Cardiovascular System

**Research Staff:**

- Participants should be asked to arrive dressed as they would for clinical placement. That is, in uniform, hair and jewellery appropriate, note pad, pen, watch, stethoscope, etc..
- Ask participant not to discuss the scenarios with their colleagues until study is complete.
- Ensure pre-assessment forms are complete
- Ensure eye tracking is working
- Ask SA questions at the end of the scenario
- Check equipment is available and correct for the scenario
- Run through scenario with participants and ask them to repeat it back.
- Emphasize the need to record observations regularly and verbalise thoughts and actions
- You will be scoring and acting as a junior inexperienced assistant (nurse/paramedic as applicable)

**Briefing Notes**

**Nursing student:** You are just starting your shift as a district nurse and you are visiting your first patient of the day at his home. As your ‘patient’ is an actor you are required to take observations as per normal but results will be revealed by the researcher. The patient is alone in their room.

**Paramedic student:** You are just starting your shift as a primary response paramedic in a response car and have been called to a patient at home. As your ‘patient’ is an actor you are required to take observations as per normal but results will be revealed by the researcher. The patient is alone in their room.

**The patient:** John is 65 years of age and has been treated for cellulitis of his leg, for which a course of oral antibiotics has been completed. On your arrival he tells you he has chest pain and points to the centre of his chest. You are the first to respond.

The scenario will be run in ‘real time’. There will therefore be gaps in activity, *(this does not mean you are doing anything wrong).* You have an observation chart to document vital signs. Talk out loud about what you are thinking and doing. You can ask for the patient’s status at any point and you can expose him down to his underwear.

At the end of the simulation you will be stopped and asked about specific aspects of the situation, as you perceive them, at that time. The questions should be answered as rapidly as possible – it is Ok to use your instinct.

**Researcher**

DO NOT PROMPT at any point but assist each participant as applicable (as an inexperienced nurse/paramedic). Give information as requested after an applicable action, i.e. only indicate the BP or HR after it has been taken. Please rate performance on the following scale during or immediately after each scenario.
Patient scenario:
You are **Mr John Edwards a 65-year-old retired accountant**.

Moulage – Cyanosis – i.e. pale/sweaty lips

**Presenting condition (If asked)**
You are being treated for cellulitis of the leg and are taking oral antibiotics. About 20 minutes ago you got severe chest pain and rang 000/or called for help in ward.

- **Chest pains and breathlessness.**
  - The pain came on gradually and is currently approx 5/10.
  - The onset of pain was AT REST. You did not have indigestion.
  - The pain was across the front of your chest. It did not radiate anywhere else.
  - The pain was accompanied by you feeling generally unwell and breathless. You still feel your breathing is ‘a bit tight’.
  - You have had this pain in the past. It does feel similar to your angina pain.
  - Usually you need to use your GTN approx once every month or so and you have not seen your GP about your angina for the last 8-9 months.

You are anxious and agitated but not aggressive. Your wife is out shopping with her sister and you have been unable to contact them so far.

Past medical history
- You are known to have high BP for which you take medication.
- You had a blood test to check your cholesterol last year which was 5.4
- You have had angina for the last three years

Drug history
- **Metoprolol** 50mg twice a day (for your BP and angina – you think)
- **Aspirin 100mg** daily
- **Pravastatin 40mg at night** (for your high cholesterol)
- **GTN spray** prn (for your angina when you need it)

Social history
- You drink 4 glasses of red wine per day.
- You eat ‘healthily’.
- You smoked 20 cigarettes per day for 25 years but have recently given up
- You have gained about 6kg in weight over the last six months.
- Married to Grace, also retired, with four adult children.
- You don’t exercise specifically but you take your dog for a walk twice a day

Family history
- Your father died aged 48 years of a heart attack which is adding to your concerns.

Decline at 4 minutes (halfway point of scenario)
- **Rapid increase in chest pains (9/10) and breathlessness (rapid shallow breaths)**
- The pain is crushing central chest pain right across the front of your chest. It did not radiate anywhere else.
- You are anxious, agitated and very frightened.

Participant No = Date =
## CVS Chest Pain (Scenario 1)

<table>
<thead>
<tr>
<th>Aprox Time (mins)</th>
<th>Observation</th>
<th>Action</th>
<th>Correct/incorrect</th>
<th>Points at debrief</th>
</tr>
</thead>
<tbody>
<tr>
<td>On arrival 1-4</td>
<td>5/10</td>
<td>Obtain immediate history, Pain assessment, Record/request obs</td>
<td>Y/N</td>
<td>PQRST (Provoke/Palliation, Quality, Radiates, Severity, Time)</td>
</tr>
<tr>
<td></td>
<td>BP 150/95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HR 110 (<em>if palpated</em>)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RR 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CRT – 2 secs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>O₂ Sats 95%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Temp 36.8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Investigate current medication usage
- Identify other symptoms
- Consider non-cardiac causes of chest pain
- Aspirin (sub-lingual)
- Commence ECG monitoring

### Patient rapidly deteriorates

Rapid increase in chest pains (9/10) and breathlessness (rapid shallow breaths)
<table>
<thead>
<tr>
<th>4-8 mins</th>
<th>9/10</th>
<th>Pain assessment</th>
<th>Y/N</th>
<th>[Prescribed for nurses]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BP 170/95</td>
<td>Nitrates</td>
<td>Y/N</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HR 140</td>
<td>Record/request</td>
<td>Y/N</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RR 32</td>
<td>Obs.</td>
<td>Y/N</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CRT – 2 secs</td>
<td>O² Sats 89% (despite O² if on)</td>
<td>Y/N</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Call for applicable emergency assistance</td>
<td>Y/N</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Position appropriately</td>
<td>Y/N</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Administer O² (non-rebreath)</td>
<td>Y/N</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ensure IV cannulation</td>
<td>Y/N</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Morphine</td>
<td>Y/N</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emphasise systematic ABCs. Time critical</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7.5-8 mins?</th>
<th>BP 140/80</th>
<th>Instructor Note: Where requested - unless majority of above have been missed - indicate these observations and initial stabilisation in last 30 secs of scenario</th>
<th>Stabilisation may be temporary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HR 120</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RR 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CRT – 2 secs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>O₂ Sats 93%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

End scenario with SA questions