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Emergency Department Guideline for Airway Management in Adult and Paediatric patients with suspected COVID – 19

1. Overview:

To provide a guideline to Emergency staff managing both adult (Footscray, Sunshine and Williamstown) and paediatric (Sunshine Hospital) patients within Western Health Emergency Departments that may require urgent intubation during the COVID-19 Pandemic response period.

2. Applicability:

This guideline is applicable and essential knowledge information for all staff who work in the Western Health Emergency Department's during the COVID-19 Pandemic response period.

3. Responsibility:

Responsibility lies with the Division of Emergency, Medicine & Access Divisional Director and Clinical Services Director, the Directors of Emergency Medicine & Paediatric Emergency Medicine at the Footscray and Sunshine Emergency Departments, the Clinical Lead of the Williamstown Emergency Department, the Nurse Unit Managers for the Williamston, Footscray, Sunshine Emergency Departments and the Nurse Unit Managers Sunshine and Footscray, Short Stay Units.

4. Authority:

Exceptions to this guideline can only be authorised by the above the staff identified in 3. Responsibility or the Senior Medical Officer in charge and/or the Nurse-in-Charge of the shift in each Emergency Department.

5. Associated Documentation:

This guideline aligns with the following WH documents available on the microsite

1) WH ED COVID Clinical Matrix Guide
2) WH COVID Clinical Guidelines for Doctors v9.4
3) WH Safe use of Respiratory therapy v4.0
6. Guideline Detail

NOTE: Paediatric specific guidance is outlined in beige and italicised.

6.1. General Principles

• The on-call or attending Emergency Physician may override the following guideline in consultation with the Nurse in Charge on a case by case basis.
• During the COVID 19 pandemic, changes to usual practices are required in order to maximise both staff and patient safety.
• Intubation in ED is a high risk procedure. The COVID 19 pandemic is associated with additional risks associated with staff exposure, altered work environments, and changes to normal clinical practice. The risks to staff need to be considered alongside the risks to the patient.
• Intubation is an aerosol generating procedure (AGP) performed by staff who are wearing appropriate personal protective equipment.
• The choice of location and appropriate staffing for intubation may vary. It will be dependent on patient factors, availability of human resources and availability of critical care resources within the hospital.
• Intubation should occur in the highest-order engineered room available. If a Negative Pressure Room (NPR) is readily available, and if transfer of the patient to this room does not compromise the wellbeing of the patient, this should be considered.
• Protection of staff protection remains a key priority, even in the event of significant deterioration.
• Care must be taken when donning PPE and a spotter system should be used to ensure no breaches.
• Early identification of deterioration and planning for intubation is key to making this process safe.

6.1.2 Additional Paediatric Considerations

• Paediatric intubation in the Emergency Department is a high-risk/low-frequency procedure.
• The most common indications for intubation in paediatric patients in the ED are status epilepticus and head injury with low GCS, however ALL paediatric patients requiring intubation during the COVID-19 pandemic period will be treated as suspected of having COVID-19.
• Intubated paediatric patients are not admitted to Western Health and require transport to a Paediatric Intensive Care Unit (The Royal Children’s Hospital or Monash Children’s Hospital) by PIPER retrieval service. Occasionally, older adolescents can be admitted to a WH ICU by strict negotiation with the ICU consultant.
• Intubated paediatric patients requiring external transfer are likely to stay in the Emergency Department for longer than adult patients due to the need for transfer and the coordination of a retrieval team. Contact PIPER early in the sequence.
6.2. Preferred Location for Intubations.

- Wherever possible, a patient requiring intubation, where COVID-19 is suspected, they should be intubated in a negative pressure room. If unavailable, consider other rooms in the following order of hierarchy; Class S single room with solid walls, area where curtained walls exist.
- The safest location to assess and resuscitate a patient (regardless of COVID risk/status) is the Resuscitation area of the department. This is due to the space, familiarity of environment and location of equipment that may be required, as well as ease of communication with other parts of the department. If intubation is required, this should also occur in this space unless it is safe to move the patient elsewhere.
- The safest locations for an unstable patient with suspected or confirmed COVID-19 in ED is R1 (FH), Cubicle 23 (SH Adults) and Cubicle P1 (SH PAEDS).

If a patient is stable but has been identified as likely to need intubation, attempts should be made to move the patient to a safer location within the hospital prior to intubation where possible.

<table>
<thead>
<tr>
<th>Hierarchy of room preferences for an Emergency Department patient requiring Intubation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Patient in ED</td>
</tr>
<tr>
<td>Adult - Unstable and/or undifferentiated patient</td>
</tr>
</tbody>
</table>
| Adult - Suspected/ Confirmed COVID-19 patient with gradual respiratory system deterioration looking likely to require intubation within hours. | 1. Cubicle 23  
2. P1  
3. R3 | 1. Consider alternate locations in liaison with ICU  
2. Resus 1  
3. BAR Room |
| Paediatric patient                                         | 1. P1  
2. Cubicle 23  
3. P5 or P8 | Resus 1 |
| Paediatric patient with concerns of difficult airway       | Theatre                                  | Resus 1 |
6.3. Personnel/Staffing

- Tracheal intubation is an aerosol generating procedure (AGP) which potentially exposes staff to risk. Only those directly involved in the process of airway management should be in the room.
- Staff risk is minimized by assembling the most experienced team available to facilitate tracheal intubation in the safest manner requiring the least attempts.
- If required, additional airway support is obtained by calling the Anaesthetist in charge (FH- 8345 6540, SH- 9055 3021). The Anaesthetist in charge may be able to activate the COVID 19 Critical Care Outreach team (in and out of Hours). Separate guideline in development.
- Decision making in regards to suitability for escalation of care will be done by ED in consultation with hospital guidelines and ICU (for adults) or PIPER (for paediatrics) when required.
- As a general principle, the most experienced team available should be assembled.
- A proposed allocation of staff is shown on the table below divided into Ideal and preferred Substitute.

**Staffing Matrix mix for ED Intubation**

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airway Doctor</td>
<td>Emergency Physician/ <strong>Paediatric Emergency Consultant</strong> or most experienced doctor with airway experience</td>
</tr>
<tr>
<td></td>
<td>Performs upper airway intervention.</td>
</tr>
<tr>
<td>Airway Nurse</td>
<td>ED nurse (with mech vent accreditation)</td>
</tr>
<tr>
<td></td>
<td>To assist the Airway doctor, prepare equipment and monitoring, pass airway equipment and assist with BVM ventilation as required</td>
</tr>
<tr>
<td>Team Leader</td>
<td>Next most senior doctor available.</td>
</tr>
<tr>
<td></td>
<td>Coordinates team, manages drugs, and communicates with staff outside room as needed.</td>
</tr>
<tr>
<td>At least 2 additional staff (Scribe and Runner) situated in Anteroom in PPE</td>
<td>2 additional staff – at least one with resus experience.</td>
</tr>
<tr>
<td></td>
<td>Are able to source additional equipment from outside room, act as PPE “spotter”, scribe, and be able to enter room if requested.</td>
</tr>
</tbody>
</table>
6.4. Equipment

A standardized airway equipment box has been agreed on across all disciplines. (See separate Appendices for Adult and Paediatric specifics)

Important equipment information includes:

- ED will have a local store of 3 prepared boxes suitable for adult intubation available at each site.
  - Paediatric patients have prepared trays available at Sunshine.
- Suction and Yankeur sucker in each room are to be restocked and checked as per usual practice.
- A pre prepared BVM with bacterial/viral filter, etCO2, and licorice stick will be part of the equipment setup.
- The ED CMAC Video Laryngoscope will be used for intubations in ED.
- Standardised Cognitive Aids (see Appendices) will be visually displayed at all potential Intubation sites
- PPE will be provided and donned outside room.

Ventilator

- The ED Hamilton Ventilator will be used. Should the patient prove difficult to ventilate, an ICU ventilator (and appropriate staff to manage it) may be requested as per pre-COVID procedures.

The ED Hamilton Ventilator will be used for paediatric patients >20kg. If <20 kg, patients will require manual ventilation awaiting PIPER using a BVM or Neopuff.

Paediatrics

- To replace the airway equipment box, Sunshine ED is using a combination of a Paediatric Intubation Tray and a Broselow Trolley.
  - The Broselow trolley should not be taken into the intubating cubicle
- Equipment will need to be gathered as per the checklist, removed from the Broselow trolley and placed on a tray to take into the intubating cubicle.
- Paediatric Intubation Tray x 3:
  - Contents: Non size specific airway equipment and Checklist for equipment required from Broselow trolley
  - Location: inside Cubicle P1 Resuscitation Trolley, outside Cubicle P1 on Broselow Trolley, and in Cubicle 24 storage area.
- Broselow trolley x 1:
  - Contents: age/size specific airway/intubation adjuncts and equipment.
  - Location: Outside Cubicle P1
  - The Broselow trolley should not be taken into the intubating cubicle
Drugs (see Appendix for full details)

- Standardised sealed drug packs will be stored in ED and theatres as grab bags named “Emergency Intubation Pack”.
  - The induction agent in the pack is Ketamine.
  - The NMBA is Rocuronium
- Packs also include the required consumables.

- If a different induction agent or NMBA is required/requested by the physician leading the intubation, these can be obtained from regular stock (eg. Midazolam, Propofol, Suxamethonium).
- Vasopressors will be provided by ED as requested as part of the Pre-intubation outside room checklist.

- Packs will be stored within ED at the following locations.
  - Sunshine - Main safe
  - Footscray - Main safe

### Emergency Intubation Pack / Ketamine

<table>
<thead>
<tr>
<th>Induction Agent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ketamine 200 mg/2 mL x1</td>
</tr>
<tr>
<td>+ Sodium chloride 0.9% 10 mL x2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Paralysis Agent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rocuronium 50 mg/5 mL x3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consumables</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 mL luer lock syringe (clear) x1</td>
</tr>
<tr>
<td>Drawing up needle x1</td>
</tr>
<tr>
<td>Red plunger syringe 5 mL x3</td>
</tr>
<tr>
<td>19G needle x3</td>
</tr>
<tr>
<td>Rocuronium label x3</td>
</tr>
</tbody>
</table>
6.5. Indications for Intubation.

Prior to intubation, consider the goals of care;

- Is intubation appropriate? Involve the Emergency Physician in decision making where it is uncertain.
- Consider
  - Whether an Acute Resuscitation Plan (ARP) or Advanced Care planning document exists.
  - The patients Clinical Frailty Score.
- If applicable, refer to additional guidance from Western Health Ethical Decision Making Framework. (This will only come into effect if required, and will be provided to you as appropriate)

ICU/PIPER should continue to be notified EARLY for any patient at risk of requiring HDU/ICU level of care to facilitate early transfer when possible.

The indications for intubation remain similar to usual practice. The timing of intubation is challenging. Whilst early intubation was thought to be beneficial, this strategy may introduce additional risk and harms to the patient and is not currently recommended.

Consider intubation when;

- There is worsening hypoxia refractory to oxygen therapy.
- Rapid progression over hours
- Evolving hypercapnia, increasing work of breathing, increasing tidal volume, worsening mental status.
- Haemodynamic instability or multiorgan failure.
- **Decreasing GCS**
- **RR persistently within the Purple zone on Victor Charts**

If additional airway support is felt necessary, contact the In-Charge Anaesthetist as per usual practice.

FOOTSCRAY PHONE 8345 6540
SUNSHINE (All patients) PHONE 9055 3021
6.6. Intubation

6.6.1 Preparation – Pre Intubation Checklist

Checklist to be completed using cognitive aid (see Appendix – Intubation Checklist) both Inside and Outside room.

Airway equipment must be kept protected both pre and post intubation.
Ensure all used equipment is placed in a way to minimise the chance of cross contamination. This includes the laryngoscope and suction catheters that may contaminate surroundings.

Checks OUTSIDE ROOM.

- **TEAM**
  - Establish Team and roles.
  - Don PPE and Buddy Check.
  - Check communication device functioning.

- **PATIENT**
  - Review potential airway difficulties, medication history and allergies, past medical history
  - Ensure haemodynamics optimised and deterioration anticipated
  - Ensure IV access x 2

- **EQUIPMENT**
  - Setup airway trolley outside room.
  - Choose CMAC blade
  - Choose Induction/Paralysis drugs and doses.
  - Consider need for vasopressor.
  - Discuss and prepare post intubation plan including ventilator settings and sedation plan.

- **PLAN**
  - Discuss failed intubation plans.

Checks INSIDE ROOM

- Patient positioning (consider ramping)
- Turn CMAC on
- Ensure suction connected and on
- Connect monitoring
- Preoxygenate
- Confirm ETCO2
- Final checks.
6.6.2 Intubation

Preoxygenation

- Mask-filter-ETCO2-Laerdal bag with PEEP valve (set at 10 cm H2O).
- Tight fitting mask, with two-hand grip.
- 45 degrees head up.
- Apneic oxygenation is not recommended. If NIPPV already in use, NIPPV may be continued during induction until laryngoscopy.

Rapid Sequence Induction

- Modified RSI (1.2 – 1.5mg/kg IBW Rocuronium OR 1.5mg/kg TBW Suxamethonium).
- Wait 60 seconds for paralysis
- Avoid routine cricoid pressure
- 2-person gentle BMV during apnoea if severe hypoxia.

Intubation

- Use video laryngoscopy for first attempt at intubation.
- If bougie used, remove through gauze to contain droplet spread
- Inflate cuff prior to ventilating.
- Connect BMV, and confirm position with ventilator waveforms and capnography, as well as chest movement and auscultation.
- If failed intubation, process with planned rescue plans A suggested plan is as follows;
  - Plan B LMA (I-Gel in adults)
  - Plan C two handed BMV +/- OP Airway or NP Airway
  - CICO (Can’t Intubate, Can’t Oxygenate) algorithm approach if intubation fails.
    - Scalpel-bougie-tube technique (Adults, Paeds > 8yo)
    - Use needle, insufflator (Paeds < 8 years old)

Transfer to ventilator

- Prepare Inline suction if suctioning required.
  - Check that the inline suction is appropriately sized for ETT
  - Two paediatric sized inline suction catheters are available at Sunshine
    - 7Fr for ETT 3mm to 4mm
    - 10Fr for ETT 4.5mm – 5.5mm
- Turn off the oxygen flow to the self-inflating bag.
- Clamp the ETT using a chest drain clamp.
- Disconnect the ETT from the bacterial/viral filter.
- Take prepared circuit (including inline suction and filter) and connect to ETT.
- Unclamp ETT, turn ventilator on and commence ventilation.

Post-intubation

- Insert nasogastric tube (NGT) immediately post-intubation
- Patient may be moved outside of intubation room if required after 30 minutes post procedure
- Arrange CXR to confirm ETT and NGT placement
- Doff outside room/ante room (if not involved in transfer/ongoing direct care).
7. Williamstown Specific Intubation Guideline

Preparation for Intubation at Williamstown Emergency Department.

When the decision has been made by the Senior Medical Officer to intubate the suspected COVID patient and it is deemed medically unsafe to transfer patient without intubation the following process should be followed:

- **Negative Pressure Isolation Cubicle 6** is the preferred location for the intubation of suspected COVID patient. Patients to be taken directly from the Triage area to Cubicle 6 if possible to maintain isolation of suspected COVID patient.
- Area **outside of cubicle 6 to act as an anti-room** for preparation of staff and equipment both doors to remain closed at this time.
- **PPE to be donned** by all staff including yellow gown, N95 mask, full face shield and double gloves.
- Aprons also available for under the gowns and surgical caps. Full suit if preferred.
- **Nurse In Charge** to inform remaining staff of situation and delays, communicated to triage nurse with further communication to patients in the waiting room.
- **Patient to receive oxygen therapy** as required and IV access established including full septic work-up prior to intubation. Full PPE to be worn during this patient assessment period.

**Personnel/Staffing**

A delegation of Staff for Intubation team will allocated at beginning of each shift in preparation.

**Roles include:**

1. Team Leader/Airway Doctor,
2. Airway nurse
3. Anaesthetic drug administration role/ Second doctor or Senior nurse
4. Scribe
5. Runner (initially to collect all required equipment and then DON PPE to assist with intubation)

Scribe to remain outside cubicle 6 as PPE spotter and will communicate via monitor during the procedure. Scribe only to enter cubicle 6 if required for Resuscitation to bring Defibrillator into the cubicle. EMR drug chart to be completed following the procedure by medical staff. According to documentation by scribe.

**Equipment:**

Equipment to be set-up on three trolleys outside isolation cubicle will include:

- Intubation trolley including McGrath intubating equipment and iGels for airway rescue measures
- Intubation drug bag and IV Fluids with giving set.
- Hamilton’s ventilator with ventilator circuit, viral filter and in-line suction attached.
- Double Oxygen connector required in Cubicle 6 as only one oxygen outlet. (Spare oxygen cylinder also on trolley in cubicle 6 as backup.)
- Air-viva set-up with viral filter and ETCO2 tubing
• IV cannulation /Circulation trolley for access
• Cardiac monitoring equipment already set-up in Cub 6. ETCO2 module to be sourced from Resus cubicle at the time of Intubation.
• Art line, CVC line and IDC set-up in boxes outside Cubicle 6 for use as required.
• Resuscitation trolley including Defibrillator to remain outside Cubicle 6 for the duration of the Intubation unless required.
• Communication device/White board markers/Laminated RSI checklists/ASA flowcharts

Prepared trolleys to be taken into the isolation room at the time of the intubation by the Airway Doctor, Airway Nurse and Drug administrator once the pre-intubation checklists have been completed by the Medical Team Leader.

Intubation of patient

As per the guideline set out by Footscray and Sunshine ED/Safe Airway Australia.

• Following intubation the 30-minute aerosolisation settling period to be observed by intubation staff.
• Doffing of PPE to be observed by spotter staff on exiting the patient cubicle.
• All equipment cleaned as per protocol following the transfer of the patient.

Operational Considerations

• In the event of an intubation during business hours Nurse Unit Manager will assist on the floor.
• NIC to inform Access manager of procedure and need for patient transfer.
  o Post 14:30 or on the weekend/public holiday – the WTN AHA should be immediately notified of the intent or possibility of need to intubate. They will arrive and offer support to the department.
• Access Manager between 0800 and 1430 SH, post 1430 WTN to organise the ICU or critical care bed for patient that is being intubated.
• NIC to notify 000/MICA at the commencement of any intubation.
• CMO to handover to ICU staff in preparation for patient admission.
• AHA for assistance after 14.30 pm as required to manage department and transfer of patient.
• The CMO or senior ED clinician may override the clinical guidance as there is not an ED physician on call or attending.

NOTE: There is currently limited or no Anaesthetic support at Williamstown Hospital.
9. References


10. Sponsor
Clinical Service Director of Emergency, Medicine and Access

11. Authorisation Authority
Clinical Service Director of Emergency, Medicine and Access
12. Appendix A – COVID-19 Airway Trolley Contents List

Top Shelf

*Kit dump A3 laminated sheet (taped to left side of surface)*

*COVID-19 Airway Trolley A4 laminated sheet (taped to surface)*

*Dirty tray on the right*

**PLAN A - Intubation box**

- Bag-Valve Mask -
  - preassembled in following order
    - Bag Valve Mask
    - PEEP Valve (PEEP set to at least 10)
    - Liquorice Stick
    - In line etCO2
    - Bacterial/Viral Filter
    - Medium Sized Face Mask

- Laryngoscope handle
- Mac 3 and 4 blade (1 of each)
- Bougie 15Fr
- Stylet
- Cuffed ETT - Size 6, 7 and 8 (1 each)
- 10ml syringe
- Tube tie white tape
- Transpore tape or Sleek
- Lubricant sachet
- Forceps or clamp (for ETT) thoracic tube clamp
- Gauze Pack
- Salem Sump NG tube 14 Fr & spigot & lubricant & nasofix tape
- Inline/closed suction pack
- This contents list

_All connections to be twisted on insertion to ensure tight_
Bottom shelf

**Plan B - LMA box**
- Size 3, 4 and 5 igels (1 of each)
- Lube sachet

**Plan C – Bag Mask Ventilation and adjuncts box**
- Small/Medium/Large adult disposable facemask
- 80mm Green, 90mm Yellow and 100mm Red Guedel airways
- Size 6.0 nasopharyngeal airways x1
- Size 7.0 Nasopharyngeal airway x 1
- Lube sachet

**Plan D – Surgical Airway Box**

*For CICO (Can’t Intubate, Can’t Oxygenate) scenarios*

- Disposable size 10 scalpel
- Bougie 15Fr
- Size 6 ETT
- 10 ml syringe
- Chlorhexidine swab
- Gauze
### 13. Appendix B – COVID Intubation Box Content Visual

#### FED: COVID INTUBATION BOX CONTENTS

**Use alongside Kit Dump poster**

**TAPED TO TOP OF BOX:**
- Preassembled BVM (see photo)
- BVM + PEEP valve +Liquorice stick + Inline Capnograph +
- Viral filter (see photo outside BAR)

**In separate labelled snap lock bags:**
- Plan A, B, C, D, Post-intubation, Circulation
- **Other:** Whiteboard marker, Bluey x2 (at top)

### PLAN A – Primary Strategy

- Laryngoscope Handle
- Laryngoscope blades: size 3 and 4
- Cuffed ETT: Size 6, 7 and 8
- Introducer/Stylet
- Bougie
- Lubricant sachet
- 10ml syringe x 2
- ETT tie + ETT Sleek tape
- ETT clamp (ICC tube clamp)
- Inline suction
- Gauze pack
- Extra viral filter

### PLAN B - Supraglottic

- LMA (iGel): size 3, 4 and 5
- Lube sachet

### PLAN C - BVM

- Small/Medium/Large Adult disposable facemask
- OP Airway (Guedel): Size 2, 3, and 4
- NP Airway: size 6 and 7

### PLAN D CICO

- Scalpel (long)
- ETT size 6.0
- Gauze pack

**Post Intubation**
- NGT + Lube + Bag + 60ml syringe + Valve + Nose sticker
- Giving set for ongoing sedation

**Circulation**
- 1x IV cannula insertion pack (20g + 18g)
14. Appendix C – ED Bag Valve Mask Set up. (Poster)

- Bag Valve Mask
- PEEP Valve (PEEP set to at least 10)
- Liquorice Stick
- etCO2
- Bacterial/Viral Filter
- Medium Sized Face Mask

*All connections to be twisted on insertion to ensure tight*
## Appendix D - Intubation Checklist

### Emergency COVID-19 Intubation Checklist

**Checks Before Entering Room or Cubicle**

<table>
<thead>
<tr>
<th>TEAM</th>
<th>PATIENT</th>
<th>EQUIPMENT</th>
<th>PLAN</th>
</tr>
</thead>
</table>
| ✗ Anaesthesia contacted if concerns?  
Footscray - 83456540 | ✗ Difficult airway anticipated?  
✧ Pre-oxygenation method?  
✧ Haemodynamics optimised?  
✧ Monitoring working?  
 ETCO₂, SpO₂, BP  
✧ IV access x2?  
 Fluid on pump set | ✗ Drugs drawn up & doses chosen?  
 Induction drugs  
 Vasopressors  
 Post-intubation sedation (Paeds- use Monash Book for weight-based doses)  
✧ Intubation equipment ready?  
 Laid out as per kit dump  
 ETT size chosen, tested  
 BVM with filter checked  
✧ C-MAC?  
✧ Ventilator settings? | ✗ Plans discussed?  
 Plan A – VL Intubation with bougie/stylet  
 Plan B – iGel  
 Plan C – BVM (2 person with OPA/NPA)  
 Plan D – surgical airway  
✧ What is the trigger to move to Plan B?  
✧ Any questions or concerns?  
 VL = videolaryngoscope |

### Final Checks at Bedside

| ✗ Patient position optimal?  
 Head up, ear-to-sterne notch | ✗ CMAC on?  
✧ Pre-oxygenation optimal?  
 BVM, good seal confirmed with ETCO₂ trace  
✧ Everyone ready?  
✧ Remember to DOFF safely with buddy check!  
✧ ETCO₂ trace? |
16. Appendix E - COVID 19 Intubation Team Kit dump poster.
17. Appendix F Anaesthetic Medication Intubation Packs

Emergency Intubation Packs

General principles

- Tamperproof bags are to be used for storing medications required in each pack. These can be ordered via FMIS when needed (see below)
- The packs are to be stored in the S8 medication safe and accounted for in the designated S8 medication register
- The packs should be included in the Balance Check at each shift change as usual

Pack contents / labelling

<table>
<thead>
<tr>
<th>Emergency Intubation Pack / Ketamine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Induction Agent</strong></td>
</tr>
<tr>
<td>• Ketamine 200 mg/2 mL x1</td>
</tr>
<tr>
<td>+ Sodium chloride 0.9% 10 mL x2</td>
</tr>
<tr>
<td><strong>Paralysis Agent</strong></td>
</tr>
<tr>
<td>• Rocuronium 50 mg/5 mL x3</td>
</tr>
<tr>
<td><strong>Consumables</strong></td>
</tr>
<tr>
<td>• 20 mL luer lock syringe (clear) x1</td>
</tr>
<tr>
<td>• Drawing up needle x1</td>
</tr>
<tr>
<td>• Red plunger syringe 5 mL x3</td>
</tr>
<tr>
<td>• 19G needle x3</td>
</tr>
<tr>
<td>• Rocuronium label x3</td>
</tr>
</tbody>
</table>
Making up a pack

1. Sign out ketamine from the S8 medication register - 2 RNs required as per hospital policy
   a. Entry to be noted as “for emergency intubation pack”
   b. The unique tamperproof bag number should be noted in the UR number column
2. Collect other required medications and consumables for the pack
   a. Out of fridge date for Rocuronium to be marked on the ampoule as usual
   b. Place separately in a plastic zip lock bag (from pharmacy)
      i. Rocuronium stickers to also be placed in the plastic zip lock bag
3. All medications and consumables to be placed in tamperproof bag and sealed
   a. Place labels on the bag, which lists the contents of the bag
   b. Consider measures required to safely store ampoules e.g. within a vial or with padding
   c. Write out of fridge date of Rocuronium on tamperproof bag - easier to visualise expiry and reduces unnecessary handling of each pack (Rocuronium has 3month expiry out of the fridge)
   d. Date packed and initials of those making up the pack to be noted on label
4. Sign the pack into the register
   a. Signed in as 1 unit for each pack
   b. Unique tamperproof bag number is to be recorded in the medication section at the top of the column
5. For each C+C, each pack is to be accounted for by checking that the bag number in the safe corresponds with what is entered in the register

Signing out packs for intubation purposes

1. The required pack(s) are to be signed out of the register when required
2. If unused, any remaining packs are to be signed back into the register at the earliest possible opportunity
   a. If a pack has been used, the UR for the patient it was used for is to be written against the entry used for signing the pack out. This should be recorded under the discards/comments column, along with any associated discards per legislative requirements

Accountability

For accountability purposes, staff performing the C+C must also check previous entries in the register (until the last C+C) to ensure that the packs signed out have either been:
- Signed back in if unused
- Matched with a UR number to confirm that the packed was used for patient intubation

If a pack cannot be accounted for:
- The persons who have signed out the unaccounted for pack must be contacted to account for the pack and ensure the necessary documentation

If the pack remains unaccounted for, a Riskman must be completed with subsequent follow up in accordance with OP-GC6 Medication Prescription, Supply, Storage and Administration procedure.
# Appendix H Paediatric Airway Tray (Sunshine ED)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SOURCE</th>
<th>NOT IN ROOM</th>
<th>IN ROOM P1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laryngoscope Handle</td>
<td>Broselow Trolley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laryngoscope Blades sized for patient</td>
<td>Broselow Trolley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cuffed ETT sized for patient</td>
<td>Broselow Trolley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bougie sized for ETT</td>
<td>Broselow Trolley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stylet sized for ETT</td>
<td>Broselow Trolley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supraglottic airway sized for patient</td>
<td>Broselow Trolley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BVM (Bag Valve Mask) sized for patient and tubing</td>
<td>From Shelf in P1 or Broselow Trolley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paed CMAC</td>
<td>In Room</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMAC Blades: Miller #0, Mac #2</td>
<td>Trolley P1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-line suction catheter sized for ETT</td>
<td>Trolley P1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7Fr = ETT 3mm - 4mm;</td>
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<td></td>
<td></td>
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<tr>
<td>10Fr = ETT 4.5mm - 5.5mm</td>
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<td></td>
</tr>
<tr>
<td>NGT, drainage bag, 20ml syringe, valve, Litmus paper,</td>
<td>Tray (in NGT Bag)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sticker for nose</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>10ml syringe X2</td>
<td>Tray</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tube tie / trache tape</td>
<td>Tray</td>
<td></td>
<td></td>
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<tr>
<td>Sachet lubricant</td>
<td>Tray</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oropharyngeal and nasopharyngeal airways</td>
<td>Tray</td>
<td></td>
<td></td>
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<tr>
<td>Needle cric kit for children under 8 years + scalpel</td>
<td>Tray</td>
<td></td>
<td></td>
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<tr>
<td>for larger patients</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Viral filter</td>
<td>Tray</td>
<td></td>
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<tr>
<td>Yankauer sucker</td>
<td>Tray</td>
<td></td>
<td></td>
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<tr>
<td>In line CO₂ monitor</td>
<td>Tray</td>
<td></td>
<td></td>
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<tr>
<td>Gauze</td>
<td>Tray</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clamp</td>
<td>Tray</td>
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<td></td>
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<tr>
<td>Remember</td>
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<td></td>
</tr>
<tr>
<td>• Options</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o Ketamine 1-2 mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o Rocuronium 1mg/kg or Suxamethonium 2mg/kg</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>o Metaraminol 10microg/kg or Adrenaline 1mcg/kg (follow Monash book “push dose pressors” dilution)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o Atropine 20mcg/kg</td>
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<tr>
<td>• Use the Monash Book outside the closed room prior to</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>intubation to confirm doses, dilutions and to assist</td>
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<td></td>
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<tr>
<td>in planning</td>
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</tbody>
</table>