



## rOSCE - Simulation

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This is a single station simulation station.

You are the duty consultant in the resuscitation area of a tertiary ED. You receive notification that an ambulance is 3 minutes away from your ED with a 34yo female who appears to have taken an overdose of unknown ingestion. She was drowsy when the ambulance arrived and has now become unconscious. Her vital signs are:

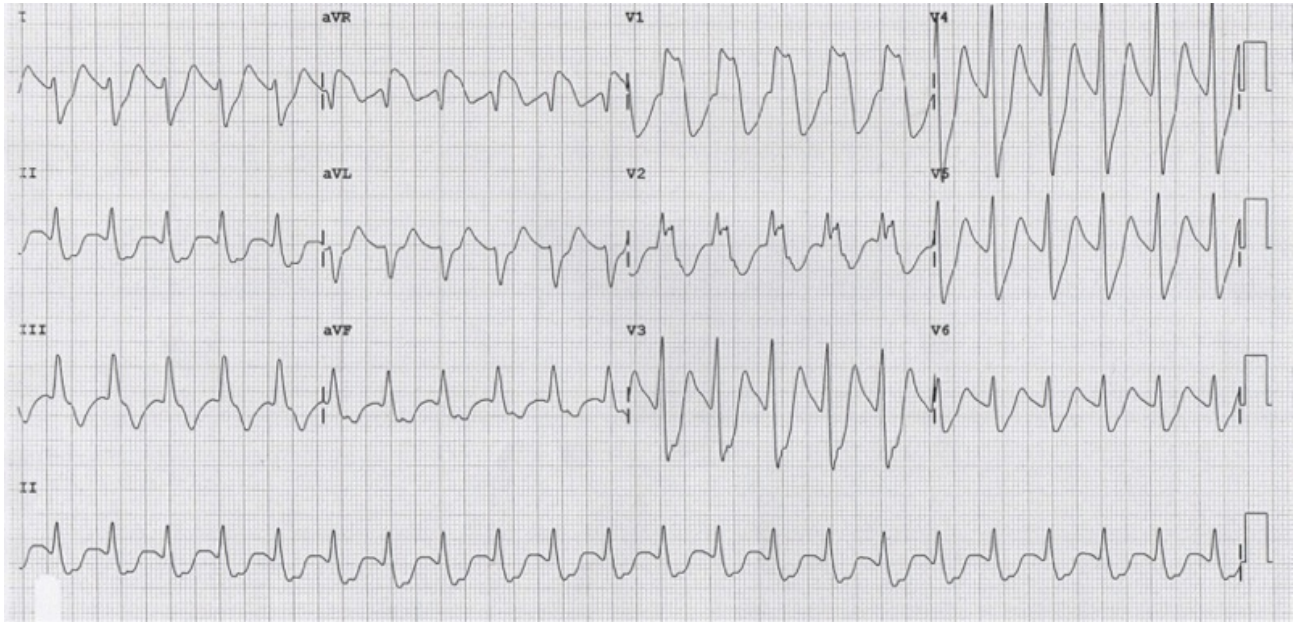
HR 130  
BP 80/40  
RR 24  
SaO2 92% on 15L  
GCS 7 (E1V2M4)

### **TASKS**

- Prepare your resuscitation team for this patient's arrival.
- Perform a rapid assessment and initiate management

### **DOMAINS**

- Medical Expertise (40%)
- Prioritisation And Decision Making (20%)
- Teamwork and Collaboration (40%)



The ABG obtained on 15L O<sub>2</sub> via NRB mask  
is:

pH 7.12

pCO<sub>2</sub> 23

pO<sub>2</sub> 221

HCO<sub>3</sub> 9

Na 130

K 4.5

Cl 109

glu 8.4

lac 1.4

# INSTRUCTIONS FOR CONFEDERATE

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## ED Registrar

You are an advanced trainee with competent airway and procedural skills. You will be able to perform all tasks as requested. However you will not prompt or guide the candidate unless there is limited progress in the scenario.

You will be doing the following

- primary assessment as requested by the candidate
  - o patent airway
  - o decreased air entry bilaterally, nil added
  - o tachycardia with hypotension, likely warm shock given vasoplegia cap return is 2s
  - o GCS 7 E1V2M4, equal pupils 3mm
  - o No external/physical injury
- You may prepare the RSI/airway equipment as requested, need to clarify the equipment
  - o Tube size
  - o Any adjuncts or monitoring equipment – may choose not to prompt eg – apnoeic oxygen, PEEP valve, capnography, positioning of the patient
  - o Good candidates will describe a back up plan
  - o If asked for a checklist, move the candidate on
  - o Drugs – need name, dose, route
- If asked for investigations that are not immediately required, answer – it will be arranged, waiting for radiographer, they are on a break, it's normal; and move the candidate on.
- Prompts
  - o What are some potential ingestions? Non toxicological causes must be mentioned – sepsis, anaphylaxis, any reasonable cause for shock
  - o I'm thinking of giving an antidote, what should that be? Would sodium help?

## ED Nurse

You are a competent ED Nurse and capable of all basic interventions. Monitoring, cannulation, ECG, airway assistance, CPR, drawing up drugs and hanging fluids. You will not interpret any information.

### Prompts

- We've done an ECG, can you help me interpret it?
- The blood gas has just come back, what should we do about it?

# CURRICULUM DOMAINS

Subject:

- Management of a sodium channel blockade/TCA overdose
- Simulation performance

Curriculum components assessed

- Medical expertise
- Prioritisation and decision making
- Teamwork and collaboration

MEDICAL EXPERTISE	On completion of <b>Provisional Training</b> , the trainee will be able to...	On completion of <b>Advanced Training Stage 1</b> , the trainee will be able to...	On completion of <b>Advanced Training Stage 2</b> , the trainee will be able to...	On completion of <b>Advanced Training Stage 3</b> , the FACEM will be able to...
<b>Initial Emergency Medicine Care</b>				
<b>Initial assessment</b>	Identify high-risk features during initial patient assessment. Assess a patient in order to select and arrange appropriate preliminary investigations.	Perform a targeted risk assessment based on identified high-risk features.	Briefly assess a patient in order to select and arrange time critical investigations.	Rapidly determine the required investigations based on minimal information.
<b>Clinical streaming</b>	Describe the use of triage systems in the Emergency Department. Identify patients that should be managed in the resuscitation room.	Recognise the appropriate location within the Emergency Department for ongoing care.	Describe the benefits and limitations of triage systems in the Emergency Department. Allocate patients according to clinical streaming principles. Activate transfer of a patient to the resuscitation room.	Determine the most appropriate location for each patient within the Emergency Department
<b>Diagnostic reasoning</b>	Formulate a differential diagnosis based on the patient presentation.	Apply a problem solving approach to patient care when a provisional diagnosis cannot be determined.	Synthesise clinical information found on initial assessment to form both a provisional diagnosis and a differential diagnosis.	Generate a differential diagnosis from minimal information, with an inherent focus on the life and limb threatening conditions.
<b>Initial interventions</b>	Escalate care when high-risk features have been identified. Treat common symptoms with appropriate simple medical, physical and psychological therapies.	Initiate appropriate time critical interventions.	Initiate appropriate supportive treatment for any presenting problem.	Rapidly determine the need for time critical interventions based on minimal information obtained during initial patient assessment. Utilise an increased range of medical and physical therapies to provide initial targeted management.

PRIORITISATION AND DECISION MAKING	On completion of <b>Provisional Training</b> , the trainee will be able to...	On completion of <b>Advanced Training Stage 1</b> , the trainee will be able to...	On completion of <b>Advanced Training Stage 2</b> , the trainee will be able to...	On completion of <b>Advanced Training Stage 3</b> , the FACEM will be able to...
<b>Decision Making</b>				
<b>Initiating patient care</b>	Decide to initiate resuscitation when a patient is recognised as critically ill or deteriorating.	Decide to commence an appropriate clinical treatment pathway matched to the patient presentation.	Decide appropriately what treatment to commence when supplied with incomplete and uncertain information.	Decide to recruit specific additional staff and resources to initiate time critical patient care.
<b>Prioritisation of Patient Management</b>				
<b>The single patient</b>	Apply accepted algorithms to prioritise treatment of a patient.	Prioritise the assessment and management of a patient with a simple presentation.	Prioritise the assessment and management of a patient with a complex or critical presentation.	Prioritise the essential components of care of any patient in the Emergency Department.

TEAMWORK AND COLLABORATION	On completion of <b>Provisional Training</b> the trainee will be able to...	On completion of <b>Advanced Training Stage 1</b> , the trainee will be able to...	On completion of <b>Advanced Training Stage 2</b> , the trainee will be able to...	On completion of <b>Advanced Training Stage 3</b> , the FACEM will be able to...
<b>Team Leader</b>	Undertake the role of team leader during an initial resuscitation with the use of basic resuscitation skills until senior colleagues can assist.	Undertake the role of team leader during a routine resuscitation which responds to first line therapy.  Respond appropriately to questions asked by team members during a resuscitation.	Allocate and brief a resuscitation team prior to the arrival of a critical patient.  Undertake the role of team leader during a resuscitation which requires more advanced therapeutics.  Step in and out of the team leader role without disrupting the functioning of the team as required.	Lead resuscitation in any scenario.  Support junior staff in routine team leader roles.

<b>The Effective Resuscitation Team</b>				
<b>The resuscitation team</b>	Demonstrate an understanding of effective teamwork principles when assigned to a resuscitation team role.	Undertake a variety of different resuscitation team roles.  Demonstrate flexibility and adaptive behaviours when working in a team.	Demonstrate effective teamwork principles when working in teams of various numbers and skill levels.	Perform any resuscitation team roles effectively, including team leader.

# ASSESSMENT

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Medical Expertise	<p>Identification of Na Channel blockade on ECG (pass/fail)</p> <p>Initial treatment based on provisional dx</p> <ul style="list-style-type: none"><li>- Volume expansion – Nsaline 500ml boluses</li><li>- NaHCO<sub>3</sub> – 1mMol/kg IV : pH 7.55 (pass/fail)</li><li>- Midazolam 5mg aliquots</li><li>- Early intubation, with airway control, hyperventilation pH 7.55</li><li>- NGT and decontamination with AC</li><li>- Haemodynamic support with NAd/Ad infusion</li><li>- Consider use of third line therapy: lignocaine, intralipid, ECMO</li><li>- ECG endpoints: QRS &lt;140ms (100ms predictive of seizures, &gt;160ms VF)</li><li>- BP endpoints, MAP &gt;65, UO/0.5-1ml/hr</li></ul> <p>Preparation of RSI</p> <ul style="list-style-type: none"><li>- Equipment</li><li>- Monitoring</li><li>- positioning</li><li>- Drugs, dose, route</li><li>- Plan B</li></ul> <p>ALS</p> <ul style="list-style-type: none"><li>- Minimal delay to CPR</li><li>- May consider stacked shock x3 if 'witnessed' and delay less than 10s</li><li>- Shockable rhythm</li><li>- Safe rhythm check – COACHED (pass/fail)</li><li>- Appropriate adrenaline after second shock</li><li>- Avoid amiodarone</li><li>- Assessment of reversible causes,</li></ul>
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	<p>5Hs/5Ts</p> <p>Post resuscitation care</p> <ul style="list-style-type: none"> <li>- Appropriate ventilator setting, for hyperventilation and pH 7.55</li> <li>- Sedation drugs – benzodiazepine + analgesia</li> <li>- Ongoing antidote</li> <li>- Check NGT.ETT positioning</li> <li>- May consider an arterial line for invasive BP monitoring and frequent gas sampling</li> <li>- Medical handover: accurate and succinct summary of key issues, ideally &lt;60s. May use a structured template like iSBAR</li> </ul>
<p>Prioritisation and decision making</p>	<p>Able to make decisions based on limited information</p> <ul style="list-style-type: none"> <li>- Early use of NaHCO<sub>3</sub></li> <li>- Need for securing the airway</li> </ul> <p>Response to changing clinical scenario</p> <ul style="list-style-type: none"> <li>- Seizures are a complication of the case and changes management accordingly</li> </ul> <p>Ability to request appropriate investigations and correct interpretation</p> <ul style="list-style-type: none"> <li>- ECG</li> <li>- ABG</li> </ul>
<p>Teamwork and collaboration</p>	<ul style="list-style-type: none"> <li>- Establishes leadership</li> <li>- Allocates roles</li> <li>- Provides an overview and expectations</li> <li>- Clear and precise instructions with end points</li> <li>- Clarifies when asked</li> <li>- Verbal and non verbal communications: addresses individuals, eye contact, closed loop communication</li> </ul>