**Emergency Airway Management in the Critically Ill**

**\*\* If advanced airway management is needed for a critically ill patient \*\***

* Provide 1:1 patient care
* Apply monitoring (ECG, cycling NIBP, SpO2 + CAPNOGRAPHY)
* Call 2222 if peri-arrest
* Bleep ICU registrar on 1319 and ODP on 1711. CCOT 1374
* If child bleep paediatric registrar on 1165
* Start preparing airway equipment and RSI drugs

**Environment and equipment**

**Emergency department** – patients requiring airway support should initially be managed in the resuscitation room. If covid-19 is highly likely – consider transfer to side room for intubation. Trust standardised airway equipment is kept in trolleys in ED resus – all bays have adult equipment, paediatric equipment is located in bay C. An RSI drug box is kept in the resus fridge.

**Wards** – the ward resuscitation trolley should be brought to the patient’s bedside and contain the trust standardised airway box and self-inflating bag. Consider transfer to side room for intubation, to minimise aerosol spread.

**Additional equipment -** an airway trolley is kept on ICU (Radnor). This contains an airway box, a mcgrath videolaryngoscope for difficult intubation, portable capnography and a ventilator. An RSI drug box is kept in the Radnor store cupboard fridge. A more extensive drug pack is kept in the Radnor CD cupboard. On being alerted to an airway emergency the ODP should collect the airway trolley, RSI box and ventilator and take to the emergency situation. A full difficult airway trolley is found in main theatres.

**Guide to drawing up RSI drugs**

* **Label all syringes**
* **Ketamine \*check strength\* If 50mg/ml –** 20ml syringe. Draw up 4ml ketamine and then 16ml 0.9% saline to make up 10mg/ml solution.
* **Rocuronium –** 10ml syringe. Draw up two 5ml 1mg/ml ampules.
* **0.9% Saline flush –** draw up x2 10ml flushes
* **Metaraminol 10mg/ml –** 20ml syringe, draw up 1ml of 10mg/ml
* **Propofol –** 50ml syringe, draw up 2 x 20ml 1% propofol to make 40ml of maintenance sedation
* Consider fentanyl +/- need for weak adrenaline metaraminol into syringe and then 19ml 0.9% saline to make 20ml of 500mcg/ml solution

**Other useful personnel**

* ICU consultant – In hours bleep 1373, and on mobile via switch
* Radnor ward – ex 5400
* Anaesthetics – SHO blp 1178, Consultant blp 1713 in hours
* Paediatrics - consultant via switch. SpR blp 1165
* Emergency ENT support – SHO 1261, consultants via switch

**Emergency tracheal intubation checklist**

* **Roles allocated + introductions**

1st /2nd Intubator

Drugs + monitoring

Assistant +/- cricoid

Need for MILS

Outside runner

* **Difficult airway expected?**

Call for senior help Videolaryngoscope (Radnor)

Difficult airway trolley (theatre)

* **If failed intubation – wake or proceed?**
* **Plan A – RSI**

Which laryngoscope & ETT

Planned BVM

Cricoid / MILS

* **Plan B** – supraglotic airway size
* **Plan C** – 2 handed BMV + guedel
* **Plan D** – Front of neck
* **Any concerns?**
* **Perform intubation**
* Inflate cuff prior to ventilation
* Confirm capnography
* Check bilateral air entry
* Consider clamping ETT before disconnection
* Attach to ventilator with appropriate settings
* Start propofol sedation

**Extra procedures?**

* Attach in-line suction
* Insert NG tube
* 300 Head up (neuroprotect)
* CXR
* Document intubation (see overleaf)

**Covid precautions**

* Careful equipment disposal
* Decontaminate reusable equipment
* Doff PPE
* Wash hands
* Re-don PPE for transfer
* **Apply monitoring**

Sp02 (tone on), cycling NIBP

ECG, EtCO2

* **Assess airway**
* **IV access checked (x2)**
* **Check drug allergies**
* **Optimise position**

Spinal precautions needed? Ramp, hard surface, pillow

* **Pre-oxygenate 100% O2 >3min** (consider nasal apnoeic oxygenation)
* **Optimise**

NG aspirated

Fluid / vasopressor needed?

* **Apply ‘Level 3 PPE’**

Wash hands, long sleeved gown, FFP3 mask, Visor, gloves. Name on visor

**Equipment**

* Waters circuit with viral HME
* Working suction under pillow
* Laryngoscopes + bougie
* Videolaryngoscope
* Guedels + LMA/ iGEL
* X2 endotracheal tubes (with subglottic suction)
* Tube ties and syringe
* Tube clamp
* In-line suction ready
* Front of neck access kit
* Ventilator + circuit

**Drugs**

* Induction agent +/- opiate
* Muscle relaxant
* Vasopressor / inotropes
* Propofol sedation

**Intubation drugs**

|  |  |  |
| --- | --- | --- |
|  | Drug | Dose |
| Induction |  |  |
| NMB |  |  |
| Opiate |  |  |
| Vasoactive |  |  |
| Other |  |  |
|  |  |  |

Any difficulties encountered? E.g. hypoxia, hypotension, other

Events during transfer

**CT/ICU transfer checklist**

**Airway**

* ETT secured
* Spare airway kit + waters circuit
* Spinal precautions if needed

**Breathing**

* Continuous ETCO2, Sp02
* Parameters stable on transfer ventilator
* Adequate oxygen for transfer

**Circulation**

* X2 IV access
* ECG & NIBP cycling, Consider IABP
* Fluids +/- vasopressor bolus +/- infusion
* Consider need for defibrillator

**Neuro**

* Sedation running and additional NMB available / given
* Neuroprotection (head up, control ETCO2)
* Warming / blanket

**Final checks**

* Appropriate personnel
* Portable suction
* Attached to transfer monitor + portable O2
* Emergency + ongoing drugs available
* Transfer bag
* Battery on vent, monitor + pumps OK
* Notes scanned

**Intubation details**

**Date & Time:**

**Location:**

**Personnel (name and grade)**

Intubator

Drugs

Assistant

**Intubation**

Mask ventilation difficult / easy / N/A

Laryngoscope used

Adjuncts

Grade of view 1 / 2a / 2b / 3 / 4

ETT size Length at teeth

Manual in-line stabilisation yes / no

Patient ID sticker