

# **Sunshine Coast Hospital and Health Service**

## **ACEM Objective Structured Clinical Exam (OSCE) Preparation Course Handbook**



May 2017

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## Acknowledgements

This Handbook was created by Dr. Julia Haire for the SCHHS Fellowship Preparation Course. The Simulation section was written by Dr. Suneth Jayasekara. Dr. Henry Huang contributed to the History Taking section. Parts of this handbook have been adapted from The Royal Brisbane and Women's A Guide to the ACEM Objective Structure Clinical Exams written by Dr. John Kao; Princess Alexander Hospital OSCE Handbook written by Dr. Johnathan Isoardi and Dr. Darren Powrie and the Monash Health Emergency Education Group OSCE Preparation Handbook written by Dr. Jon Dowling.

## General Tips

- **The knowledge that you have gained whilst studying for the written exam will not be enough to pass this exam.** This exam tests the application of that knowledge and other skills such as communication.
- **You will need to give yourself time to study and to practice for this exam.** If you decide to leave it until after the written exam then this only gives you 10 weeks to prepare for the next OSCE exam. It is unlikely you will study for the first week after the written and most people cannot motivate themselves to focus appropriately on the OSCE until they find out they have passed the written. Which leaves you with only about 5 weeks of focused study and practice. Our recommendation is that you either start practicing OSCEs before the written OR you do the OSCEs in the next sitting, 6 months after the written.
- **Commit** to an exam and work towards that. From 2018 onwards you will only have 3 chances to pass the exam and then you are out of the training program. Give yourself the best chance to do this exam only once.
- **Know the exam.** Look at the ACEM website to gain a good understanding of what will happen on the day of the exam and look at the example OSCE videos, the examiner marking sheets and the released OSCE exam from 2016.1. Understanding the OSCE process and having a good idea of what the OSCEs entails and how they are marked will make a big difference to how you prepare and your performance.
- **Keep up your knowledge and learn it in a different way.** When you are revising the knowledge learnt for the written component, do so in a way that will be helpful for the OSCE. For every topic think of how you would run a resus, how you would explain that ECG and what the management of it would be, how you would explain that concept to a junior or how you would teach that procedure etc.
- **Practice, practice, practice.** The more you practice the better you will become and the more comfortable you will be on the day. You need to practice with other people so forming a study group of 2-4 people and regularly getting together to practice OSCEs and critique each other will make a big difference to your performance. You also need to practice in front of other FACEMs and examiners to get advice on how to improve your performance. You can also practice each day at work. Get a FACEM to critique you whilst you run a resus, take a history or examine a patient. Every time a resident presents to you it is an opportunity to practice your teaching skills.

## Eligibility

Candidates for the FEx (Clinical) must meet all of the following criteria:

- They must be a registered and financial trainee of the College.
- They must hold current registration to practice medicine in Australia or in New Zealand.
- They must have completed at least 36 months of the 48 months of accredited Advanced Training time prior to the relevant examination application closing date (not including any required remediation time).
- They must have satisfied the trainee research requirement.
- They must have successfully completed the FEx (Written).

Candidates must meet these eligibility criteria, as per official College records, by the relevant **application closing date**.

## Application

### The Application Process

To apply for the Fellowship examination, you will need to complete and return the forms by the relevant application closing date.

The application must reach the College by close of business on the closing date specified.

### Unacceptable Applications

An application will NOT be accepted in the following circumstances:

- If it is not received at the College by close of business on the specified closing date; or
- If it is incomplete in any way (including hand signatures where indicated); or
- If, at the application closing date for the examination in question, any outstanding fees of whatsoever nature have not been paid in full.

## Know the Exam

### The Venue

So far each exam has been held at the Australian Medical Council National Test Centre in Melbourne. This facility is purpose built for medical OSCEs.

There are a number of small rooms that are about the size of an outpatient consulting room. They can be set up in a number of ways depending on the requirements for that particular OSCE. Note the rooms are quite small especially compared to a resus bay.

The rooms are constructed next to each other in a U shape so that you will go into one room for a station and then proceed to the adjacent room for the next station.

### The Process

- 180 minutes total examination time
- Currently held over 3 days
  - 2 days are 6 x 10 minutes stations
  - 1 day of 3 x 20 minute stations
  - The examination days you will be given are consecutive i.e. you will be examined on Monday, Tuesday and Wednesday or Thursday, Friday and Saturday

**\*\*Note the structure of the exam may change at any time and the details of how YOUR exam will be structured will be sent out to you just prior to your exam\*\***

- How each station works
  - The stem/scenario is written on the wall outside the station
    - Read carefully
    - **Break down of domains provided**
  - 3 minutes outside to read the stem
  - 7 or 17 minutes in the station
  - Buzzer and instruction to tell you to start reading
  - Buzzer to tell you when to move into the room
  - Buzzer (different sound) to tell you when you have 1 minute left
  - Buzzer and instruction to move to next station

## Who is in the OSCE station

- The Examiners
  - There may be 1 to 3 examiners in the corner of the room
  - They generally do not interact with you
  - Occasionally they may participate in the OSCE but this will be minimal (e.g. being the ambulance officer that drops off the patient and gives you a handover or being the person that you are referring to during the OSCE)
- The Role Players
  - These may be trained actors, medical students, nursing staff or FACEMs
  - They are given specific instructions about their role and what they can say is limited so PAY ATTENTION to what they are saying and how they are saying it. They are trying to help you get through all the bits you need to in the OSCE.

## How the OSCE is marked

Please see below I have attached the 2016.1 OSCE that has been released. With each OSCE there is the **marking sheet** that the examiners were given. Look at these carefully.

Each domain that is being assessed in that OSCE is marked against a 7 point scale ranging from “Very poor level of competence” to “Very high level of competence”. This is how YOU are marked.

At the bottom of the examiners sheet is a 5 point global rating that ranges from “Well below standard” to “Well above standard”. This mark is for standard setting.

The process for working out the pass mark for the OSCE is the Borderline Regression Method. The total domain scores for each candidate are plotted against the global score. For each global score a regression line is derived through the total domain scores. The total domain score where this line cuts through the “just at standard” grouping is the raw cut score for that OSCE. This is done for all the OSCEs then the raw cut scores are averaged and that becomes the raw cut score for the entire OSCE. A Standard Error Measurement is added to that score and that becomes the pass mark.

Note you do not have to pass every OSCE to pass the exam overall.

There are also areas for the examiner to fill in for feedback if the candidate has not done well in the station and if the candidate fails overall, that feedback is given to the candidate.

## Types of OSCEs

We have identified 8 types of OSCE stations that are likely to make up most of the exam.

These are:

1. History Taking
2. Physical Examination
3. Communication
4. Clinical Synthesis and Communication
5. Teaching
6. Administration
7. Procedures
8. Simulations

The OSCEs are not divided up into types by ACEM, this is just what we have observed over the short life of this Fellowship Exam.

Within these OSCE types we have identified the commonly occurring components of the OSCE that the examiners are looking for and they are outlined below with some tips for how to approach these stations.

Remember that paediatrics will make up at least 25% of the exam so be prepared for paediatric cases as well.

## History Taking OSCEs

In these stations you will be asked to take a focused history from a patient. You are then often asked to explain your findings and your management plan to the patient (or a resident/nurse etc.).

The domains that are likely to be tested in these stations are:

- Medical expertise
- Communication
- Professionalism
- Health Advocacy

You should be fairly comfortable with taking a history but remember you will often have to take the history, explain your findings and explain your management plan all in 7 minutes.

This means that you have to take a **focused** history that:

- Is a detailed history of the presenting complaint
- Explores a differential diagnosis
- Explores relevant past medical history; medications; allergies; family history
- Clarifies your likely diagnosis
- Clarifies the severity of the presentation

- Covers risk stratification of the presentation
- Explores disposition (social Hx; additional issues; risks)

You also need to be aware of what tasks you have been given in the stem and you need to achieve all those tasks i.e. if you do a great and thorough history but you run out of time to explain your assessment and your management you will get great points for Communication and Professionalism but very low marks for Medical Expertise and Health Advocacy and may fail that OSCE.

Pay careful attention to what the role player is saying. Everything they say is relevant and important and designed to keep you on the right track.

Please look at the Presentations List in the Curriculum Framework. These are likely to be what some of the history taking stations are based on.

These are what we think are the high yield history taking topics:

<b>Cardiorespiratory</b> Chest pain Dyspnoea Palpitations Cough	<b>Neurological</b> Dizziness Vertigo Headache Syncope TIA
<b>Gastrointestinal</b> Abdominal pain Diarrhoea (possibly in returned traveller) Jaundice Dysphagia Upper or lower GI bleeding	<b>Psychiatric</b> Suicide risk assessment
<b>Paediatric</b> BRUE/ALTE Febrile convulsion Limp child Fever	<b>Other</b> Falls Visual disturbance Back pain Haematuria Sexual or drug history Rash Weight loss Hypoglycaemic episode in a diabetic Returned traveller with fever



### Tips for the History Taking stations (and what the examiners are looking for):

- Develop and maintain rapport
- Non-judgemental, empathetic approach
- Assure confidentiality where appropriate
- Listen actively
- Open ended questions
- Respond to patients verbal and non-verbal cues
- SUMMARISE
- Verbalise plan, and reasoning in LAY language
- Give the patient opportunity for questions – and address those.

### Physical Examination OSCEs

In this type of OSCE you are likely to be asked to perform a focused examination on a patient and then explain your examination findings to them (or a resident, colleague etc.) and explain your further management.

The domains that are likely to be tested in these stations are:

- Medical expertise
- Communication
- Professionalism
- Health Advocacy

ACEM states that the patients will be standardised patients. We think this means that either there will be actors faking a lesion, or they will have a completely normal examination or if they are patients with a finding on examination, they will have stable findings (e.g. heart murmurs) that are present in many patients.

You will still need to study from Talley and O'Connor for this section of the exam. However the examination will be a **focused** one so you need to adapt the Talley and O'Connor method to one that is practical for the ED. And you need to practice your examinations A LOT so they are slick, fast and you can do them on auto-pilot under stress. Practice on each other, those whom are at home, the dog, anyone and then ask a FACEM to watch you and critique you when you are at work.

You can be asked to do any of the examinations that are in Talley and O'Connor and you need to prepare for them all. However, the examinations that we think are the highest yield are:

- Neurological
  - Cranial nerves
  - Upper limb
  - Lower limb
  - Cerebellar
- Cardiovascular
- Respiratory
- Abdominal
- Joints
  - Neck
  - Shoulder
  - Elbow
  - Hand
  - Back
  - Hip
  - Knee
  - Ankle and foot
- Gait

**Tips for the Physical Examination stations (and what the examiners are looking for):**

- Address pain and discomfort
- Maintain dignity and comfort of the patient
- Focused exam
- Clear instructions to the patient with brief explanations of why you are doing what you are doing
- Summarise findings
- Discuss examination findings and treatment options if asked in the stem and provide patient information about pros and cons if there are a few options.
- Explain plainly in lay terms
- Give the patient an opportunity to ask questions and then address them

\*\*\*It is also likely that you may have a combined history taking and physical examination station e.g. Your patient presents with knee pain. Take a focused history, do a focused examination and then explain your findings and management plan to the patient\*\*\*\*

## Communication OSCEs

The OSCE is the only way that ACEM can assess this domain so there is likely to be at least one of these pure communication OSCEs in your exam. Every OSCE involves communication but in these OSCEs, communication is the focus of the assessment.

The domains that are likely to be tested in these stations are:

- Communication
- Medical expertise
- Professionalism

(plus others depending on the scenario)

Potentially there are lots of communication stations that can be examined but some of the high yield ones that we have thought of are:

- Breaking bad news
- Obtaining consent for a procedure
- Management of an angry patient or relative
- Complaint management (may be combined with angry patient)
- Managements of a difficult colleague e.g. Difficult referral, conflict resolution
- Dealing with an impaired colleague
- Talking to a struggling trainee
- Explaining a result/procedure etc. to parents

Each one of these can be broken down into a template of what needs to be achieved in the station. Examples are:

- Complaints: (Professionalism, communication, leadership and management)
  - Empathetic, patient centred approach (remember body language, positioning of chairs)
  - Develops and maintains rapport
  - Open disclosure with early apology
  - Non-defensive
  - Does not blame anyone
  - Multi-modal reasons for error
  - Clearly outlines plans for investigations, plan for prevention in the future, and communication of progress to the patient
  - Addresses patients' concerns
- Impaired colleague/trainee:
  - Introduction, explain reason for meeting
  - Establish rapport
  - Non-threatening and non-judgemental approach
  - Re-assure colleague/trainee of CONFIDENTIALITY
  - Active listening, response to verbal and non-verbal cues
  - Allow the trainee to voice their views and concerns and gather necessary information from them

- Remember to enquire about home situation and stressors (alcohol, drugs, relationship issues)
- Facilitate reflection, insight
- Provide feedback in a constructive manner
- Provide support
- Summarise issues and plan to address them
- Make a plan (involve DEMENT / director as appropriate)
- Organise follow up

**Tips for the Communication OSCEs (what the examiners are looking for):**

- Introduces themselves and purpose (walk in, introduce yourself and shake hand with the person and then position yourself appropriately)
- Establishes rapport with patient (including good use of body language and eye contact)
- Maintains confidentiality and assures patient of this
- Starts with open ended questions and keeps this approach for initial questioning
- Resists interrupting early
- Actively listens to patient
- Responds to non-verbal cues
- Follows leads
- Conveys understanding and empathy
- Logically uses second order questioning to focus on and differentiate presenting problem/s or concerns
- Avoids premature closure
- Repeats parts of what the patient has said to patient to confirm listening and understanding and try to use shared decision making
- Concludes by invitation for any further information that the patient wishes to convey

The best way to get good at these OSCEs is to practice them over and over again. Practice them in your study group and also use all your clinical interactions at work to practice them, getting FACEMs to observe you and give you feedback when you can either formally as a mini-CEX or informally.

## Clinical Synthesis and Communication OSCEs

In these OSCEs you are usually asked to interpret history and examination findings or an investigation and then explain your assessment and management plan or options. You are usually talking either to a junior doctor or a patient.

The domains likely to be tested in these stations are:

- Medical Expertise
- Prioritisation and Decision Making
- Communication

Some examples of these types of the OSCEs are:

- Explanation of an investigation and its implications to a junior doctor
- Explanation of any investigation result to a patient
- Explanation of management options to a patient, examples are:
  - Thrombolysis in STEMI
  - Thrombolysis in CVA
  - Management options in spontaneous pneumothorax
- Referral to a colleague
- Discharge instructions to a patient

It is important then to practice focused description and interpretation of common investigations e.g. ECGs, X-rays, blood gases, haematology and biochemistry etc. so that you can describe the investigation and interpret it in a succinct manner to a junior doctor. Also practice explaining the result of an investigation and its implications or explaining management options to a patient using lay terms. You can also come up with templates for referrals, handovers and discharge instructions.

### **Tips for the Clinical Synthesis and Communication OSCEs (what the examiners are looking for):**

- Summarise key points from the history, physical examination and/or investigations provided to you
- Verbalise interpretation of information, likely differential
- Verbalise risk assessment
- Prioritise treatments and actions that need to be taken and explain the reasoning behind your prioritisation
- Use language appropriate for whom you are talking to
- Give the listener an opportunity to ask questions and answer them appropriately

## Teaching OSCEs

In these OSCEs you are usually asked to teach a junior doctor some aspect of Emergency Medicine. However, it usually also incorporates interpretation of clinical information given to you and formulating a management plan for a patient. For example, a junior doctor has just seen a patient with atrial fibrillation with a rapid ventricular response and would like to know the approach to patients with AF in general and what to do in this patient.

The domains likely to be tested in these stations are:

- Medical Expertise
- Prioritisation and Decision Making
- Communication
- Teaching and Scholarship

The list of topics in EM that would lend itself to this type of question are infinite so a good way to practice for this type OSCE is to try and imagine you are explaining concepts to a junior doctor when you are revising your EM subject material. The best way to do that, when you are revising a subject, is to try to create a structure to it e.g. for explanation of the approach to patients with AF you can divide it into headings - patients compromised by rapid AF, rate control, rhythm control and anticoagulation.

You also need to practice your teaching and communication skills for these OSCEs by doing them over and over again to make sure you remember all the elements you need to cover in a teaching session as outlined below.

### **Tips for the Teaching OSCEs (what the examiners are looking for):**

- The candidate should firstly establish the RMO's baseline knowledge
- Then outline a plan for the teaching session – topics to be covered
- Listening and checking understanding may occur throughout. There should be patience and tolerance for the learner
- Correct misconceptions, reinforce correct knowledge
- Specific and relevant depth and breadth of knowledge imparted
- Summarise important take home points at the end
- Answer questions throughout
- At the end of the OSCE, the candidate could recommend that the RMO reflect on the case and follow up with further reading (post experiential reflection)

## Procedural OSCEs

In these OSCEs you are asked to either demonstrate a procedure or teach a procedure, usually to a junior doctor. For example you have to manage the airway in a difficult airway situation or you have to teach a junior doctor how to do a lumbar puncture.

Any of the procedures on the Procedures List of the Curriculum Framework could be used so please refer to that. It is attached to this handbook.

The domains likely to be tested in these stations are:

- Medical Expertise
- Communication
- Teaching and Scholarship

If you are performing the procedure verbalise what you are doing throughout the procedure in a step-by-step manner so the examiners know what you are thinking and preparing for e.g. in planning for the difficult airway, explain to your airway nurse what equipment you want (and why) and what your plan A, B, C etc. is.

If you are teaching the procedure then there are extra things that need to be covered such as gaining an understanding of the junior doctor's previous experience with this procedure, ensure that they understand your instructions etc.

The best way to practice these procedures yourself and teaching them is on mannequins and part-task trainers. You can organise some sessions with this equipment with our simulation coordinators and critique each other.

### **Tips for the Procedural OSCEs (what the examiners are looking for):**

- If teaching start with a plan of what will be covered during the 'session'; if performing the procedure talk about when, where and with whom you will be doing the procedure
- Obtain informed consent
- Ensure comfort of patient at all times; ask patient how they are doing throughout the procedure
- Departmental awareness – ensure rest of ED ok and safe to do procedure at that time
- Right personnel helping with procedure
- Indications
- Contraindications
- Complications
- Equipment
- PPE/Sterility
- Patient positioning

- Technique
- How to trouble shoot common problems and avoid complications
- Post-procedure care e.g. observation, dressings, analgesia
- Disposition
- Give the patient or the student opportunity to ask questions and answer those questions appropriately
- If teaching, ensure understanding throughout
- Ideally leave time for the role player to practice the skill with your supervision after your demonstration

## Administration OSCEs

In these OSCEs you are asked to perform a task that is more administrative or managerial. These are often difficult OSCEs as they ask you to perform tasks that you do not do on a daily basis. This means that you need to know your theory and have a structure or template in mind to tackle these.

The domains likely to be tested in these stations are:

- Medical Expertise
- Communication
- Prioritisation and Decision Making
- Professionalism
- Leadership and Management
- Teamwork and Collaboration

Examples of topics that are likely to be examined in these OSCEs are:

- Addressing flow of patients in the ED e.g. you have a full department and you are about to receive 2 cat 1 patients
- Formulating or enacting a disaster plan
- Formulating a guideline
- Formulating a quality improvement plan
- Addressing overcrowding and access block

The biggest mistake that candidates make in these types of OSCEs is to concentrate solely on what can be done in the ED. Those issues are often the ones that you can address the most as they are within your department but you also need to think about the wider hospital and community in your discussions.



### Tips for the Administration OSCEs (what the examiners are looking for):

- Candidate to lead the discussion
- Candidate to display knowledge of the key elements that need to be considered in each of these scenarios and discuss details as instructed in the stem
- Display understanding of stake holders involved, effects on department, staff etc.
- Address non-clinical issues as appropriate
- Think of wider hospital and community stakeholders and issues that may be relevant especially in flow and access block OSCEs

### Simulation OSCEs

The simulation component of the ACEM Fellowship OSCE exam is likely to involve 2 of the 3 double stations in the exam (roughly 22% of the exam). Therefore, it is critical to do well in these stations. Leading a resuscitation team in the management of a critically unwell patient is a quintessential skill of a good emergency physician, and the simulation stations assesses this characteristic. Deliberate practice at improving this skill will not only greatly assist with you passing the exam, but also help you gain the respect of your colleagues and enhance the performance of the resuscitation teams you lead in your current and future careers.

The domains likely to be tested in these stations are:

- Medical Expertise
- Communication
- Prioritisation and Decision Making
- Professionalism
- Leadership and Management
- Teamwork and Collaboration

You can expect the station to consist of a 3 min reading phase, where you obtain some initial clinical information about the patient. This is followed by 17 mins of the simulation assessment exercise. The simulation itself is likely to be low fidelity and **hands off** i.e. – you will not be expected to touch the patient – all the information you need should come for the confederates. Read the instructions in the reading phase to confirm this.

For the simulation itself you will have 2-3 minutes to introduce yourself to your team, and prepare your team for the incoming patient. This would involve allocating roles and highlighting your assessment and treatment priorities to your team (and the examiner).

This is followed by the arrival of the patient. You will be expected to receive the handover from the pre-hospital personnel, and guide your team through the initial assessment of the patient. You will need to use this time for information gathering. Ask the right questions from your team to get the information you need to make the right investigation and management decisions for the patient. As the simulation is low fidelity – you will need to use your team and the monitor to get the information you cannot get from the manikin itself.

This is followed by a management phase, where you will need to guide your team through a critical resuscitation and stabilize the patient. This will obviously depend on the scenario in front of you, and will be a test of your medical expertise, prioritisation, decision making and team leadership skills. Examples of this would be guiding your team through a rapid sequence intubation, ALS algorithm, Massive transfusion protocol, or management of a critical electrolyte disturbance or toxidrome.

This is followed by a disposition phase – you will need to anticipate the next step in the patient's journey, and make an appropriate referral and handover to the specialist clinician in a structured manner, demonstrating high level clinical thinking.

To summarise, the simulation is likely to involve

- Reading – 3 mins – *read the instructions carefully!*
- Preparation for patient's arrival ~ 3 mins
- Assessment – 3 -5 mins
- Management – 5 – 7 mins
- Disposition/ Handover ~ 2 -3 mins

### **How to be successful at the OSCE**

Here are my thoughts about what you need to be successful at the OSCE

- **Medical expertise** – Your medical knowledge about the care of critically ill patients needs to be excellent. You need to have clarity in your own mind about what needs to be done, in order to make the right decisions and be able to communicate this with your team and the examiners.
- **Leadership style and communication** – You need to develop your own leadership style that is effective, and communicate effectively with your team to get the information that you need, and convey your thinking process effectively

- **Practice** – This practice should take several forms
  - Mental simulation to develop the clarity of decision making. Run through scenarios in your mind, think about the decisions you are making, and why you are making them.
  - Practicing out loud alone – develop the verbal communication skills, and your leadership style. Practicing the “phrases” you will use to lead your team.
  - Practicing within your study group – get peer feedback on your performance.
  - Practice in formal OSCE teaching sessions – work on the skills you have developed, and get more feedback. (*note – this method alone is unlikely to be enough*).
  - “Practice” at work, leading real resuscitations. Ideally with feedback from a senior colleague.

We hope the above ideas are useful to help you with your preparation.

Performing well in the simulation stations in the OSCE, will not only give you good marks in those stations, but greatly increase your confidence so that you can shine in the other stations as well.

Some of the high-yield topics, in our opinion, are:

- Advanced life support
  - Shockable rhythm
  - Non-shockable rhythm
  - Special circumstances (pregnancy, newborn, toxicology, hypothermia, trauma)
- Post-resuscitation care
- Standard intubation – need to be slick at this – may form part of any simulation
- Difficult intubation or Can’t Intubate Can’t Ventilate situation
- Trouble shooting ventilation problems e.g. Asthmatic, sudden hypoxaemia in ventilated patient
- Cardiovascular/Respiratory emergencies e.g. STEMI - thrombolysis/PCI; cardiogenic shock, massive PE, tension pneumothorax, tachyarrhythmias (unstable wide or narrow complex); bradyarrhythmias (including pacing)
- Haemorrhagic shock (e.g. massive GIT haemorrhages, Post Partem Haemorrhage) with Massive Transfusion Protocol activation
- Anaphylaxis
- Pre-eclampsia or eclampsia
- Seizures
- Precipitous birth or difficult birth e.g. shoulder dystocia

- Trauma
  - Severe head injury
  - Haemo/pneumothorax
  - Penetrating chest injury
  - Severe pelvic trauma
  - Severe abdominal trauma
  - Spinal injury/neurogenic shock
- Toxicological emergencies e.g. TCA overdose
- Toxinological emergencies e.g. Snake, Funnel Web spider, Irukandji
- Paediatric simulations
  - Anaphylaxis
  - Asthma
  - Paediatric advanced life support
  - Choking child/Foreign body
  - Seizures
  - Septic shock
  - SVT
  - Trauma
  - Neonatal resuscitation
  - Collapsed neonate

## General Performance Tips

- **Read the stem carefully.** Every word and phrase on that stem has been workshopped many times so it is there for a reason and it is important.
- **Look at the tasks you are given in the stem and make sure you achieve those in the OSCE.** You have limited time and you need to achieve all those things. Even if you can half fit it in in the last minute, it is better than not achieving the task.
- **Look at the domains being tested and think about how you can concentrate on those, especially the main ones.** There is no point spending 3 minutes counselling a patient to stop smoking if Health Advocacy is not being tested.
- **Try to form a structure for each OSCE in the 3 minutes that you have outside the room.** Think of the task/s you need to perform and break them down into sections to provide a structure. If you can, outline that structure at the beginning of the OSCE as if you don't get to some the things, at least the examiners will know you intended to.
- **Be the consultant.** You need to own the OSCE and give the impression that you are in control at all times and are unflappable. Take your time when talking, pause to think and make sure you phrase things as if they are YOUR practice/plan etc. i.e." MY practice is to .....; MY management plan in this patient is.....; I think we should....."
- **Stay calm and confident.** No matter what the role player does or what happens in the scenario keep going and remain calm. Never get angry at the role player or exhibit frustration at the process.
- **Be empathetic with the patients.** Always show that you care and be considerate.
- **Speak clearly and do no talk too fast.** The examiners need to be able to hear and understand you to give you the marks.
- **Consider going to a performance psychologist or speech coach.** They may be able to help you with tips on controlling your nerves, slowing speech, speaking more clearly etc.
- **Try to summarise and then cover things quickly that you have not gotten to in the last minute.** Summarising allows the examiners to pick up on things they may have missed and gives you a way to make sure you have covered all your tasks that you needed to achieve in that OSCE.
- **When you walk out of the OSCE, forget about it completely and focus on the next one.** If you have a bad OSCE and you continue to mull it over in the 3 minutes you have to prepare for the next one, you are also going to stuff up the next OSCE and then possibly a number of OSCEs in a row.

## General Practice Tips

- **Form a study group.** You can get together a few times a week and practice OSCEs and critique each other. You will cover lots of OSCEs in this way and learn a lot from each other.
- **Do the OSCE over and over again.** This will allow you to put in to practice what you have been advised to do and consolidate what you have learnt.
- **Practice in front of FACEMs and examiners whenever you can.** This can be in the formal OSCE session but the more you do this the better so approach FACEMs to do additional sessions too.
- **Video yourselves doing the OSCE.** Then watch it back to critique yourself or to better understand the critiques of others.
- **Practice the procedures with the part-task trainers and mannequins.** You can organise this yourself with the simulation co-ordinators.
- **Learn the physical exams and practice them on anyone who will let you.** You need to get slick at these.
- **Use every day at work and every clinical encounter as an OSCE practice.** Try to get FACEMs to observe and critique you.
- **Lead the resus team at work regularly.** And ask the FACEM to critique you.
- **Use every encounter with a junior doctor as a teaching or clinical synthesis OSCE.**
- **Practice, practice, practice!!!**

## Resources

### Recommended Texts

ACEM has an official list of recommended texts that are included later in this handbook.

In addition to the texts that you used for the written exam the 2 other texts that you will need for the OSCE are:

- Talley N, O'Connor S, Examination Medicine – a Guide to Physician Training MacLennan & Petty is the text for physical examination. When you buy the text you also get a disc with videos demonstrating the examinations.
- Roberts JR, Hedges JR (eds), Clinical Procedures in Emergency Medicine WB Saunders Company is the go to book for procedures. When you purchase this book you also get access to loads of videos on line demonstrating the procedures.

### Other Texts

These are other texts that we have used in the past for tips and practice OSCEs. They are based on the UK MCEM OSCEs but are helpful for our exam:

- Somani K, Nitin J. Membership for the College of Emergency Medicine Part C: 110 OSCE Stations. 1st ed. London: JP Medical Ltd; 2014.
- Thorpe RU, Chapman S, Blackham J. Self-Assessment for the MCEM Part C. 1<sup>st</sup> Ed, Oxford: Oxford University Press; 2015

There is also an online subscription-based book which gives you access to communication OSCEs. It is written by Michelle Davison who is a FACEM and runs OSCE preparation and simulation courses. The link is <http://www.eduacute.com.au/home/online-subscriptions/52-osce-communication-scenarios/>

### Web-based Resources

The most important web-based resource is the ACEM site. Under the Education and Training tab is the Fellowship Exam tab. Please have a good look through this. It goes over the structure of the exam, the application process, dates etc. and has a lot of resources including video examples of OSCEs, written examples of OSCEs and the 2016.1 OSCE exam.

There are many Web-based EM resources out there that can be used to study. <http://lifeinthefastlane.com/> is a large Australian based site that is comprehensive, has exam preparation information on it as well and is good place to start.

There are many sites that are dedicated to preparation for the ACEM Fellowship Exam and they are well worth looking at for more practice OSCEs, tips and general resources. A few of them are:

- Adelaide Emergency Physicians site:
  - <http://acemfex.adelaideemergencyphysicians.com/osce> has loads of practice OSCEs
  - <http://adelaideemergencyphysicians.com/2015/02/tips-on-the-new-acem-fellowship-clinical-exam/> is a nice overview
  - <http://adelaideemergencyphysicians.com> is their main education site with lots of resources. You need to register for access.
- <http://geekymedics.com/> - meant for medical students but the communication skills section goes through stuff that has come up in the previous exams like explain to the parent how to administer salbutamol using a spacer, Mental state examination, sexual history taking. Nice thorough summaries. Clinical examination section also good for summaries, details (for extra brownie points) on joint exams and examination of particular systems.
- <https://www.youtube.com/user/geekymedics123> - good videos for clinical examination, all a bit long but useful for revising the important bits and then you have to practice making them shorter and slick.
- <http://lifeinthefastlane.com/education/signs/> more examination videos
- <http://emcrit.org/podcasts/critical-care-palliation/> essential listening for preparing to do any end of life conversations. (EMcritPodcast 93)
- <http://www.gcs16.com/osce-resources.html> is the Monash site and has lots of OSCEs to practice
- <http://topendexam.com/>
- <http://www.edexam.com.au/>
- <http://www.edcentral.com.au/>
- <https://emergencypedia.com/facem-exams-page/>

Please let us know your thoughts on how useful these sites are and if there are any more that you are aware of.



## Courses

We would recommend that you do a separate exam preparation course. Any extra resources and input you can get will benefit your exam preparation. The ones that we are aware of are:

- <http://www.eduacute.com.au> courses:
  - Michelle Davison (FACEM in our department) runs 2 simulation courses that are useful for OSCE preparation
  - [Simulation for the OSCE exam course](#) is a one day course which focuses on the Simulation stations and the teaching stations for the exam. Candidates practice being the exam candidate for a number of OSCEs and are debriefed and critiqued on their efforts.
  - [Communication for the OSCE exam course](#) is a one day course focused on communication OSCEs. Candidates practice OSCEs and are critiqued afterwards. These practice OSCEs include some difficult crisis communication and critical incident debrief etc. within simulation stations.
- Advanced Fellowship in Emergency Medicine (AFEM) Clinical Course which is run in Brisbane <http://www.afemrevision.com/afem-clinical-course.html>
- Advanced Paediatric Emergency Medicine (APEM) Course which has a Fellowship Exam preparation course day the day before the general course and run at the Gold Coast <http://www.apemaustralia.com/>
- TEEMWORK runs a Fellowship Exam OSCE course <http://teemwork.com.au/>

Please let us know how you find these courses.

## SCHHS Fellowship Exam OSCE Preparation Course

We will be running OSCE practice sessions every week on a Tuesday from 0830 to 1115 at SCUH for those registrars who have committed to sitting the Clinical Fellowship Exam. Every week we will focus on a different type of OSCE but we can also adapt the session to the individual needs of the candidates, especially as we get close to the exam.

We will also facilitate you attending a full practice mock OSCE before you sit your exam.

## SCHHS Fellowship Exam Preparation Course Timetable Outline

Week	Theme
1	Intro/Communication
2	Intro/Communication
3	Sim Adult
4	Sim Adult
5	Teaching
6	Teaching
7	History Taking
8	History Taking
9	Physical Examination
10	Physical Examination
11	Sim Paed
12	Sim Paed
13	Clinical Synthesis and Communication
14	Clinical Synthesis and Communication
15	Procedures
16	Procedures
17	Admin
18	Admin
19	Communication
20	Communication
21	Revision
22	Revision
23	Revision
24	Revision
25	Revision
26	Revision

## Fellowship Education Group

We have put together this course and hope that it helps you with your study and leads to a successful exam!

Dr. Julia Haire - Coordinator  
Dr. Ashwini Amaratunga – Coordinator  
Dr. Dean Powell  
Dr. Logan Stuckey  
Dr. Donna Mills  
Dr. Barrie Field  
Dr. Sarah Davidson  
Dr. Rob Giles  
Dr. Suneth Jayasekara  
Dr. Kathryn Woolfield  
Dr. Ruth Attard  
Dr. Henry Huang

Any problems, questions or feedback please do not hesitate to email me or give me a call:

Dr. Julia Haire  
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Ph: 0437559108

# GOOD LUCK!!!!!!

## Disclaimer

The information in this Handbook has been put together in good faith to provide advice for candidates sitting the ACEM Fellowship Exam. It is based on the best information we have at the time of writing and the opinions of the Fellowship Exam Education Group. It is not a comprehensive guide to passing the Fellowship Exam and should be used in conjunction with information from other sources. It does not represent opinions and was not written or sanctioned by the Australasian College of Emergency Medicine.



AUSTRALASIAN COLLEGE  
FOR EMERGENCY MEDICINE

## 2016.1B FELLOWSHIP CLINICAL EXAMINATION (OSCE)

### STATION 3 ECG TEACHING STATION

#### 1. STATION SUMMARY

ECG showing complete heart block. Further teaching regarding ECG features of other heart blocks. Patient has presented with fever and dyspnoea post AVR – likely diagnosis of aortic root abscess, other causes of bradycardia require consideration. Investigation of this patient/ bradycardia covered.

#### 2. CANDIDATE INSTRUCTIONS

Doctor Jones is a PGY3 junior doctor. They wish to discuss a patient's ECG and their clinical presentation. The history is as follows but Dr Jones is unaware of the examination findings.

At your tertiary referral centre, it is 11 am on a Wednesday.

The patient, John, is a 40 year old man who is currently in Resus having come in following a syncopal episode without head injury. John had an aortic valve replacement 4 weeks ago for aortic stenosis. He has no other past medical history. John describes having had fevers and chills for the last 5 days which is associated with anorexia, lethargy and increasing dyspnoea. His only medication is aspirin.

The patient is currently stable in the resuscitation room under the care of a senior registrar and therefore you have time and/or several minutes to discuss this with Dr Jones.

#### Your tasks are to:

- Interpret the ECG
- Discuss the potential causes for the patient's presentation
- Explain what investigations would be required

You are **not** required to take a further history.

Management is **not** a focus of this OSCE.

#### This OSCE will assess the following domains:

- Medical Expertise
- Scholarship & Teaching

### 3. ROLE-PLAYER INSTRUCTIONS

You will be playing the role of a junior (PGY3) doctor currently working in the ED. You have just seen John, a 40 year-old man who is currently in Resus having come in following a syncopal episode at home. John had an aortic valve replacement 4 weeks ago. John describes having had fevers and chills for the last 5 days which is associated with anorexia, lethargy and increasing SOB.

You have been in the resuscitation room with the senior registrar. You have heard the history and have just seen his initial ECG. The patient is stable and in good hands with the senior registrar, who is going about an examination and further assessment. You are seeking guidance about the ECG interpretation in this setting. You are also wondering what could cause this, as well as how to further investigate.

As a junior doctor you recognise that there is a bradycardia but are having trouble working out the exact rhythm and what to look for on the ECG in this presentation.

#### **The Candidate will Walk into the Room:**

*'Hi I'm Dr Jones, Thanks for helping me with this case' ... Sit down and show the ECG to the candidate such that a discussion can begin.*

While the candidate starts to look at the ECG, reiterate the history as above:

*'I've just seen John, a 40 year-old man who is currently in Resus. He has come in following a syncopal episode at home. John had an aortic valve replacement 4 weeks ago. He describes having had fevers and chills for the last 5 days which is associated with anorexia, lethargy and increasing SOB. I have been in the resuscitation room with Jack, the senior registrar. Jack is sorting it. The patient is stable and in good hands. I was wondering if you could help me interpret this ECG and have a quick chat about the case please'*

The candidate will likely firstly ascertain your baseline knowledge about the ECG. The following should be the response:

*'Well, there is bradycardia with a rate about 50 but I can't quite work out the rhythm.'*

Your base line knowledge includes simple ECG interpretation and a rudimentary differential diagnosis (myocardial ischaemia and drugs). You recognise the left bundle branch pattern, but not the CHB. You recognise that there are p waves on the ECG.

You may be asked about an old ECG but at this point *'I don't have the chart'*.

You need to get the candidate to explore the relevant relative negatives and positives on the ECG. The candidate must describe and explain clearly to you the following points:

1. Complete heart block: p waves independent from QRS
2. Escape rhythm 40/min with LBBB morphology: Rate and morphology suggest coming from infranodal conducting tissue

If necessary, ask *'So what is happening with the QRS?'* and *'Where is it coming from?'*

*'What else should I be looking for on the ECG?'* They may discuss looking for signs of ischaemia, hyperkalaemia etc.

You are an ALS provider and are familiar with the treatment of symptomatic bradyarrhythmias and therefore do not require a discussion on this.

*'I am happy with the management of symptomatic bradycardia'*

You are also focused on learning about how you differentiate heart blocks.

*'How do I differentiate types of heart block?'*

The candidate needs to adequately explain the following:

- 2<sup>nd</sup> degree heart blocks (not all p waves followed by QRS)
  - Type I (Wenkebach) – progressive PR lengthening then block
  - Type II – constant PR then block
- 1<sup>st</sup> degree heart block – PR > 0.20 msec

Better candidates may discuss looking for conduction disease such as bi-fascicular blocks / tri-fascicular blocks. This is fine if they have time however is not 'required'.

If explanations by the candidate are not clear to you please ask for clarification and/or say *'I don't understand'*.

The interpretation and teaching with the ECG should take around 4 minutes, and you can move on at the 4 minute mark if the ECG interpretation seems adequate or exhausted. Poor candidates may struggle to relay information and take longer. Similarly, good candidates may have a lot of information to relay and start talking about Sgarbossa criteria. If time is running out to 5 minutes, do not use any more prompts or dialogue that would prolong the ECG discussion.

Then the discussion needs to move to possible causes and what investigations might be required.

*'What causes do we need to consider in him? How should we investigate for them?'*

The candidate may well say to you what do you think the causes could be. In response to this say something like

*'ACS perhaps.... I'm not really sure though'*

The candidate should outline a number of potential causes

- Post surgical: Endocarditis/ Aortic Root abscess / surgical complication
- Other: Ischaemia (unlikely), Drugs (BBLOCKERS, Amiodarone, CaCB), Degenerative, Cardiac disease (myocarditis / infiltration), Electrolyte (HyperK+)

If they focus on the 'post surgical' aspects only, ask *'Are there other causes of heart block I should think of?'*

If they do not address the post surgical aspect ask *'Could it be related to his operation?'*

The candidate may ask you to consider why the patient could be febrile. Your response should be

*'They most likely have an infection, maybe a pneumonia but I am not sure why they have a heart block'*

Then proceed to prompting about investigations. If asked, you can suggest some basic investigations such as FBE/ UEG/LFT and TnI.

A good candidate should recognise the risk for endocarditis and as such recommend multiple blood cultures and Echo. If an echo is not mentioned prompt as follows:

*'Are there any other tests that we should get?'*

*'Should we get the patient to the cath lab for an angiogram?'*

If the candidate says an echocardiogram, you should explore the reasons for this if it not already clear:

*'What are we looking for with an echocardiogram?'*

If time permits also explore the urgency of the echocardiogram. If an aortic valve root abscess is possible this is quite urgent.

#### 4. EXAMINER INSTRUCTIONS

You are to observe the candidate only. You may re-orientate the candidate to the tasks if they get off track.

Up to 5 minutes should be allowed for ECG interpretation and the rest of the time for case base discussion with the RMO about the possible causes and investigations.

This OSCE will assess the following domains:

- Medical Expertise
- Scholarship & Teaching

##### ECG Interpretation

- CHB –p waves able to be traced out. No fixed relation to QRS –best seen at the end of the rhythm strip. P waves are hidden in the ST/T complexes.
- Rate: 42. Rate suggests nodal/infranodal escape
- LBBB – new/old/indeterminate. While possibly preexisting or escape, cannot rule out acute ACS if new.
- Left axis deviation (LAXD) – goes with LBBB
- Sgarbossa criteria – negative for STEMI i.e. no concordance of ST segments as related to QRS
- T waves prominent and could raise the possibility of hyperkalaemia
- Relevant negative re RCA ACS – no inferior ST elevation
- T wave inversion 1, AVL and V6 (as expected with LBBB pattern)

##### Causes

Very good candidates will try to relate to recent surgery, fever and bradycardia and consider one cause that will explain all manifestations

- Only real (best) explanation is classic presentation of aortic valve root abscess with endocarditis and conduction system disturbance
- Endocarditis with infected emboli in coronary artery far less likely
- Recognise this as potential surgical emergency which needs echo diagnosis
- Passing candidates should identify a concern for post-surgical endocarditis and a discussion with cardiology/ cardiac surgeon at minimum

Other candidates may consider multiple causes to explain presentation features

- Infection and hyperkalaemia/ARF
- Other Infection and ACS
- Heart block: Ischaemia (unlikely), Drugs (BBBlockers, Amiodarone, CaCB), Degenerative, Cardiac disease (myocarditis/infiltration), Electrolyte (HyperK+)

Poorer candidates are likely to just go through a list-like approach for bradycardia/CHB and a list like approach for fever, rather than relate to this patient. The causes of these are many and well known to examiners.

##### Investigations

Good candidates should advise the junior doctor of the utility of an early vbg/abg to exclude hyperkalaemia and assess for poor end organ perfusion signs such as metabolic acidosis and raised lactate. The patient is SOB and an arterial blood gas will provide information on gas exchange.

CXR and multiple blood cultures as well as a “standard workup” is important and good candidates will relate the rationale of why a test should be ordered in this situation.

An angiogram in this setting should not be done before an ED transthoracic bedside echocardiogram. An Echo can define endocarditis potentially and can include/exclude an aortic valve root abscess. Although specifically not a task, good candidates may mention the need for collaborative cardiothoracic surgery in investigative approach.

### **Scholarship & Teaching**

As this is a teaching OSCE with the Junior doctor, the candidate will be required to facilitate a case based discussion with the RMO. The candidate should firstly establish the RMO's baseline knowledge. This should include the discussion on the diagnosis of one (1) disease process causing the constellation of findings vs multiple disease processes. The candidate needs to be clear in his explanation and facilitate the discussion through the use of both open and closed ended questions. Clinical reasoning, diagnostic reasoning in relation to investigative reasoning is key to the discussion. Demonstration of the process to define different heart blocks should be logical and specific to the case. Listening and checking understanding may occur throughout. There should be patience and tolerance for the learner. Teaching rules for the diagnosis of different types of heart block and key learning messages for the future should be delivered. At the end of the OSCE, the candidate could recommend that the RMO reflect on the case and follow up with further reading (post experiential reflection).

#### **Aortic Root Abscess and Acute (prosthetic valve endocarditis) PVE**

Acute PVE defined as occurring within first 60 days post valve replacement and is a more aggressive disease than subacute infective endocarditis (IE). Not very common and usually caused by skin organisms. High mortality. Clinical features similar to native valve endocarditis with most common symptoms being fever and chills.

#### **Aortic Root Abscess**

Complication of Infective Endocarditis. More frequently found in Acute IE, Prosthetic valves and in the aortic valve. High mortality and morbidity requires early diagnosis and invariably surgical repair. Presents with features of IE – Fevers and chills commonly. Increasing PR on ECG or development of heart block are worrying features as conduction system impinged on by abscess.

### **Medical Expertise**

Areas assessed: ECG interpretation, heart blocks, relevant negatives and positives on ECG with heart block, Endocarditis and complications specifically valve ring abscess, emergent investigations in this setting.

Assessment criteria (see mark sheet for essential criteria)

- ECG interpretation
  - Recognise CHB
  - Recognise escape rhythm: rate suggest nodal/infranodal ?old LBBB (relate to old ECGs) with nodal escape or infranodal escape with block
  - Adequate explanation of features of 1<sup>st</sup> and 2<sup>nd</sup> degree Heart block
  - Other blocks
- Diagnosis/differential
  - consider endocarditis, relate to cause of CHB, aortic root abscess
  - Cardiac disease: Ischaemia, degenerative, myocarditis, cardiomyopathy (bold + 1 other)
  - Drugs (Amiodarone, BB blocker, CaCB, Dig), Electrolytes (hyperkalaemia ?AKI) (2 drugs to pass)
- Investigations
  - VBG/ABG with correct rationale (K+, acidosis)
  - Endocarditis: Echocardiogram + multiple blood cultures (min 3 sets)
  - CXR
- FBE/ UEG/LFT/ INR if warfarin, other
- No significant errors or omissions with regard to patient ECG interpretation, differential diagnosis, investigations





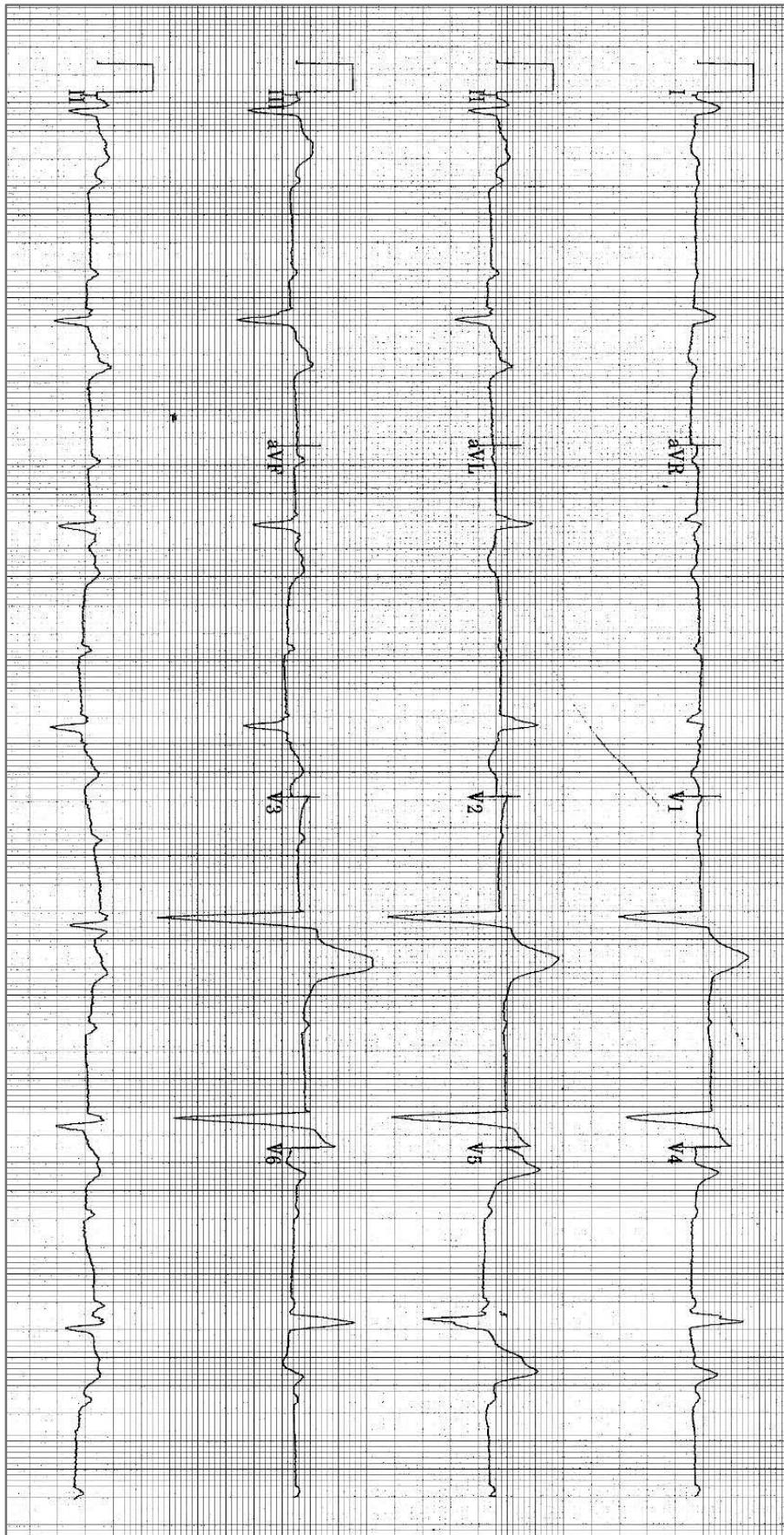
### **Scholarship & Teaching**

Establishing knowledge, check learning needs, responding to needs, clarity of communication, specific and relevant, depth and breadth, reasoning and logic, listening, manner with learner, checking understanding, correcting misconceptions, reinforcing correct knowledge, suggesting post experiential reflection and learning.

Suggested minimal standard:

- Majority of these elements should be included in the teaching style and examiners should feel comfortable that an adequate teaching experience has occurred in the time frame

**ECG**



### Examiner Mark Sheet

**CONFIDENTIAL** Examiner Rating: OSCE 3



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

Please rate ALL the following domains:

Medical Expertise

☐
☐
☐
☐
☐
☐
☐

Scholarship and Teaching

☐
☐
☐
☐
☐
☐
☐

#### Detailed assessment criteria

Please use the following criteria to inform your ratings above

	<ul style="list-style-type: none"> <li>ECG interpretation <ul style="list-style-type: none"> <li>CHB</li> <li>Escape rhythm + LBBB pattern: Nodal + old LBBB or infranodal escape with block</li> </ul> </li> <li>Adequate explanation of features of <ul style="list-style-type: none"> <li>1<sup>st</sup> degree block</li> <li>2<sup>nd</sup> degree Heart block: Type I and Type II</li> <li>Other blocks: LAFB, LPFB, Bifascicular, Trifascicular</li> </ul> </li> </ul>
Medical Expertise	<ul style="list-style-type: none"> <li>Diagnosis/ differential <ul style="list-style-type: none"> <li>consider endocarditis, relate to cause of CHB, aortic root abscess</li> <li>Cardiac disease: Ischaemia, degenerative, myocarditis, cardiomyopathy (bold + 1 other)</li> <li>Drugs (Amiodarone, BB blocker, CaCB, Dig), Electrolytes (hyperkalemia ?AKI) (2 drugs to pass)</li> </ul> </li> <li>Investigations <ul style="list-style-type: none"> <li>VBG/ABG with correct rationale (K<sup>+</sup>, acidosis)</li> <li>Endocarditis: Echocardiogram + multiple blood cultures (min 3 sets)</li> <li>CXR</li> <li>FBE/ UEG/LFT/ other</li> </ul> </li> </ul>
Scholarship and Teaching	<ul style="list-style-type: none"> <li>establish knowledge &amp; respond to learning needs</li> <li>clarity of communication - specific and relevant, appropriate depth</li> <li>interaction with learner – rapport, listening, response to questions</li> <li>checks understanding, corrects misconceptions, reinforces correct knowledge</li> <li>suggesting post experiential reflection and learning</li> </ul>

**Examiner Mark Sheet** (cont')

**CONFIDENTIAL** Examiner Rating: OSCE 3



**INFORMATION**

Station Summary: ECG teaching station. ECG showing complete heart block. Further teaching regarding ECG features of other heart blocks. Patient has presented with fever and dyspnoea post AVR – likely diagnosis of aortic root abscess, other causes of bradycardia require consideration. Investigation of this patient/ bradycardia covered.

**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:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**EXAMINER SIGNATURE:**



OSCE 1

Page 2 of 2 (end of form)

## Procedures List

This is a comprehensive list of procedures that an Emergency Medicine trainee will be expected to encounter and learn during the training program.

The trainee is expected to develop their ability as follows:

1. The trainee will be able to decide to conduct the procedure during their clinical assessment of the patient's presentation.
2. The trainee will be able to prepare the patient and equipment for the procedure, which includes consent and patient education.
3. The trainee will be able to technically perform the procedure.
4. The trainee will be able to manage any complications if they arise.

This document provides more detail for the third learning outcome (above). The learning outcomes for the other processes are covered elsewhere in the *ACEM Curriculum Framework*.

A mastery key has been created and a mastery level has been assigned to each stage of training for each procedure. It is expected that as a trainee progresses, each subsequent mastery level builds on the previous levels. Please note:

- The Levels of Mastery assigned to each procedure are matched to the top level descriptors in the Medical Expertise domain. This means a trainee can independently assess/manage the following types of patient presentations at the end of the following stages:
  - End PT: Common, low acuity, low complexity presentations (or initiate resuscitation).
  - End AT 1: Common, high acuity, low complexity OR common, low acuity, high complexity presentations.
  - End AT 2: Common, high acuity, high complexity presentations.
  - End AT 3: Any emergency presentations.
- The Levels of Mastery are minimum levels of competence.
  - All trainees should have achieved the assigned level of mastery by that stage of training.
  - It is rarely possible to assign the highest level of mastery in this list. It is expected that further experience after training will allow the FACEM to continue to progress to the highest level.
  - Certain procedures may start at a relatively high Level of Master (e.g. cannulation).
  - It is acknowledged that levels may change (become higher OR lower) if the trainee trains in specific types of EDs for example paediatric only, rural, trauma centre, etc. The trainee should access learning resources to ensure that they achieve the assigned level of mastery by the end of training regardless of where they have trained.
- It is acknowledged that these assigned mastery levels are based on the performance in non-challenging situations. Performance in challenging situations will alter the assigned mastery level.
- There are some procedures where a theoretical knowledge of the procedure is within the scope of Emergency Medicine but further mastery, although desirable, is not essential for core Emergency Medicine practice. For these procedures, the trainee only needs to reach the first mastery level on completion of training.
- With regard to progression through successive stages of training:
  - The Levels of Mastery are NOT an implied hierarchy of procedural importance.
  - Procedures that are life/limb/sight saving are listed and trainees are expected to achieve mastery level at least in simulation if real life opportunities to practice this procedure are rare. Level 4/5 equates to multiple opportunities in real life and in simulation to practice this skill. Level 3 equates to multiple opportunities to practice the skill in simulation. Level 2 equates to very few opportunities to practice the skill in simulation.
  - Progression through the Levels of Mastery does NOT need to be linear. Some procedures may not need intermediate Levels of Mastery.



**Categories**

**C** = this procedure occurs **commonly** enough for the trainee to achieve competence in the clinical situation by the end of training.

**LS** = this procedure is **life/limb/sight saving** and should be mastered, even if only in simulation.

**Mastery Levels**

Code	Mastery Level	Description
<b>1</b>	The trainee will have theoretical <b>knowledge</b> of these procedures.	The trainee will be able to describe a procedure and its indications, contraindications and complications, and incorporate their knowledge of the basic sciences.  The supervisor will perform the procedure with trainee observing or assisting.
<b>2</b>	The trainee will be able to perform these procedures <b>under direct supervision</b> .	The trainee will be able to perform the procedure with the supervisor observing or assisting.  The trainee will plan consciously and deliberately before performing the procedure, and will follow standardised rules and routines.
<b>3</b>	The trainee will be able to <b>independently perform</b> these procedures.	The trainee will be able to perform the procedure without direct supervision.  The trainee will be able to perform a single approach for the procedure.
<b>4</b>	The trainee will be able to <b>proficiently perform</b> these procedures.	The trainee will be able to perform more than one approach for the procedure. They will apply discrimination and discretion in selecting an appropriate approach for the situation.  The trainee will occasionally draw on the experience or assistance of peers and check written or online resources as backup.
<b>5</b>	The trainee will be able to <b>expertly perform</b> these procedures.	The trainee will perform the procedure independently in all situations without any need for peer or written/online resource backup, and will also be able to adapt their technique when performing in non-ideal situations.

GROUP	PROCEDURE	CATEGORY		MASTERY LEVELS 1: knowledge; 2: under direct supervision 3: independent; 4: proficient; 5: expert			
		Prevalence C common in EM	Importance LS life/limb/ sight saving	End PT	End AT AT 1	End AT AT 2	End AT3
Infection Control	Aseptic and sterile technique	C		3	4	5	5
Airway	Simple airway manoeuvres (chin lift, jaw thrust, head tilt, positioning) in an adult or a child	C	LS	3	4	5	5
Airway	Insertion of oropharyngeal or nasopharyngeal airway	C	LS	3	3	5	5
Airway	Insertion of a laryngeal mask airway	C	LS	2	3	4	4
Airway	Direct laryngoscopy, Insertion of oral ETT, use of RSI technique (including drugs, stylet, bougie)	C	LS	1	3	4	4
Airway	Video laryngoscopy	C	LS	1	2	3	4
Airway	Use of other rescue difficult airway device		LS	1	2	3	3
Airway	Securing and caring for ETT including during transport	C	LS	1	3	4	4
Airway	Insertion of cricothyroid needle and jet insufflation of oxygen, in an adult or a child		LS	1	1	2	3
Airway	Perform a cricothyroidotomy		LS	1	1	2	3
Airway	Emergency replacement of blocked or dislodged tracheostomy tube		LS	1	1	2	3
Airway	Extubation			1	1	3	3
Airway	Indirect laryngoscopy (use of dental mirror to examine for FB)			1	1	3	3
Airway	Use of other types of ETT (nasal, double lumen)				1	1	2
Breathing	Spirometry and Peak Flow measurement	C		2	3	3	4
Breathing	Use of oxygen delivery devices	C	LS	3	3	4	5
Breathing	Use of self-inflating bag for ventilation	C	LS	3	4	4	5
Breathing	Use of a non-self-inflating bag for ventilation				1	2	3
Breathing	Use of adult non-invasive ventilation device	C	LS	1	3	4	4
Breathing	Use of paediatric non-invasive ventilation device		LS		1	1	3
Breathing	Setting up a transport ventilator	C	LS	1	2	4	4
Breathing	Decompression needle/finger thoracostomy	C	LS	1	2	4	5
Breathing	Pleurocentesis	C		1	2	4	4
Breathing	Tube thoracostomy	C	LS	1	2	4	4
Circulation	Adult, Paediatric and Infant External Chest Compressions	C	LS	3	3	5	5
Circulation	Defibrillation	C	LS	3	4	4	5

GROUP	PROCEDURE	CATEGORY		MASTERY LEVELS 1: knowledge; 2: under direct supervision 3: independent; 4: proficient; 5: expert			
		Prevalence C common in EM	Importance LS life/limb/ sight saving	End PT	End AT AT 1	End AT AT 2	End AT3
Circulation	DC Cardioversion	C	LS	1	2	3	5
Circulation	External pacing		LS	1	2	3	3
Circulation	Venepuncture	C		4	5	5	5
Circulation	Adult peripheral intravenous access	C	LS	4	4	5	5
Circulation	Paediatric peripheral intravenous access	C	LS	2	3	4	4
Circulation	Insertion of a rapid infusion catheter		LS	1	3	3	4
Circulation	Intraosseous access	C	LS	2	3	4	5
Circulation	Arterial puncture for blood sampling	C		3	3	4	4
Circulation	Arterial line insertion	C		1	2	4	4
Circulation	Preparation & operation of transport monitoring equipment	C		1	3	4	4
Circulation	Insertion of a central venous line	C		1	1	3	4
Circulation	Emergency pericardiocentesis		LS	1	1	3	3
Circulation	Resuscitative thoracotomy		LS	1	1	1	3
Circulation	Insertion of a temporary pacing wire				1	1	1
Fluids	Preparation of an intravenous fluid or blood product line	C		3	4	4	4
Fluids	Insertion of a nasogastric tube or orogastric tube	C		3	4	4	4
Fluids	Insertion of an adult urinary catheter (female and male)	C		3	4	4	4
Fluids	Insertion of an infant urinary catheter (female and male)	C		1	2	4	4
Fluids	Suprapubic aspiration of urine in an infant	C		1	2	3	3
Fluids	Insertion of a suprapubic catheter			1	1	3	3
Fluids	Replacement of a suprapubic catheter	C		2	3	3	4
Fluids	Abdominal paracentesis and insertion of drain	C		2	3	4	4
Fluids	Insertion of oesophageal & gastric balloon devices		LS	1	1	3	3
Fluids	Emergency replacement of a dislodged gastrostomy tube	C		2	2	3	4
Disability (Neuro & Ortho)	Sizing and application of a rigid cervical collar	C	LS	3	3	4	5
Disability (Neuro & Ortho)	In-line cervical spine immobilisation	C	LS	3	3	4	5
Disability (Neuro & Ortho)	Full spinal immobilisation, log roll, and transfer	C	LS	3	3	4	5



GROUP	PROCEDURE	CATEGORY		MASTERY LEVELS			
		Prevalence C common in EM	Importance LS life/limb/ sight saving	1: knowledge; 2: under direct supervision 3: independent; 4: proficient; 5: expert			
				End PT	End AT AT 1	End AT AT 2	End AT3
Disability (Neuro & Ortho)	Emergent Fracture / Dislocation Reduction	C	LS	2	3	4	4
Disability (Neuro & Ortho)	Joint reduction - Digits	C		3	3	4	4
Disability (Neuro & Ortho)	Joint reduction – Shoulder, elbow, patella	C	LS	2	3	4	4
Disability (Neuro & Ortho)	Joint reduction – Ankle	C	LS	2	2	3	4
Disability (Neuro & Ortho)	Joint reduction – Hip, knee		LS	1	2	3	3
Disability (Neuro & Ortho)	Fracture/Joint immobilisation - Removable Splint application	C		3	4	4	4
Disability (Neuro & Ortho)	Fracture/Joint immobilisation – Backslab application	C		3	3	4	4
Disability (Neuro & Ortho)	Fracture/Joint immobilisation – Circumferential casts application	C		2	3	4	4
Disability (Neuro & Ortho)	Application of sling/ collar and cuff	C		3	4	4	4
Disability (Neuro & Ortho)	Insertion of a fascial intra-compartmental monitor				1	1	2
Disability (Neuro & Ortho)	Application of a pelvic binding device	C	LS	2	3	4	4
Disability (Neuro & Ortho)	Application of traction splinting devices	C	LS	2	3	4	4
Disability (Neuro & Ortho)	Arthrocentesis (knee)	C		2	3	4	4
Disability (Neuro & Ortho)	Arthrocentesis (other joints)			2	3	3	3
Sedation delivery	Administration of procedural sedation	C		1	2	3	5
Sedation delivery	Administration of chemical restraint	C		2	3	3	5
Regional Anaesthesia	Use of topical anaesthesia	C		3	4	4	5
Regional Anaesthesia	Direct infiltration of local anaesthetic	C		3	4	5	5
Regional Anaesthesia	Digital Nerve Block	C		3	4	5	5
Regional Anaesthesia	Femoral or Fascia iliaca block	C		2	3	4	4
Regional Anaesthesia	Additional regional nerve blocks				1	1	3
Regional Anaesthesia	Haematoma block				1	1	3
Regional Anaesthesia	Intravenous regional anaesthesia and Biers Blocks				1	1	3
Wounds	Basic skin suturing techniques	C		3	4	5	5
Wounds	Alternate skin closure (eg. tissue adhesive, staples)	C		3	3	4	4

GROUP	PROCEDURE	CATEGORY		MASTERY LEVELS			
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				End PT	End AT AT 1	End AT AT 2	End AT3
Wounds	Advanced suturing techniques	C		2	3	4	4
Wounds	Wound exploration, cleaning, irrigation, and debridement	C		2	3	4	4
Wounds	Superficial open wound dressing	C		3	3	4	4
Wounds	Open wound packing	C		2	3	3	4
Burns	Burn first aid	C		3	3	5	5
Burns	Debridement of burns	C		2	3	4	4
Burns	Primary burn dressing	C		3	3	4	4
Burns	Escharotomy		LS	1	1	3	3
Minor Surgical	Removal of superficial & subcutaneous foreign bodies	C		3	3	4	4
Minor Surgical	Incision and drainage of simple, superficial abscesses	C		2	3	4	4
Minor Surgical	Drainage of a paronychia	C		2	3	4	4
Minor Surgical	Drainage of a subungual haematoma	C		1	3	3	4
Minor Surgical	Incision and drainage of a thrombosed external haemorrhoid	C		1	3	3	3
Minor Surgical	Drainage of peritonsillar abscess				1	1	2
Minor Surgical	Nail bed repair	C			1	2	2
Minor Surgical	Proctoscope insertion	C			1	1	3
O&G	Vaginal speculum insertion	C		3	3	4	4
O&G	Removal of products of conception from cervical os	C	LS	2	2	3	4
O&G	Use of foetal doppler	C		1	2	3	3
O&G	Spontaneous vaginal delivery		LS	2	2	3	3
Microbiology	Collection of blood culture	C		3	3	5	5
Microbiology	Lumbar Puncture and measurement of CSF opening pressure	C		2	3	4	4
Microbiology	Paediatric non-invasive urine collection	C		2	3	4	4
Microbiology	Collection of swabs	C		3	3	4	4
Microbiology	Nasopharyngeal aspirate collection	C		2	3	3	3
ENT	Removal of nasal foreign bodies	C		2	3	4	4
ENT	Removal of aural foreign bodies	C		2	3	4	4
ENT	Removal of laryngeal foreign bodies	C		1	2	3	3
ENT	Nasal speculum insertion	C		3	3	4	4
ENT	Nasal cautery	C		2	3	4	4
ENT	Anterior nasal packing	C	LS	3	3	4	4
ENT	Posterior nasal packing		LS	1	1	3	3
ENT	Aural toilet	C		2	3	3	3

GROUP	PROCEDURE	CATEGORY		MASTERY LEVELS 1: knowledge; 2: under direct supervision 3: independent; 4: proficient; 5: expert			
		Prevalence C common in EM	Importance LS life/limb/ sight saving	End PT	End AT AT 1	End AT AT 2	End AT3
ENT	Aural wick insertion	C		3	3	4	4
Eyes	Removal of corneal foreign bodies	C		2	3	4	4
Eyes	Direct ophthalmoscopy	C		3	3	3	4
Eyes	Indirect ophthalmoscopy				1	1	2
Eyes	Use of a slit lamp in the eye examination	C		2	3	4	4
Eyes	Tonometry	C		2	3	3	3
Eyes	Eye irrigation	C	LS	3	3	4	4
Eyes	Application of an eye pad or shield	C		2	3	4	4
Eyes	Lateral canthotomy		LS	1	1	1	3
Dental	Joint reduction: Temporo-mandibular joint	C		2	2	3	4
Dental	Enlocation avulsed / extruded / intruded / laterally injured tooth	C		1	2	3	3
Dental	Temporary stabilisation of injured tooth	C		1	2	3	3
Dental	Haemostasis following dental extraction	C		1	2	3	3
Ultrasound	Detection of cardiac activity in cardiac arrest	C		1	2	4	4
Ultrasound	Performance of Focused Assessment with Sonography for Trauma (FAST) or EFAST	C		1	2	3	4
Ultrasound	Pneumothorax / haemothorax detection	C		1	2	3	3
Ultrasound	Detection & characterisation of an abdominal aortic aneurysm	C		1	2	3	3
Ultrasound	Guided Peripheral Vascular Access	C		1	1	3	3
Ultrasound	Guided Central Vascular Access	C		1	1	3	4
Ultrasound	Ultrasound guided nerve blocks			1	1	2	2
Ultrasound	Identification of distended bladder	C		1	2	3	4
Ultrasound	Soft Tissue Ultrasound				1	1	1
Ultrasound	1st Trimester Pregnancy Ultrasound				1	1	1
Ultrasound	Hepatobiliary Ultrasound				1	1	1
Ultrasound	Application of haemodynamic assessment protocols				1	1	1
Toxinology	Pressure immobilisation Bandage	C	LS	3	3	5	5
Toxicology	Gastric decontamination		LS	1	1	3	3
Toxicology	Whole Bowel Irrigation		LS	1	1	3	3
Environmental	Basic cooling techniques (external and IV fluids)	C	LS	3	4	4	4

GROUP	PROCEDURE	CATEGORY		MASTERY LEVELS			
		Prevalence C common in EM	Importance LS life/limb/ sight saving	1: knowledge; 2: under direct supervision 3: independent; 4: proficient; 5: expert			
				End PT	End AT AT 1	End AT AT 2	End AT3
Environmental	Advanced cooling techniques		LS	1	2	3	3
Environmental	Basic warming techniques (external and IV fluids)	C	LS	3	4	4	4
Environmental	Advanced warming techniques		LS	1	2	3	3

## Presentations List

This list represents the vast majority of what an Emergency Medicine clinician sees in daily clinical practice. The purpose for the creation of this list is to explicitly state that the core business for Emergency Medicine clinicians is the assessment of patients with undifferentiated clinical presentations.

It is expected that trainees and educators will use this list to guide training, and that trainees will link these presentations to diagnoses through the integration of clinical experience and theoretical knowledge.

The list is categorised to reflect real clinical practice. An Emergency Medicine clinician screens for life / limb / sight threatening symptoms in all patients before performing their formal assessment, and thus presentations that are more indicative of a life / limb / sight threatening diagnosis are listed first. It is recognised that some presentations may also be not immediately threatening, so to reflect that some are listed in more than one category in the list.

These presentations may affect only one anatomical or physiological system, or multiple systems. This list does not attempt to define presentations in different systems separately. However, if the presentation affects multiple systems (for example, multi-trauma) the presentation should be considered of increased complexity (see modifiers list).

Presentation classification	Presentations
Cardiorespiratory (ABC)	Abdominal pain without injury Airway compromise/ stridor Apnoea Cardio respiratory arrest Chest pain without injury Dyspnoea Haemorrhage Hypotension Major limb injury Major torso (neck/chest/abdomen/pelvis) injury Palpitations
Neurological and behavioural	Acute altered sensation Acute dizziness Acute confusion/disorientation Acute headache Acute pain Acute weakness Agitation/ aggression Altered conscious state Hallucination Major head/spinal injury Missed essential therapy (e.g. dialysis, medications) Syncope Seizure
Environmental and Exposure	Bite/ sting by venomous creature Hyperthermia Hypothermia Major burn Toxic ingestion or exposure
Alphabetical list of other presentations	Abdominal pain/distension Abnormal test result Altered behaviour Altered motor function Altered mood

Presentation classification	Presentations
	<ul style="list-style-type: none"> <li>Altered sensation</li> <li>Anxiety</li> <li>Behaviour Disturbance</li> <li>Bite/sting</li> <li>Bleeding</li> <li>Breathing difficulty</li> <li>Burn</li> <li>Collapse</li> <li>Complication of treatment/procedure</li> <li>Confusion/disorientation</li> <li>Constipation</li> <li>Contusion</li> <li>Cough</li> <li>Deformity</li> <li>Dehydration</li> <li>Delusion</li> <li>Diarrhoea</li> <li>Discharge/exudate</li> <li>Dizziness</li> <li>Drug/Medication related presentation</li> <li>Erythema</li> <li>Falls/unsteadiness</li> <li>Feeding problems</li> <li>Fever</li> <li>Foreign body</li> <li>Headache</li> <li>Hypertension</li> <li>Infection/ infestation</li> <li>Injury (other)</li> <li>Jaundice</li> <li>Lethargy</li> <li>Limp</li> <li>Lump</li> <li>Minor limb injury</li> <li>Mobility/Movement Problems</li> <li>Pain</li> <li>Pregnancy</li> <li>Poisoning</li> <li>Rash</li> <li>Skin lesion</li> <li>Situational crisis</li> <li>Social crisis</li> <li>Speech disturbance</li> <li>Sprain/Strain</li> <li>Swelling/oedema</li> <li>Urinary dysfunction</li> <li>Visual loss/disturbance</li> <li>Vomiting</li> <li>Weakness</li> <li>Weight loss</li> <li>Wound</li> </ul>

## Modifiers List

There are many different types of patients that present with an Emergency Medicine problem. Most of these patients have an undifferentiated presentation that must be assessed, processed, and managed.

Some of these presentations are simple, whereas others are complex. This list is designed to suggest modifying factors which transform a patient's presentation from simple to complex. There may be more than one factor involved in a single presentation, which creates increasing levels of complexity for that case. This is the challenge of Emergency Medicine; to identify all the problems in that patient's presentation, and to summarise them into key issues that must be managed, whilst concurrently and dynamically formulating a differential diagnosis and management plan.

There are many examples within the categories of modifiers, with suggested explanations. This list does not intend to be an exhaustive list of examples, but has enough detail to guide the trainee in how to conceptualise why a presentation is complex. The trainee is advised to consider and synthesise all these modifying factors when assessing a patient, in order to produce a safe and appropriate management and disposition plan.

For example – "A 20 year old healthy thin tall man presents with sudden onset pleuritic chest pain, dyspnoea and normal vital signs" would be considered a simple presentation. Compare this with the following scenario – "A 50 year old man who is a chronic smoker with a known history of bronchiectasis, presents with sudden onset pleuritic chest pain and dyspnoea. He is known to be on warfarin for previous pulmonary embolus. On examination his RR is 36, SaO<sub>2</sub> 90% on room air, HR 120 and BP 95/60." This would be considered a complex presentation due to the presence of modifiers.

Category	Modifiers	Examples
Demographics (Physical factors)	Neonatal age	Alternate list of causes for presentation– e.g. E coli meningitis, Apparent Life-Threatening Events (ALTE) and hypocalcaemia
	Paediatric age	Need for procedural sedation for painful procedures – e.g. Suturing
	Elderly age	Limited physiological reserve – e.g. cardiac failure due to viral respiratory infection
	Overweight/underweight	Altered drug dose – e.g. suxamethonium
Demographics (Home factors)	Family/Relationship status	Increased risk of abuse – e.g. arguing family members
	Culture/Religion	Expectations and beliefs of health systems – e.g. Jehovah's Witness and blood transfusion
	Financial status	Ability to purchase medications and treatments – e.g. crutches
	Legal status	Requires collaboration with other patient stakeholders – e.g. dementia patients
	Home supports	Available resources to support discharge – e.g. family to do groceries for a patient with broken ankle
	Home	Affects patients with altered mobility – e.g. double storey home
	Homeless	Safety for discharge – e.g. mod severity pneumonia
	Distance from home to hospital	Ease of returning in the event of deterioration – e.g. acute asthma

Category	Modifiers	Examples
Demographics (Lifestyle factors)	Smoking	Altered ED management – e.g. agitated patient with nicotine addiction.
	Pets	Alternative cause of presentation – e.g. allergy to cats
	Traveller	Different arrangements for follow up care – e.g. burn dressings
	Alcohol/ Illicit drug use	Clinical assessment more complex – e.g. alcohol and suicide risk
	Occupation	Ability to return to work – e.g. fractured finger in musician
Clinical Assessment (Communication)	Receptive/ expressive difficulties	Increased requirement for collateral assessment – e.g. stroke patient
	Language	Ability to communicate clear and unambiguous discharge information and instructions – e.g. asthma management plan
Clinical Assessment (Behaviour)	Mental health status	Consideration of medical and/or psychiatric cause of presentation – e.g. temporal lobe epilepsy
	Psycho-emotional distress	Prioritisation of safety prior to assessment – e.g. domestic violence victim
Clinical Assessment (Time)	Time of year	Surges in presentations – e.g. bronchiolitis
	Time of presentation onset	Unclear cause and effect – e.g. headache and herpes zoster ophthalmicus
	Delayed presentation	Increased risk of disease severity – e.g. perforated appendix in abdominal pain
Clinical Assessment (Presentation details)	Multiple complaints	Need to identify and prioritise problems – e.g. patient with DKA and hyperkalaemia
	Re-presentation	Increased risk of diagnosis bias – e.g. collapsed patient with vasovagal or TIA diagnosis.
Clinical Assessment (Injury details)	Multiple sites	Requires prioritisation and multiple referrals – e.g. multi-trauma
	Mechanism	Different management – e.g. blunt versus penetrating, accidental versus self-inflicted
	Type	Different management – e.g. open versus closed fracture
	Site	Requires specialised services – e.g. perineal trauma
Clinical Assessment (Medications)	Polypharmacy	Drug interactions – e.g. High INR due to warfarin and antibiotic
	Allergies	Choice of investigation/treatment – e.g. iodine allergy
Clinical Assessment (Pre-existing health)	Pregnancy	Altered differential diagnosis and management – e.g. antibiotics safe in pregnancy
	Immunosuppressed	Occult pathology – e.g. Transplant patients and sepsis
	Existing medical condition	Interrelated comorbidities – e.g. Chronic renal disease



Category	Modifiers	Examples
	Congenital condition	Altered management – e.g. Cystic Fibrosis
	Infectious status	Protection of self and others – e.g. Active tuberculosis
Clinical Assessment (Clinical Findings)	Abnormal vital signs	Severity of presentation – e.g. hypotension
	Key features (“red flags”) found	Sentinel diagnosis – e.g. thunderclap headache
	Inconsistent findings	Red flag for a missed diagnosis – e.g. Munchausen’s Disease
Clinical Assessment (Investigations)	Unexpected abnormal result	Clinical data synthesis is altered – e.g. liver metastases on CT scan for investigation of abdominal pain
	Equivocal result	Altered patient management – e.g. Intermediate V/Q result
	Time of day/ date	Limited access to CT imaging – e.g. night shift, public holiday
Clinical Treatment	Failure to respond to first-line interventions	Septic shock not responsive to inotropes
Performance of Procedures	Contraindication	Selection of alternative procedures – e.g. ‘awake’ intubation in predicted difficult airway
	No consent	Recognition of life/limb/sight threatening procedures – e.g. urgent fracture reduction
Management Considerations (Discharge Factors)	Community resources available	Follow up after discharge – e.g. timely access to a GP
	Communicable disease	Contact tracing requirements – e.g. measles
	Mandatory notification	Increased responsibilities for reporting – e.g. child at risk, fitness to drive
Management Considerations (Admission Factors)	Time/date	Admit overnight for safety – e.g. elderly patient post fall
	Protocols/guidelines	Presence/absence of dedicated clinical pathway for a presentation – e.g. STEMI
	ED workload	Availability of resources – e.g. patient surges
	Hospital resources	Affects decisions regarding care/transfer – e.g. rural vs. metro, ED observation ward
	Multiple team liaisons	Discerning and co-ordinating the hierarchy of emergent needs – e.g. anaesthetic vs. surgical

## Fellowship Exam Recommended References

This is a list of recommended reference books. It is not meant to be exclusive, but rather a guide to the books that should assist trainees and supervisors to review the knowledge base. The most recent edition of each book should be referred to.

Cameron P et al (eds), *Textbook of Adult Emergency Medicine*  
Churchill Livingstone

Dunn R et al (eds), *The Emergency Medicine Manual*  
Venom Publishing

Tintinalli JE (ed), *Emergency Medicine: a comprehensive study guide*  
McGraw-Hill

Rosen P (ed-in-chief), *Emergency Medicine: concepts and clinical practice*  
Mosby

Cameron P et al (eds), *Textbook of Paediatric Emergency Medicine*  
Churchill Livingstone

Braunwald E, et al. (eds), *Harrison's Principles of Internal Medicine*  
McGraw-Hill

Chan T et al (eds), *ECG in Emergency Medicine and Acute Care*  
Elsevier Mosby

Roberts JR, Hedges JR (eds), *Clinical Procedures in Emergency Medicine*  
WB Saunders Company

Murray L et al (eds), *Toxicology Handbook*  
Churchill Livingstone

Sutherland SK, Tibballs J, *Australian Animal Toxins*  
Oxford University Press

Meier J, White J (eds), *Handbook of Clinical Toxicology of Animal Venoms and Poisons*  
CRC Press

Bersten AD, Soni N (eds), *Oh's Intensive Care Manual*  
Butterworth-Heinemann

Talley N, O'Connor S, *Examination Medicine – a Guide to Physician Training*  
MacLennan & Petty

Peat JK, *Health Science Research*  
Allen & Unwin

## Journals

In addition, the following journals regularly contain articles relevant to emergency medicine, and should be used as a resource for the most recent knowledge in the medical literature.

- Emergency Medicine Australasia (Australia & New Zealand)
- Annals of Emergency Medicine (USA)

- Journal of Emergency Medicine (USA)
- Academic Emergency Medicine (USA)
- Emergency Medicine Journal (UK)
- New England Journal of Medicine
- Lancet

- British Medical Journal
- Medical Journal of Australia
- Circulation
- Journal of Trauma