

SCGH Emergency Department Intubation Checklist

Prepare Patient

- ☐ Is emergency intubation really required?
- ☐ Should this be an awake fiberoptic intubation?
- ☐ Good IV access with running lines?
- ☐ Is the patient's position optimal?
- ☐ Is preoxygenation optimal?
- ☐ Can the patient's condition be optimised any further before intubation?
- ☐ How will anaesthesia be maintained after induction?

Prepare Equipment

- ☐ What monitoring is applied?
 - ☐ ECG
 - ☐ Blood pressure
 - ☐ +/- Arterial line
 - ☐ Sats probe
 - ☐ Capnography
- ☐ What equipment is checked and available?
 - ☐ Self-inflating bag
 - ☐ Suction
 - ☐ 2 ET tubes
 - ☐ 2 laryngoscopes
 - ☐ Video laryngoscope
 - ☐ Stylet & bougie
 - ☐ Difficult airway trolley
- ☐ Do you have all the drugs required, including vasopressors?
 - ☐ Check allergies

Prepare Team

- ☐ Who is ...?
 - ☐ Team leader
 - ☐ First intubator
 - ☐ Second intubator
 - ☐ Cricoid pressure / Laryngeal manipulation
 - ☐ Airway Nurse
 - ☐ Giving Drugs
 - ☐ In-line stabilisation (if indicated)
- ☐ How do we contact further help if required?
 - ☐ ED Duty cons 7255
 - ☐ DA ext 1242
- ☐ Discuss the plan with the team
 - ☐ Initial plan
 - ☐ Visualise and discuss the failed airway algorithm

Prepare for Difficulty

- ☐ If the airway is difficult, could we wake the patient up?
- ☐ Are any specific difficulties anticipated?
 - ☐ BMV / ETT / LMA
 - ☐ Articulate plan
 - ☐ Oxygenation
 - ☐ Articulate plan
 - ☐ Haemodynamics
 - ☐ Articulate plan
 - ☐ Metabolic abnormality
 - ☐ Articulate plan
 - ☐ Intracranial pressures
 - ☐ Articulate plan

SCGH Emergency Department Useful References

Pretreatment

3 – 5 minutes prior to intubation

- **Fentanyl** 3mcg / kg
 - for High ICP / Vascular (eg dissection) / preeclampsia or eclampsia with elevated BP
- Consider **Lignocaine** 1.5mg / kg
 - for High ICP / Vascular with elevated BP

Immediate “push dose” Inotrope or Vasopressor

- Adrenaline 10mcg/ml = 1:100000; dose 0.5-2ml (5-20mcg as required 1-5 minutely)
 - In 10ml syringe draw up 9ml normal saline; now draw up 1ml of **1:10000** adrenaline (from prefilled syringe) and shake = 1:100000.
 - Label syringe “Adrenaline 10mcg/ml”; discard the other syringe.
- Metaraminol 0.5mg/ml; dose 1-2ml (0.5-1mg as required 2-5 minutely)
 - In 20ml syringe draw up 19ml normal saline; now draw up 1ml of 10mg/ml Metaraminol and shake
 - Label syringe “Metaraminol 0.5mg/ml”

Intubation Drugs

	Drug	Normotensive dose	Normotensive dose in 70kg patient	Hypotensive dose
SEDATION	Ketamine	2mg/kg	140mg	0.5mg/kg
	Thiopentone	3-5mg/kg	300mg	0.5-1mg/kg
	Propofol	1.5-3mg/kg	150mg	0.2mg/kg
PARALYSIS	Suxamethonium	1.5-2mg/kg	100mg	2mg/kg
	Rocuronium	For RSI 1.2mg/kg	85mg	1.6mg/kg
	Sugammadex	16mg/kg reversal of rocuronium 2min post administration	1120mg As 100mg/ml solution In 2 or 5ml vials	16mg/kg

Contraindications to Suxamethonium

- Malignant hyperthermia history
- Strokes with hemiparesis > 72 hours
- ICU stay > 2 weeks
- Burns / trauma > 72 hours
- NMJ disease
- Myopathies / Muscular dystrophies
- Hyperkalaemia (known or suspected)
- Guillain-Barre
- Penetrating eye injury and acute glaucoma

Initial ventilator settings

Adjust as per clinical & ABG assessment
Seek ICU advice if any concerns

Settings	Normal Lungs	Asthma / COPD	ARDS /ALI type lungs	Severe metabolic acidosis	Severe Head Injury
Mode	Volume	Volume	Volume	Volume	Volume
Vt ml/kg IBW	6-8	5-6	6	8-10	6-8
RR	16	8-10	16	20	16
PEEP	5	2 - 3	5 - 10	5	5
I:E ratio	1:2	1:4	1:1.5	1:2	1:2
FiO2	Start at 100% and titrate down rapidly ideally achieving FiO2 0.4				
Notes	Maintain homeostasis and avoid lung injury	Watch for breath stacking, & barotrauma Consider permissive hypercapne	Watch pressures; may need to lower Vt and accept higher CO ₂ Titrate FiO ₂ & PEEP	Maintain respiratory compensation for acidosis	Avoid high PEEP Aim PCO ₂ 35-40

Initial post intubation analgesia / sedation infusions

Infusion	Dose	Mixer	Bolus	Rate	Indication
Morphine & Midazolam	50mg 50mg	50ml NS	0.05 ml/kg	0.05-0.1 ml / kg / hr 70kg adult = 7 ml/hr	Maintain analgesia & sedation
Propofol	50ml = 200mg		0.5 mg / kg	20mcg/kg/min 70kg adult = 8.4 ml / hr	Stable, with severe neurologic injury
Ketamine	200mg	10ml NS	1mg/kg	0.5mg/kg/hr	Unstable

This checklist is for informational purposes only.

ALL information must be vetted with your clinical judgment, pharmacy and hospital committees & regulations

SCGH Post Intubation Checklist

Airway & ETT care

Breathing and Ventilator

Circulation & Fluid balance

Other

- ☐ Continuous EtCO₂
- ☐ Check tube depth
(usually 22cm female;
24cm male)
- ☐ Check cuff pressure
(20-30cm H₂O)
- ☐ Secure ETT (tie unless
raised ICP – then tape)
- ☐ OGT / NGT inserted
and stomach aspirated
- ☐ Eye care initiated

- ☐ Check ventilator
settings
- ☐ Order and check
CXR
- ☐ Check ABGs
- ☐ Head of bed to 30° up
- ☐ Recheck ventilator
settings adjusting as
per serial ABGs
- ☐ Oral suction and
decontamination

- ☐ Check IV access;
consider arterial line
+/- CVC
- ☐ All monitoring still
attached
- ☐ Fluids and blood
products selected
and documented
- ☐ IDC unless
contraindicated
- ☐ Consider DVT
prophylaxis

- ☐ Adequate sedation, analgesia
and paralysis
- ☐ Temperature optimisation
- ☐ Specific treatment commenced
e.g. antibiotics, dressings etc
- ☐ Property secure
- ☐ Family / NOK aware
- ☐ Documentation complete –
procedures, drugs, infusions,
notes all complete
- ☐ Prepare for transfer

Delayed Sequence Intubation (DSI) Guidelines = Optimise the hypoxic agitated patient pre RSI

AIM:

To optimise the patient prior to intubation particularly in the face of hypoxia and / or agitation

Position

- Semi-recumbent 20° head up (higher if more comfortable for pre oxygenation phase)
- Ramp patient's head, ear to sternal notch

Nasal cannula & non-rebreather

- Nasal cannula 10 liters per minute
- Well fitted NRBM maximal flow

Consider Ketamine for agitation

- First dose according to pt condition, average 1mg / kg slow IV push
- If indicated consider gastric decompression (NG tube)

Consider CPAP for hypoxia

- Use CPAP if sats <95%, aiming for >95%
- Titrate PEEP 5-15cm H₂O depending on haemodynamics and oxygenation
- or BVM with PEEP valve 5-15cm H₂O – need 2 hand mask seal

Wait

- Allow 3 minutes breathing at tidal volume or 8 maximal breaths
- Can you optimise patient further preintubation – consider other pretreatment drugs, need for fluids or blood, and need for inotropes and vasopressors

Induction

- Does the patient still need intubation?
- Give sedative-hypnotic and paralysis

Apnoeic Oxygenation

- Jaw thrust to maintain pharyngeal patency
- Nasal cannula flow to 15 l / min
- If needed CPAP or BVM with PEEP valve, consider leaving on until paralysed (≈45 secs)

Intubate

- Leave nasal cannula on throughout airway management period

NOTES

- Always use your clinical judgment
- No single “recipe” fits everyone
- All patients should be optimally prepared pre-intubation
- Consider contraindications to the various elements of DSI including:
 - cardiac and respiratory arrest
 - spinal trauma
 - facial trauma
 - severe head injury
- Consider possible complications including:
 - CPAP - aspiration and gastric distension
 - Ketamine – may cause raised ICP, laryngospasm

References

1. Weingart SD. Preoxygenation, reoxygenation, and delayed sequence intubation in the emergency department. J. Emerg. Med. 2011 40;6:661-667
2. Kunzler, M. Protocol Name: Delayed Sequence Intubation Respiratory Therapy Urban Central Region Protocol.
<http://prehospitalandretreivalmedicine.files.wordpress.com/2012/06delayed20sequence20intubation20foral20protocol5b15d-1.pdf>
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This is not intended to be a comprehensive guide and is not to replace clinical judgment

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