**OSCE NAME: Paediatric Drowning**

**SUBJECT AND CURRICULUM REFERENCE**

Medical Expertise ☐

Prioritisation and Decision Making ☐

Communication ☐

Teamwork and Collaboration ☐

**CLINICAL SCENARIO STEM**

A 4 yearold boy has been brought into the resuscitation bay in PEA cardiac arrest after being found submerged in the backyard pool for a maximum of 2-3 minutes. Effective CPR and administration of appropriate drugs is underway, but the team are having difficulty ventilating via a bag valve mask with a guedel airway in situ. The decision has been made to intubate the patient. The parents have chosen to leave the resus bay. The child weighs 20kg. There is copious vomitus and secretions gathering in the airway.

The team consist of:

* Candidate (assuming position of ED Consultant)
* Resus Registrar – directing ALS
* BVM/Cricoid Registrar
* Airway Nurse
* CPR Nurse
* Drug Nurse

**INSTRUCTIONS**

* Candidate
  + Your role is to manage the airway of this child, who is a high fidelity mannequin in this case. You will take over the airway from the BVM registrar when you enter the room. You must provide a definitive airway, BVM ventilation is ineffective.
  + You will have an airway nurse who can be directed to prepare appropriate equipment, any drugs you wish to use for airway management. Remember doses and sizes. Note that there is no video largyngoscopy equipment/glidescope etc.
  + There will be a CPR nurse, a registrar who is to continue leading the resus, another nurse to administer any drugs you may require and a registrar who is proficient in cricoid pressure/BVM only
  + It is also your role to set ventilator parameters and manage the first few minutes of ventilation, including all post intubation checks and care.
  + You do not need to manage any other aspect of the resus, you are solely responsible for securing the airway and managing the patients breathing.
  + CPR will continue unless you ask the team to halt.
* Resus Registrar
  + Your role is to follow the APLS algorithm for the duration of the station, including CPR, pulse and rhythm checks and administration of drugs
  + When the candidate arrives you must give a short handover of the situation stressing the need for a definitive airway
  + YOU MUST continue this role and decline any offers to swap roles with the candidate
* BVM/Cricoid Registrar
  + You will be ineffectively providing BVM with a guedel in situ when the candidate arrives, hand over the airway to him when he arrives. You must prompt him to take the airway if he does not do so.
  + Your role after that is to provide cricoid pressure and do any tasks that the candidate asks of you
  + You **ARE NOT** allowed to intubate
* Airway nurse
  + Your role is to:
    - Prepare any equipment and drugs that the candidate requires, you must inform them clearly when each task is complete
    - Act as airway nurse for the procedure – standard tasks e.g handing equipment to candidate, monitoring sats etc
    - If the candidate asks for something that is unavailable e.g NIV/video laryngoscopy you must tell them it is not available
    - You are not to provide cricoid pressure – this is the role of the RMO
* CPR Nurse
  + You are to perform effective compressions for the duration of the station
  + If you are tired you can swap with the Drugs Nurse but must then resume her role
* Drugs Nurse
  + Your role is to administer drugs that the airway doctor asks for. If he doesn’t specify the dose required you must ask “Do you want the whole syringe??”
* Examiner
  + Assess on basis of below Assessment Criteria

**ASSESSMENT CRITERIA**

Medical Expertise

* Interact appropriately and get a brief handover from the Resus Registrar on arrival
* Take over control of the airway and demonstrate attempts to appropriately BVM with adjuncts if necessary
* Suction the airway
* Prepare appropriate sized equipment
  + ETT Cuffed = 4.0 (+/- 0.5)
  + ETT Uncuffed = 5.0 (=/-0.5)
  + LMA Size 2 or 2.5
  + Laryngoscope MAC 2 or 3
* **No drugs** required as full cardiac arrest
  + **If drugs are draw this must take time and delay the intubation as is unnecessary step**
* Suction the airway
* Position child in sniffing position
* Voice airway plan to team – ideally plan A/B/C
* Effective laryngoscopy and placement of ETT at 14cm
* Minimal or no interruption of CPR
* Confirm position of ETT
  + Colorimetric capnography/waveform
  + Fogging
  + Chest rise and breath sounds
  + Request CXR
* Tie tube
* Ask for NGT
* Ask for VBG/ABG
* Set ventilator with appropriate parameters
  + Any appropriate mode delivering mandatory breaths
  + Vt – 5-7mls/kg = 100-140mls
  + PEEP – 5-10mmHg
  + RR 20-40 (Range for normal in paed)
* If ventilator not set up/runs out of time – must hand ventilate appropriately or delegate task.
* It is anticipated that there will be little time remaining after the end of the station for ventilator management, at 6mins the scenario is stopped to allow the following questions to be asked
  + What ventilator settings would you choose
  + What post intubation care would you perform

**Set up**

Hi Fidelity Mannequin

Full monitoring and defib paddles attached

Monitors showing PEA

Full Paed Airway trolley

Suction

O2

Capnography – colorimetric or waveform (if WF connected and warmed up)

Paed BVM appropriately sized

NGT