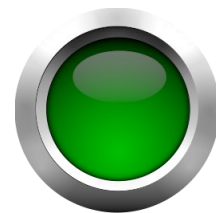


# Prehospital emergency anaesthesia SOP

QPI

Further reading

AAGBI—Safer Prehospital Anaesthesia 2017  
Prehospital anaesthesia handbook 2016  
PHEA checklist



## Related SOPs

Paediatric PHEA SOP      Traumatic brain injury SOP      Post intubation & ventilation SOP  
Front of neck access SOP      Low output state in trauma SOP

## Indications for PHEA

1. Actual or impending airway compromise
2. Respiratory failure
3. Unconscious or severely agitated/unmanageable patients
4. Humanitarian reasons to ease suffering, particularly in multiply injured patients

A risk:benefit analysis should be considered for every potential PHEA case.

## Patient access

**Optimise patient access.** Do not attempt to perform PHEA in confined/cramped conditions. 360 degree access with the patient at waist height is ideal if possible, but consideration of all factors (timing, weather, privacy) is important.

## Monitoring

Monitoring should ideally be performed on our own Corpuls device from the earliest opportunity. If an alternative monitor has to be used, GNAAS crew must be familiar with its functions and obtain a summary printout for our own records. Minimum standards as per the Association of Anaesthetists guidelines apply:

- ECG and heart rate
- SpO<sub>2</sub>
- NIBP (every 3 mins)
- EtCO<sub>2</sub>

# Prehospital emergency anaesthesia SOP

## Checklist

Preparation for PHEA should be automatic and standardized. The challenge: response checklist must be completed prior to induction of anaesthesia. In certain time-critical circumstances such as hypoxic low output state, the B-plan checklist may be appropriate. The A-plan checklist may then proceed after successful intubation.

### PHEA 6 phases

#### Preoxygenation

- For highest FiO<sub>2</sub>, use Mapleson circuit rather than BVM or facemask
- If SpO<sub>2</sub> remains low, consider ventilatory support/PEEP

#### Preparation

- <C>ABCDE assessment *“resuscitate before you intubate”*
- Patient and team positioning
- Kit dump and drugs

#### Premedication

- Consider ketamine (0.5mg/kg) or midazolam (0.05mg/kg) in agitated patients. Early fentanyl is advocated in isolated TBI.

#### Paralyse and sedate

- Drugs/doses
- Consider cricoid pressure
- Provide gentle ventilations once patient is apnoeic

#### Passage of endotracheal tube

- Use bougie as standard

#### Post intubation care

- Cuff up, confirm placement, note ETT length and secure
- Repeat patient observations
- Ongoing sedation

# Prehospital emergency anaesthesia SOP

## Drugs and doses

Drug doses must be tailored to the individual patient and circumstances. Always consider reducing or omitting the dose of fentanyl in patients with hypovolaemic trauma and the elderly/frail, where it will cause post-intubation hypotension. In some situations, higher doses of induction agents may be required (e.g. SAH, isolated TBI, burns, status epilepticus)

**\*\*Formulae are for guidance only\*\***

### ***Haemodynamically stable patient*** 1:2:1

Fentanyl 1mcg/kg, Ketamine 2mg/kg, Roc 1.2mg/kg

### ***Unstable Patient*** 0:1:1

Ketamine 1mg/kg, Roc 1.2mg/kg

### ***Peri-arrest Patient***

In rare circumstance where it is judged that the administration of induction agents will precipitate cardiac arrest in a GCS 3, low-output-state patient, a rocuronium-only intubation may be appropriate. However it is vital to consider the need for some sedation as the resuscitation progresses.

Following induction, once the patient stops breathing for themselves, gentle manual ventilations should be performed until the first intubation attempt (45-60 seconds). Once the trachea is intubated, the tube position is checked by the following:

- Direct observation of tube passing through cords
- Capnography
- Chest movements
- Auscultation in both axillae

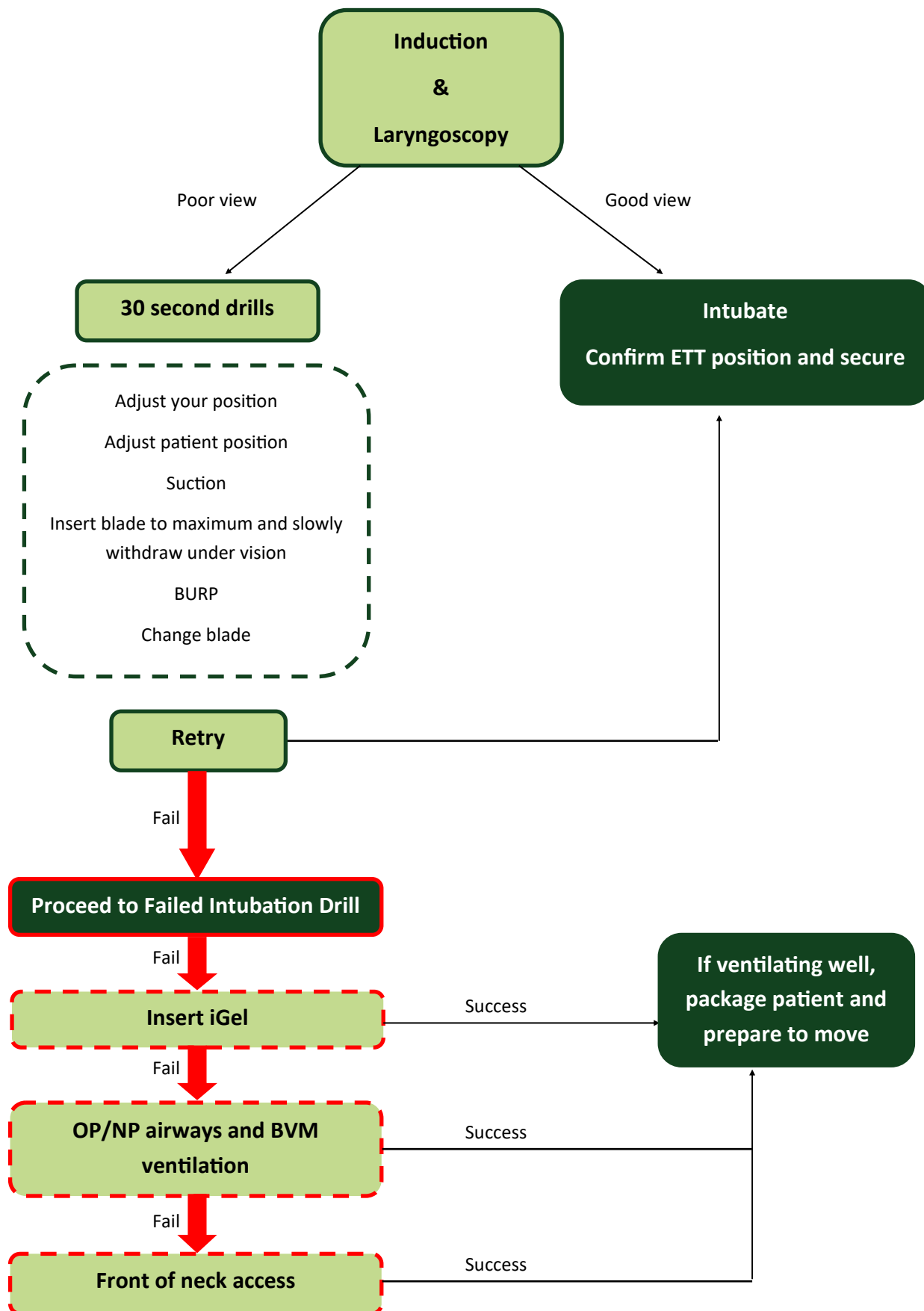
The length of tube at the top incisors should be noted.

When an adequate view of the vocal cords cannot be obtained the '30 second' drills should be carried out. They are named to indicate that they should be completed swiftly, long before a normal pre-oxygenated patient starts to desaturate.



# Prehospital emergency anaesthesia SOP

## Intubation Algorithm





# Prehospital emergency anaesthesia SOP

## Prehospital Emergency Anaesthesia A Plan Checklist

**TO BE USED IN ALL CASES REQUIRING PREHOSPITAL EMERGENCY ANAESTHESIA OTHER THAN THOSE INDICATED FOR B PLAN BELOW**

### Challenge

**Pre-oxygenation**

O<sub>2</sub> cylinder >50% & O<sub>2</sub> backup

**Bleeding** controlled

**TXA** given if required

**Patient positioning** – 360° access, Stretcher

**IV/IO x2** connected to fluid and running easily

**Suction unit** working and positioned

**Back up suction** available if required

**Patient monitor** on and connected

**BVM / Mapleson** available

**Ventilator** working and set up

**Drugs**

Pre-medication?

Fentanyl dose, if required

Induction agent dose

Rocuronium dose

Maintenance drugs and dose

**Laryngoscopes:** 2 blade sizes working and spare

**Bougie** ready

**ETT** size chosen and tested, backup available

**10ml syringe**

**Catheter mount** connected to HME filter ready

**Tube tape** available – consider tie

**Capnography**

**Stethoscope**

**Airway adjuncts** – OPA and 2 NPA available

**IGel** – size chosen and available

**Emergency Surgical Airway** kit available

**Brief** 30 second drills and failed intubation plan

**Team positioning and brief** (Drugs, MILS, Cricoid)

### Response

Check

Check

Check

Check

Check

Check

Check

Check

Check

Check

Check

Yes/No

Check

Check

Check

Check

Check

Check

Check

Check

Check

Check

Check

Check

Check

Check

Check

Check

Check



# Prehospital emergency anaesthesia SOP

## Prehospital Emergency Anaesthesia B Plan checklist

**TO BE USED IN ACTUAL OR IMPENDING CARDIAC ARREST WHERE SECURING THE AIRWAY & DELIVERY OF OXYGEN IS THE PRIMARY CONCERN**

### Challenge

### Response

Oxygen	Check
BVM / Mapleson	Check
IV access	Check
Laryngoscope	Check
Bougie	Check
ETT	Check
Capnography	Check

**NEW STABILISING FACTORS IN PATIENT CONDITION?**

**REVERT TO A PLAN**

**THE REMAINDER OF THE A PLAN CHECKLIST  
MUST BE COMPLETED AT THE EARLIEST  
OPPORTUNITY POST INTUBATION**