## Septic Shock and Cardiac Arrest

### Set-up:

<table>
<thead>
<tr>
<th>Lines/access:</th>
<th>Single peripheral cannula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infusions:</td>
<td>1L crystalloid at 100mls/hr</td>
</tr>
<tr>
<td>Airway:</td>
<td>Own. Nasal cannulae 4L oxygen</td>
</tr>
<tr>
<td>Ventilator:</td>
<td>In bedspace but switched off</td>
</tr>
</tbody>
</table>
| Other:            | Blood results revealing elevated WCC/CRP/PCT  
|                   | Urinalysis revealing positive nitrites and leucocytes  
|                   | Airway trolley  
|                   | Arrest trolley |

### Clinical Setting:

**I:** You are the ICU registrar, called by the ICU Nurse to assess a new admission. The HDU registrar reviewed the patient a few hours prior, and the patient has arrived without warning.

**S:** He/she would like a plan for the 59F who has just been transferred from the ED

**B:** Patient been in ED for past 4 hours and transferred with an ED nurse. Suspected diagnosis of LRTI.

**A:** Assess and formulate ICU plan

**R:** Assist the HDU resident

### Clinical Course Summary:

- Initially A clear, B RR 30/min, clear chest, O2 sats 88% on 4L via nasal cannulae, C HR 48bpm SR, NIBP cycling at the start of the scenario – eventually comes up as 76/54 D respond to painful stimuli by groaning, eyes closed
- Patient collapses into PEA
- Continue in PEA until fluid boluses given, and reversible causes considered
- Agonal breathing at rate of 8/min on ROSC, sats remain low – candidate needs to secure airway and commence mechanical ventilation
- Reassessment of the patient and institutes post resuscitation care
- At this point ICU consultant phones unit to enquire about the new admission. ICU registrar to give summary and formulate a plan with consultant on phone
Info Sheet For Faculty:

- **Initial Settings:** RR 30/min
  - O₂ sats 88% on 4L via nasal cannulae
  - Chest fields clear
  - HR 48bpm SR
  - NIBP cycling at the start of the scenario – eventually comes up as 76/54
  - No capnography

  Allow candidate time to assess patient and instigate immediate resuscitative measures/investigations

- **PEA arrest**

- **Post arrest: No spontaneous respirations**
  - O₂ sats 86% on high flow oxygen
  - HR 126bpm SR
  - NIBP 166/97 – next BP drops to 90/56

- **On intubation: RR at whatever ventilator is set at**
  - O₂ sats improve to 94% slowly over 1 minute
  - BP 105/63 if patient has given appropriate pressor/inotrope
  - HR 118bpm SR
  - ETCO₂ 5.6kPa (only if candidate requests capnography)
Faculty Roles:

ED Student Nurse:
- You are on your ED placement
- You are quite proud and pleased that ED let you transfer the patient alone
- Patient is 59 years of age and has a chest infection. She has had some antibiotics – you don’t know which
- The ED Consultant said she has given her some “met-arm-olol” for her blood pressure. She also mentioned that she was concerned she might arrest
- The patient has one cannula and some fluid running through it
- You know nothing else
- If the candidate gets upset or disgruntled you get upset and leave the room
- Otherwise leave when the patient has a cardiac arrest unless specifically told to stay by the candidate

HDU Resident:
- You are admitting a patient from the ED which is routine and have been assured the patient is stable
- When asked by the candidate how the patient is you say they’re fine
- You are unaware that the patient is arresting and are quite surprised and shocked
- You are incredibly keen to be involved including intubating the patient, which you will be able to do if properly guided
- You feel upset that you didn’t realize this was happening and will seek feedback from the candidate as to what went wrong – you will get upset if the feedback is harsh
- If the candidate is performing exceptionally well you will start to seek reassurance and distract them while they attempt to resuscitate the patient
- Be insistent that doing the “head end” during the intubation would be a brilliant learning opportunity for you

HDU Nurse:
- You are a competent staff nurse who has worked at the unit for a number of years
- You were also reassured the patient was stable. You don’t know anything more than the student nurse hands over
- You take direction very well and will perform tasks that are asked of you

**HiLO: 5, 11**