barcode

CANDIDATE barcode

EXAMINER 2
barcode

COMPONENT ASSESSMENT

For each Domain below, select the **ONE** 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.

Very poor level of competence displayed	Well below minimum level of competence displayed	Below minimum level of competence displayed	Minimum level of competence displayed	Above minimum level of competence displayed	High level of competence displayed	Very high level of competence displayed
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Please rate **ALL** the following domains:

Medical Expertise	☐	☐	☐	☐	☐	☐	☐
Teaching	☐	☐	☐	☐	☐	☐	☐

Detailed assessment criteria

Please use the following criteria to inform your ratings above

- | | |
|--------------------------|--|
| Medical Expertise | <ul style="list-style-type: none"> PPE – pre, during & post procedure Procedure demonstration – correct anatomy / landmarks for an emergency cricothyroidotomy <ul style="list-style-type: none"> Competent surgical cricothyroidotomy (descriptor to be given for examiners) OR Competent Seldinger cricothyroidotomy Confirm correct position / successful placement – can answer registrar questions re the same Complications/ troubleshooting Safe approach to anticipated difficult airway <ul style="list-style-type: none"> Approach to intubation: LA/sedation/RSI induction Patient optimization: Preoxygenation/ positioning Appropriate preparation for Surgical airway: equipment, patient, operator Decision making re cricothyroidotomy (timing etc) |
| Scholarship and Teaching | <ul style="list-style-type: none"> Teaching goals set + structured approach What? What is an emergency cricothyroidotomy? How? Demonstrates/ describes how it is performed. Why? Outlines the situations why /when an emergency cricothyroidotomy may be performed Can't intubate and can't ventilate e.g. airways burns or oedema e.g. anaphylaxis Clarifies understanding Answers registrar questions Summary at end |



Examiner Mark Sheet (cont')

CONFIDENTIAL Examiner Rating: OSCE 13



INFORMATION

Station Summary: Correct demonstration of anatomy, preparations and procedure for emergency cricothyroidotomy and safe approach to anticipated difficult airway.

Correct explanation of indications for emergency cricothyroidotomy and example e.g. airway burns (can't intubate, can't ventilate).

EXAMINER NOTES (For examiner reference only)

OSCE 'incident reporting' notes: Please provide details if an issue occurs which may influence this 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 or 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 practising junior emergency physician , select the ONE option that best reflects the candidate's performance in this station:	☐	☐	☐	☐	☐

EXAMINER SIGNATURE:



OSCE 1