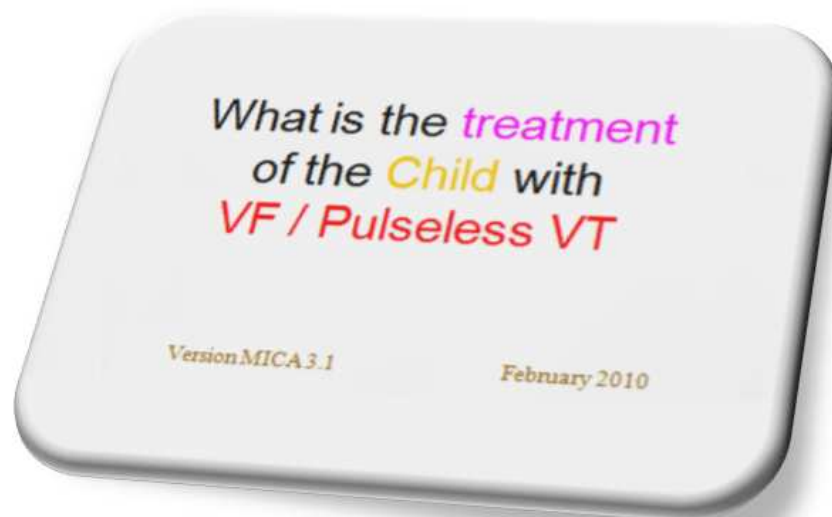


VICTORIAN
CLINICAL PRACTICE GUIDELINES
MICA
STUDY CARDS



READ BEFORE USE

The study cards provided in this booklet are designed as a learning tool to assist in highlighting the major points of each MICA guideline as found in the May 2009 Victorian Ambulance Service Clinical Practice Guidelines. These cards must not be used as a replacement to the Clinical Practice Guidelines, but rather as an adjunct to assist in their learning.

To assemble the study cards, this booklet should be printed double sided (printer setting - duplex) and in colour to highlight important components of each guideline. Following printing, laminate and cut out each card.

The author accepts no responsibility for any errors in these cards and cannot be held liable for any issues arising from their use. In using these cards, the user accepts all liabilities arising from their use.

What are the
Child
Drug ETT Dilutions

Version MICA 3.0

30 August 2009

What are the
Child
CPR Rates

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **conscious Adult**
with
Non Cardiogenic APO

Version MICA2.1

July 2008

What is the **criteria** for giving
Adrenaline Nebules
in
Croup

Version MICA 3.0

30 August 2009

What are the
Contraindications
of
IO

Version MICA 3.0

30 August 2009

What are the
Precautions
of
IO

Version MICA 3.0

30 August 2009

What is the **ETT drugs**
doses
of the **Child**
for
Atropine & Adrenaline

Version MICA 3.0

30 August 2009

What are the
Complications
of
IO

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **conscious Child**
with
Hypothermia

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Child** with
Hyperthermia

Version MICA 3.0

30 August 2009

Unitubated

- 30 : 2 (100 compressions per min) Single Rescuer
- 15 : 2 (100 compressions per min) Two Rescuers
Pause for ventilations

Once intubated/LMA

- Maintain compression rate 100 per minute
- Do not exceed 14 ventilations per minute
NO Pause for ventilations

Croup with Signs of hypoxia:

- Agitated
- Distressed
- Cyanotic
- hypoxia
- Decreasing SPO2 <92% on air
- Use of accessory muscles

Care should be taken
not to inject air

Beware of extravasation

Necrosis of surrounding soft
tissue due to extravasation

Infection of bony tissue

- Assess Temp with thermometer
- Access RBG if ACS & manage hypoglycaemia
- O₂ (100% with IPPV if airway adjunct required)
- Cooling Techniques (to keep temp <38°C)
- Shelter from heat
- Strip to underwear
- Tepid water spray or towels
- Manage hypovolemia with cooled fluids if avail
- Position flat or lateral (avoid head up)
- Gentle handling
- If >39.5 after 10 mins ACS <10,
- Urgent Transfer - Time critical

Newborn 1 ml

Small Child 5 ml

Large Child 10 ml

- Clinical evidence
- If Mild to Moderate SOB
- Ventolin 10 mg Neb x 1
- Ventolin 5 mg Neb every 5 min as required
- If Severe SOB or nil response 10 Min Vent
- Ventolin Neb every 5 min as required
- Atrovent 500 mcg Neb with Ventolin Nebs
- Salbutamol 250 mcg IV x 1
- Salbutamol 125 mcg IV x 2 at 5 min interval
- Dexamethasone 8 mg IV x 1`
- Ventolin Infusion

Any part of the limb is
traumatised or infected

Proposed site cannot be
adequately cleaned

• Adrenaline 100 mcg/kg

• Atropine 30 mcg/kg

- Shelter from cold
- Remove damp or wet clothing. Gently dry
- Assess Temp with thermometer
- Gentle handling
- RBG & manage hypoglycaemia if required
- Oxygen
- Cocoon pt in warm blanket & cover head
 - Then cover with space blanket / plastic
 - Then cover with warm blanket
- Warm NaCl IV 10 ml/kg (37-42C) and repeat as required (max 40 mls/kg)
- Avoid drug Mx of cardiac arrhythmias unless decompensated & until rewarming commenced

What is the **treatment** of the **Conscious Adult** with an **SVT** and **Symptomatic**

Version MICA 3.0

30 August 2009

What is the **treatment** of the **Adult** with an **altered conscious state & inadequate perfusion** with an **SVT**

Version MICA 3.0

30 August 2009

What is the **treatment** of the **Adult** with **Ventricular Tachycardia**

Version MICA 3.0

30 August 2009

What is the **treatment** of the **Adult** with **Accelerated Idioventricular Rhythm**

Version MICA 3.0

30 August 2009

What is the **treatment** of the **Adult** with **Cardiogenic Shock**

Version MICA 3.0

30 August 2009

What is the **treatment** of the **Adult** with **Inadequate Perfusion Post GTN & EDA administration**

Version MICA 3.0

30 August 2009

What is the **treatment** of the **Adult** with **Hypovolemia**

Version MICA 3.0

30 August 2009

What is the **treatment** of the **Adult** with **Non Cardiogenic Hypovolemia**

Version MICA 3.0

30 August 2009

What is the **treatment** of the **Adult** with **Non Meningococcal Sepsis**

Version MICA 3.0

30 August 2009

What is the **treatment** of the **Adult** with **Cardiogenic Acute Pulmonary Odema**

Version MICA 3.0

30 August 2009

- Exclude Sinus Tachycardia
- Pads Front (Apex) / Back (Sternum)
- Midazolam 2.5 mg IV every 2 mins until ... nil verbal stimuli ... but does have pain response
- Sync 75 J
- If unsuccessful 150 J as required
- Transport and treat as required

If adequate perfusion...

- General care & transport

If less than adequate perfusion...

- If ventricular rate > 100 treat for VT
- If ventricular rate < 60 treat for Brady
- If ventricular rate between 60 to 100, give NaCl 250 ml IV x 2

If no perfusion...

- Treat as for PEA

- Clinical Approach
- Consider other causes
 - arrhythmias
 - pain
 - hypovolemia

If Inadequate to Extremely Poor Perfusion

- Aramine 0.5 mg IV given over 1 min Give every 2 mins (max 5 mg)
- Consult if no response

- Clinical Approach
 - If hypotensive - NaCl 20 ml/kg IV x 3
- If effect & BP>100 or P<100, consider **Slowing Fluid**

Inadequate to extreme poorly perfused continues despite first dose NaCl 20 ml/kg

- Continue NaCl IV and give Adrenaline Infusion (3 mg/50 ml NaCl) beginning at 5 mcg/min (5ml/hr) increasing 2 minly
- If no Infusion Adrenaline 10 mcg IV at 2 min increment - May require incremental doses up to 50-100 mcg

No SOB & Basal Crackles only

- General Care & Transport

SOB & Basal or Mid Zone Crackles

- GTN Patch if BP>90 WITH
- GTN Tablet if BP>110 (every 5 min)
- Lasix 20-40 mg IV x 1
- If no improvement, tx as for full field crackles

SOB & Full Field Crackles

- GTN as above (every 5 min)
- CPAP if available
- Lasix 40 mg or daily dose as single dose (max 100 mg)
- Morphine 1 - 2 mg IV if alert & anxious
- Ventolin if previous Hx of bronchospasm, otherwise avoid

- Clinical Approach
- Ensure not wide (ie VT)
- Sync 75 / 150 J if unconscious at any time
- Attempt Valsalva

If BP>100 & Transport time > 30 mins

- Verapimal 5 mg IV x 1 over 1 min
- Verapimal 1 mg IV every 1 min (max 10 mg)

If BP<100 & Inadequate Perfusion > 30 mins

- Aramine 0.5 mg IV every 2 min (max 5 mg)

- Clinical Approach

If VT persist > 30 seconds.....

- Amiodarone 5 mg/kg IV (max 300 mg) given over 10 - 20 minutes once only

If unstable or inadequate perfusion - Sync

- Midazolam 2.5 mg IV every 2 min until ... nil verbal stimuli ... but does respond to pain
- Sync 150 J, repeat as required
- Amiod infusion as above if narrow complex

- Manage other causes (arrhythmias, pain, Hypovol)

If inadequate to extreme poorly perfused

- If chest clear
 - NaCl 250 ml x 2 (max 20 ml/kg)
 - If unchanged, continue NaCl IV and give Adrenaline Infusion
- If crackles present, give Adrenaline Infusion (3 mg/50 ml NaCl) beginning at 5 mcg/min (5ml/hr) increasing every 2 min as required
 - Reassess at 50 mcg then continue if required
- If no Infusion, Adrenaline 10 mcg IV every 2 min
 - May require incremental doses up to 50-100 mcg
- If chest clear continue NaCl 250 ml (max 20 ml/kg)

- Control life threatening bleeding
- Pain relief
- Immobilise & support fractures
- Exclude Tension Pneumothorax
- Manage hypoxia

Then

- P<100 & BP>100 ... Nil Fluid
- P>100 & BP>100 ... NaCl 20 ml/kg IV
- P>100 &/or BP<100 ... NaCl 20 ml/kg IV
- BP<100 Supine & NaCl 20 ml/kg IV (Max 40 ml/kg without consultation)

If effect BP>100 or P<100, consider **Slowing Fluid**

- Clinical Approach
 - If hypotensive - NaCl 20 ml/kg x 3
- If effect & BP >100 or P <100, consider **Slowing Fluid**

Inadequate to extreme poorly perfusion continues despite first dose NaCl 20 ml/kg

- Continue NaCl IV and give Adrenaline Infusion (3 mg/50 ml NaCl) beginning at 5 mcg/min (5ml/hr) increasing 2 minly
- If no Infusion, Adrenaline 10 mcg at 2 min increments
 - May require incremental doses up to 50-100 mcg

If long transport time, consult for

- Ceftriaxone 1 gm IV x 1
- Dexamethasone 8 mg IV x 1

What is the
treatment
of the **Adult**
Agitated Patient

Version MICA 3.0

30 August 2009

What is the
treatment
of the **Adult**
Stroke Patient

Version MICA 3.0

30 August 2009

What is the
treatment
of an **Adult** with
Acute Coronary Syndrome

Version MICA 3.0

30 August 2009

What is the
treatment
of the **Adult** with
Pain

Version MICA 3.0

30 August 2009

What is the
treatment
of the **Adult** with
Nausea & Vomiting

Version MICA 3.0

30 August 2009

What is the
treatment
of the **Adult** with
VF / Pulseless VT

Version MICA 3.0

30 August 2009

What is the
Spectrum
of
Acute Coronary Syndromes

Version MICA 3.0

30 August 2009

What is the treatment
of the **Adult** with
Asystole

Version MICA 3.0

30 August 2009

What is the treatment
of the **Adult** with
Bradycardia

Version MICA 3.0

30 August 2009

What is the treatment
of the **Adult** with
PEA

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- Assess using stroke assessment tool
 - Facial Droop
 - Hand Grip
 - Speech
 - Blood Glucose
- Consider & exclude stroke mimics
- Determine & record exact time of onset
- Notify receiving Hosp if:
 - no co-morbidities &
 - onset <6 hrs

If pain likely controlled by Non IV or no IV avail

- Penthrane 3 ml x 2 (20 min apart) AND/OR
 - >60 Fentanyl 200 mcg IN, then 50 mcg IN 5 minly x 4
 - <60 Fentanyl 100 mcg IN, then 50 mcg IN 5 minly x 2

If pain requires narcotic.... Or ongoing therapy

- Morphine up to 5 mg IV every 5 min OR Fentanyl 25 to 50 mcg IV every 5 min
- If no IV
 - >60 kg Morphine 10 mg IM, then 5 mg IM at 15 min x 1
 - <60 kg Morphine 0.1 mg IM, & consult for further doses

If Nausea

- Maxalon 10 mg IV x 2 (10 min apart) OR If no IV, then Maxalon 10 mg IM x 2 OR
- Stemetil 12.5 mg IM x 1

CPR 30:2

- DEFIB - If witnessed 3 x 200 J
1 x 200J 2 minly
- If unwitnessed . 1 x 200 J
- IV Access / IO if IV delay
- NaCl IV TKVO
- Adrenaline 1 mg IV every 3 min
- ETT / LMA .. then CPR 15:1 (no vent pause)
- Amiodarone 300 mg IV x 1
- Amiodarone 150 mg IV x 1 4 min later
- Sodi Bic 50 mls IV x 1 after 15 min Amb CPR

CPR 30:2

- IV access / IO if IV delay
- NaCl IV TKVO
- Adrenaline 1 mg IV every 3 min
- ETT / LMA... then CPR 15:1 (no vent pause)
- Atropine 3 mg IV x 1
- Sodi Bic 50 mls IV x 1 after 15 min Amb CPR
- May cease after 30 mins ALS if > 18 yrs

CPR 30:2

- Identify & manage causes (HEAATU)
- IV access / IO if IV delay
- NaCl IV TKVO
- Adrenaline 1 mg IV every 3 min
- ETT / LMA .. then CPR 15:1 (no vent pause)
- NaCl 20 ml/kg IV and reassess
- If slow PEA < 60, then Atropine 3 mg IV x 1
- Sodi Bic 50 mls IV x 1 after 15 min Amb CPR
- May cease after 30 mins ALS if > 18 yrs

- Reduce Stimulus
- De - escalation strategies
- Treat other causes

If above fails & pt is not recommended

- Midaz 0.5 - 0.1 mg IV every 5 min (1/2 dose if >60yrs or BP <100)
- Apply mechanical restraints if required

If no IV access or IV access delayed

- Midaz 0.05-0.1 mg/kg IM x 4 every 10 min (1/2 dose if >60yrs or BP <100)

12 Ld ECG

- GTN 0.3 or 0.6 mg every 5 min if BP >110
- GTN Patch 50 mg (0.4 mg/hr) x 1 if BP >90
- Morphine up to 5 mg every 5 min OR Fentanyl 25 to 50 mcg IV every 5 min
- Consider Penthrane AND/OR Fentanyl IN if no IV
- Aspirin 300 mg x 1
- Prehospital Thrombolytic Assessment

If Nausea

- Maxalon 10 mg IV x 2 (10 minly) OR If no IV then Maxalon 10 mg IM x 2
- Stemetil 12.5 mg IM x 1

Consider causes and if appropriate....

- Maxalon 10 mg IV x 2 (10 min apart) OR

If prolonged Transp time and no IV..

- Maxalon 10 mg x 2 (10 min apart) OR

If allergic to Maxalon..

- Stemetil 12.5 mg IM x 1

Dehydrated, NaCl 20 ml/kg (max 60 ml/kg)

• Unstable Angina

• Non STEMI

• Stemi

- Clinical Approach
- If adequate perfusion - Transport

If less than adequate perfusion

- Atropine 0.6 mg IV x 2 (3-5 min apart)
- Adrenaline Infusion
 - Adren Inf (3 mg/50 ml NACL) 5 mls/hr
 - Increase every 2 min by 5 mls (max 20 ml/hr)
- If no Infusion available
 - Adrenaline 10 mcg IV every 2 min
- NaCl 250 ml bolus and repeat (max 20 ml/kg)

What is the **treatment**
of the **Adult**
with
Hyperthermia

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Conscious Adult**
with **Moderate / Severe**
Hypothermia

Version MICA 3.0

30 August 2009

What are the **levels** of
Hypothermia

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult**
Hypothermia
In
Cardiac Arrest

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult**
with a
Fracture

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult**
with a
Severe Traumatic
Head Injury

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Child** with
Hypovolemia with
Inadequate Perfusion

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult**
with
Burns

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Child** with
VF / Pulseless VT

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Child** with
PEA

Version MICA 3.0

30 August 2009

- Shelter from cold
- Remove damp or wet clothing. Gently dry
- Assess Temp with thermometer
- Gentle handling
- RBG & manage hypoglycaemia if required
- Oxygen
- Cocoon pt in warm blanket & cover head
 - Then cover with space blanket / plastic
 - Then cover with warm blanket
- Warm NaCl IV 10 ml/kg (37-42C) and repeat as required (max 40 mls/kg)
- Avoid drug Mx of cardiac arrhythmias unless decompensated & until rewarming commenced

If <30C ...

- Only 1 x Defib
- Only 1 x Adrenaline/Amiodarone/Atropine
- WITHHOLD Sodi Bic
- Continue CPR & rewarming until >30

If 30C-32C ...

- Double dosage intervals
- Do NOT rewarm beyond 33C if ROSC

If >32C ...

- Standard cardiac arrest guidelines

- In line Stabilisation & C Collar when convenient
- If gag but poor airway, only then NPA
- If GCS <10, RSI regardless of airway reflexes
- Ventilate 10 ml/kg
- SPO2 > 95
- ETCO2 at 30-35 mmHg
- Aim for Systolic BP 120
 - NaCl 20 ml/kg IV x 2
 - Consult for final 3rd dose NaCl 20 ml/kg IV
- Skull wounds - Saline soaked dressing
- Midazolam for seizures
- RBG and treat hypoglycaemia

- Clinical Approach
- Look for airway injury
- Use Lund & Browlers Chart
- Classify partial or full thickness
- Cool burn area
- Cover with appropriate dressing (Cling Wrap or BurnAid)
- Analgesia (Penthrane, Fentanyl IN or Morphine)
- Thermometer & manage hypothermia
- Consider early intubation for airway burns
- If >15% burn area (partial or full thickness) Administer NaCl IV:

% BSA x Weight over 2 hrs
(from time burn occurred)

- CPR 30:2 (1 person)
15:2 (2 Person)
- Identify treatable causes (HEAATU)
- IV Access
- NaCl IV TKVO
- Adrenaline 10 mcg/kg IV / IO every 3 mins (minimum 100mcg dose)
- ETT (change CPR to 15:2)
- NaCl 20 ml/kg IV / IO x 1
- Sodi Bic 1 ml/kg IV / IO x 1 after 15 min CPR
- CPR to Hospital

- Assess Temp with thermometer
- Access RBG if ACS & manage hypoglycaemia
- O2 (100% with IPPV if airway adjunct required)
- **Cooling Techniques (to keep temp <38°C)**
 - Shelter from heat
 - Strip to underwear
 - Tepid water spray or towels
 - Manage hypovolemia with cooled fluids if avail
 - Position flat or lateral (avoid head up)
 - Gentle handling
- **If >39.5 after 10 mins ACS <10,**
- ? ETT sedate & paralysis (to prevent shivering)

Mild 35C - 32C

Moderate 32C - 28C

Severe <28C

- Clinical Approach
- Pain Relief (Penthrane or Morphine)
- Correct hypovolemia
- Control external haemorrhage
- Immobilise joint above & below #
- Record neurovascular obs distal to #
- Realign long bone # (excluding joints)
- Irrigate open # with saline prior to splint
- Traction splint to femoral shaft # (unless dislocation), or upper 2/3 tib/fib
- Pelvic # anatomically splint legs & Sam PS

- Control bleeding
- Pain relief
- Immobilise & support fractures
- Exclude Tension Pneumothorax
- Manage hypoxia

Then

- Adequate perfusion ... Nil Fluid
- < adequate perfusion ... NaCl 20 ml/kg IV
- < adequate perfusion continues... NaCl 20 ml/kg IV
- Consult for further treatment

- CPR 30:2 (1 person)
15:2 (2 Person)
- DEFIB - If Ambulance witnessed ... 2/2/4 J/kg
- If Ambulance unwitnessed ... 1 x 2 J/kg
- Thereafter 1 x 4 J/kg every 2 min
- IV Access with NaCl IV / IO TKVO
- Adrenaline 10 mcg/kg IV / IO every 3 min (minimum 100mcg dose)
- ETT (change CPR to 15:2)
- Amiodarone 5 mg IV / IO x 2 (4 min apart)
- Sodi Bic 1 ml/kg IV / IO x 1 after 15 min CPR
- NaCl 20 ml/kg IV / IO if ? dehydrated
- CPR to Hospital

In What is the **treatment**
of the
Child with a
Psychostimulant overdose

Version MICA 3.0

30 August 2009

What is the **treatment**
of the
Child with a
sedative overdose
Wx

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult**
with
Anaphylaxis

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Child**
Hypothermia
In
Cardiac Arrest

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult**
with
Hypoglycemia

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult**
with a
Narcotic Overdose

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult**
with a
TCA Overdose

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult**
with a
Sedative Overdose

Version MICA 3.0

30 August 2009

What are the
Sedative Overdoses

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult**
With a
Physostimulant Overdose
(Meth)

Version MICA 3.0

30 August 2009

- Airway & Ventilatory support
- **Manage** clinical causes if possible
- De-escalation strategies
- If **hyperthermia** treat as per hyperthermia protocol
- If **hypothermia** treat as per hypothermia protocol
- If **Seizures** treat as per Seizures protocol - **Midaz**

If agitated or aggressive

- **Midazolam 0.05 - 0.1 mg IV** every 5 min
If no IV **Midazolam 0.05 - 0.1 mg IM** x 4 every 10 min
Apply **mechanical restraints** if required

If <30C ...

- Only 1 x **Defib**
- Only 1 x **Adrenaline/Amiodarone/Atropine**
- No Sodi Bic
- Continue rewarming until **>30C**

If 30C - 32C ...

- **Defib** as per protocol
- All drugs **double normal time** intervals
- Do not rewarm **>33C** if ROSC

If >32C ...

- As per standard protocols

- Ensure personal safety
- Be alert body fluids or concealed syringes

Evidence of Narcotic Overdose

- Altered conscious state
- Respiratory depression
- Pinpoint pupils
- Track marks
- Airway & Ventilatory support
- **Narcan 1.6 - 2 mg IM** x 1
- If inadequate response after 10 min - consider
 - **Narcan 0.8 IM or IV** x 1
- If **bradycardia** & **poorly perfused** - **Atropine IV**
- If **hypotensive** - **NaCl 20ml/kg IV** x 3

- Airway & Ventilatory support
- **Manage** clinical causes if possible

If agitated or aggressive

- **Midazolam 0.05 - 0.1 mg IV** every 5 min
If no IV **Midazolam 0.05 - 0.1 mg IM** x 4 every 10 min
If **>60 yrs** or **BP < 100** then only give **0.5 mg/kg** doses
- Apply **mechanical restraints** if required
- If **bradycardia** & **poorly perfused** - **Atropine IV**
- If **hypotensive** - **NaCl 20ml/kg IV** x 3
- If **hyperthermia** treat as per hyperthermia protocol

- Airway & ventilatory support
- **Manage** clinical causes if possible
- If seizure **manage seizure as per A0703**
- If cardiac chest pain **manage as per ACS A0401**
- If hyperthermia **manage hyperthermia as per A0902**

If agitated or aggressive

- **Midazolam 0.05 - 0.1 mg IV** every 5 min
If no IV **Midazolam 0.05 - 0.1 mg IM** x 4 every 10 min
If **>60 yrs** or **BP < 100** then only give **0.5 mg/kg** doses
- Apply **mechanical restraints** if required
- If **bradycardia** & **poorly perfused** - **Atropine IV**
- If **hypotensive** - **NaCl 20ml/kg IV** x 3

- Airway & Ventilatory support
- **Manage** clinical causes if possible
- De-escalation strategies

If agitated or aggressive

- **Midazolam 0.05 - 0.1 mg IV** every 5 min
If no IV **Midazolam 0.05 - 0.1 mg IM** x 4 every 10 min
Apply **mechanical restraints** if required

Borderline / inadequate Perfusion, OR Resp Distress with Bronchospasm, OR ACS, WITH An-gioedema OR Urticaria, OR GIT...

- Cardiac **Monitor**
- **Adrenaline 1:1000 0.3 mg IM** every 5 min
- **Dexamethasone 8 mg IV** x 1
- **Consider NaCl 20 ml/kg IV** (max 60 ml/kg)
- *If bronchospasm, give Ventolin & Atrovent*

If Extremely Poor Perfusion ...

- **Adrenaline 1:10,000 50 mcg IV** x 1
- **Adrenaline 50 - 100 mcg IV** every 1 min
- **Dexamethasone 8 mg IV** x 1
- **NaCl 20 ml/kg IV** (max 60 ml/kg)

- Evidence of probable hypoglycemia
- **RBG** check

If RBG <4 and responds to command

- **Glucose Paste 15 G**

If RBG <4 and unresponsive to command Or inadequate response to Glucose Paste

- **IV** and flush with **10 mls NACL**
- **D10W 150 mls IV** **tritrating** to pt response
- A further **D10W 100 mls IV** can be given
- Cease when GCS 15

If no IV or not sure of patency, or delay

- **Glucagon 1 ml IM** x 1

- Clinical Approach
- Airway & Ventilatory support
- **RBG** check

If less than adequate perfusion or ECG changes (QT >0.44 /1/2 RR or QRS > 0.12)

- **Sodi Bic 100 ml IV** over 3 minutes
- May repeat **Sodi Bic 100 mls IV** after 10 min
- ? **ETT** if **GCS <10** persists
- **Hyperventilate** 100% 20-24 BPM aim
- **ETCO2** at 20 - 25 mmhg
- If **Bradycardia** & **poorly perfused** - **Atropine IV**
- If **hypotensive** - **NaCl 20ml/kg IV** x 3

- GHB
- Alcohol
- Benzodiazepines
- Volatile agents

What is the **treatment**
of the **unconscious Adult**
with
Asthma

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **conscious Adult**
with
COAD

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult**
with
Atrial Fib/Flutter

Version MICA2.1

July 2008

What is the **treatment**
of the **Adult**
with
Autonomic Dysreflexia

Version MICA 3.0

30 August 2009

What is the treatment
of the **Adult**
with
Hypertension & Chest Pain

Version MICA 3.0

30 August 2009

What is the treatment
of the **Adult**
with
**Organophosphate
Overdose**

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult** with a
Seizure

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult** with
Septic Shock

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Conscious Adult**
with
Asthma

Version MICA 3.0

30 August 2009

What is the **treatment**
of the **Adult**
with
**Menningococcal
Septiciemia**

Version MICA 3.0

30 August 2009

If SOB at any level

- Ventolin 10 mg Neb x 1
- Ventolin 5 mg Neb ever 5 min as required
- Atrovent 500 mcg neb x 1 with Ventolin Neb
- Dexamethasone 8 mg IV x 1

If inadequate response

- Ventolin Infusion 15 mcg/min (45 ml/hr)

If positive response

- Titrate O2 to target SPO2 >90%
- Consider low flow O2 (eg nasal prongs)

If SCI >T6, BP>160, Severe Headache

- Sitting position
- Legs dependent
- If distended bladder, unkink catheter
- Manage pain, burns, labour, etc
- GTN every 10 min until
 1. BP <160
 2. Side effects
 3. Symptoms resolve
- Transport required in all cases even if event is resolved

- Wear PPE
- Remove and Wash contaminated cloths with soap and water

If cholinergic effects (NBSBS) AND excessive cholinergic effect of:

1. Salivation compromising airway AND/OR
2. Bradycardia with inadequate perfusion

THEN

- Atropine 1.2 mg IV at 5 minute intervals until excessive symptoms resolve

- Clinical Approach

- If hypotensive - NaCl 20 ml/kg x 3

If effect & BP >100 or P <100, consider Slowing Fluid

Inadequate to extreme poorly perfusion continues despite first dose NaCl 20 ml/kg

- Continue NaCl IV and give Adrenaline Infusion (3 mg/50 ml NaCl) beginning at 5 mcg/min (5ml/hr) increasing 2 minly
- If no Infusion, Adrenaline 10 mcg at 2 min increments - May require incremental doses up to 50-100 mcg

If long transport time, consult for

- Ceftriaxone 1 gm IV x 1
- Dexamethasone 8 mg IV x 1

Confirm Clinical Evidence Of Meningococcal

- Purpuric rash
- Septicemia (Headache, fever, tachycardia, joint pain, altered conscious, or hypotension)

Administer Ceftriaxone IV

- Dilute 1 gm with 9.5 ml sterile water
- Administer Ceftriaxone 1 gm IV over 2 mins

If no IV access, administer Ceftriaxone IM

- Dilute 1 gm with 3.5 ml Lignocaine 1%
- Administer Ceftriaxone 1 gm IM x 1 into the upper lateral thigh

If Unconscious or becomes unconscious

- Ventilate 5 - 8 BPM with Tidal Volume 10 ml/kg
- Moderately high inspiratory pressure
- Prolong Expiratory time
- Gentle lateral chest pressure during expiration
- Salbutamol IV & Dexamethasone IV
- If no IV, Adrenaline 0.3 mg IM x 3 at 20 min intervals

If Spontaneous Ventilation

- Ventolin 5mg neb every 5 min & Atrovent 500mcg neb x 1

If Patient loses Cardiac Output

- Apnea for 1 min (with gentle lateral chest pressure)
- Adrenaline 1:10,000 50 mcg IV x 1
- Adrenaline 50-100 mcg IV every 1 min
- NaCl 20 ml/kg IV

If unconscious or Inadequate perfusion with ACS

- Midaz 2.5 mg IV every 2 min until
 - Nil verbal response
 - but pain response
- Biphasic 75 j then 150 J

Anterior Pad - Apex
Posterior Pad - Sternum

- Control Pain

If Systolic > 160 or Diastolic BP > 100

- GTN 0.3 mg at 5 min intervals
- Maintain systolic BP >110

- Consider other causes (including RBG)

If single seizure

- General Care & Transport

If Continuous/Recurrent seizure

- Midazolam 0.1 mg/kg IM (if age >60 then 0.05)

If Continuous/Recurrent seizure >5 min

- Midazolam 0.05 mg/kg IV over 30 Sec
- Repeat every 2 - 5 min to max 3 doses
- If No IV repeat first dose Midazolam IM at 10 mins

Overall Max Dose = 0.25 mg/kg

Consult if further doses required

- If patients Mx asthma plan has been activated

If Mild to Moderate SOB

- If pMDI & Spacer 4 puffs every 4 mins continuous
- If pMDI & Spacer not available
 - Ventolin 10 mg Neb (2 nebs) x 1
 - Ventolin 5 mg Neb (1 neb) every 5 min as required

If Severe SOB or nil response 10 Min Ventolin

- Ventolin Neb (1 neb) every 5 min as above
- Atrovent 500 mcg Neb (1 neb) given with Ventolin Neb
- Salbutamol 250 mcg IV x 1
- Salbutamol 125 mcg IV x 2 at 5 min intervals
- Dexamethasone 8 mg IV x 1
- If no improvement Ventolin Infusion 15 mcg/min (45 ml/hr)

What is the **treatment**
of the **Unconscious Child**
with
Asthma

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What is the **treatment**
of the **Conscious Child**
with
Asthma

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What is the **treatment**
of the **Child** with
Burns

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What is the **treatment**
of the **Child** with
Hypoglycemia

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What is the **treatment**
of the **Child** with a
Narcotic Overdose

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What is the **treatment**
of the **Child** with
**Organophosphate
Poisoning**

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What is the **treatment**
of the **Child** with a
Seizure

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What is the **treatment**
of the **Child** with a
TCA Overdose

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What is the **treatment**
of the **Child** with
Anaphylaxis

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What is the **treatment**
of the **Child** with
Asystole
or
Severe Bradycardia

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- If patients Mx asthma plan has been activated

If Mild to Moderate SOB

- If pMDI & Spacer 4 puffs every 4 mins continuous
- If pMDI & Spacer not available
Ventolin 10 mg Neb (2 ampoules) x 1
Ventolin 5 mg Neb (1 ampoule) every 5 min as required

If Severe SOB or nil response 10 Min Ventolin

- Ventolin Neb (1 ampoule) as above
- Atrovent 250 mg Neb (1 ampoule) with Ventolin Nebs
- Salbutamol 5 mcg/kg IV x 1
- Salbutamol 2.5 mcg/kg IV x 2 every 2-3 minly
- Dexamethasone 600 mcg/kg IV x 1
- Ventolin Infusion (Ventolin 100 mcg/kg) & add NaCl to make up 50 mls. Run at 60 ml/hr 2 mcg/kg/min

- Evidence of probable hypoglycemia

If RBG <4 and responds to command

- Glucose Paste 15 G

If RBG <4 and unresponsive to command

Or inadequate response to Glucose Paste

- IV and flush with 10 mls NACL
- D10W 3 ml/kg IV titrating to pt response
Repeat D10W 2 ml/kg IV if required
- Cease when GCS 15
- Flush with 10 mls NaCl

If no IV or not sure of patency, or delay

- Glucagon 0.5 ml IM x 1 if <25kg
- Glucagon 1 ml IM x 1 if >25kg

- Wear PPE

- Remove and Wash contaminated cloths with soap and water

If cholinergic effects (NBSBS) AND excessive cholinergic effect of:

1. Salivation compromising airway AND/OR
2. Bradycardia with > adequate perfusion

THEN

- Atropine 20 mcg/kg IV at 5 minute intervals until excessive symptoms resolve

- Clinical Approach
- Airway & ventilatory support
- RBG

If less than adequate perfusion or ECG changes (QT >0.44 /1/2 RR or QRS > 0.12)

- Sodi Bic 2 ml/kg IV over 3 minutes
- May repeat Sodi Bic 2 ml/kg after 10 min
- Hyperventilate 100% oxygen with the aim ETCO₂ at 20 - 25 mmhg if intubated
- If Bradycardia & poorly perfused - Atropine
- If hypotensive - NaCl 20ml/kg x 3

- CPR 30:2 (1 person)
15:2 (2 Person)
(if P<60 in Infants / P<40 Children)
- IV Access
- NaCl IV/IO TKVO
- Adrenaline 10 mcg/kg IV/IO every 3 min
- ETT (change CPR to 15:2)
- Atropine 20 mcg/kg IV/IO x 1
- Sodi Bic 1ml/kg IV/IO x 1 after 15 min CPR
- NaCl 20 ml/kg if Pulse but severe Bradycardia & Poor Perfusion persists

If Unconscious or becomes unconscious

- Ventilate 1/2 BPM with Tidal Volume 10 ml/kg
- Moderately high inspiratory pressure
- Long Expiratory time
- Gentle lateral chest pressure during expiration
- Salbutamol IV & Hydrocortisone IV
- If no IV, Adrenaline 0.01 mg/kg IM x 3 each 20 minly

If Spontaneous Ventilation

- Ventolin 5 mg Nebs & Atrovent 250 mcg Nebs

If patient Carotid Pulse but no BP

- Apnea for 30 seconds
- Adrenaline 1:10,000 0.01 mg/kg IV 5 minly
- NaCl 20 ml/kg IV

- Clinical Approach
- Look for airway injury
- Use Lund & Browlers Chart
- Classify partial or full thickness
- Cool burn area
- Cover with Gladwrap or BurnAid)
- Analgesia (Penthrene, Fentanyl IN or Morphine)
- Thermometer & manage hypothermia
- If >15% burn area (partial or full thickness) Administer NaCl IV:

3 x % BSA x Weight over 24 hrs

(Half given in the first 8 hrs)

- Ensure personal safety
- Be alert body fluids or concealed syringes

Evidence of Narcotic Overdose

- Altered conscious state
- Respiratory depression
- Pinpoint pupils
- Track marks
- Airway & Ventilatory support
- Narcan 0.01 mg/kg IM (max 2 mg)

If nil response after 10 mins

- Narcan 0.01 mg/kg IM or IV (max 2 mg)
- If bradycardia & poorly perfused - Atropine IV
- If hypotensive - NaCl 20 ml/kg x 3

- Consider other causes (perform RBG)

If single seizure

- General Care & Transport

If Continuous/Recurrent seizure

- Midazolam 0.1 mg/kg IM (max 10 mg)

If Continuous/Recurrent seizure after 5 mins

- Midazolam 0.05 mg/kg IV over 30 Sec
- Repeat every 2 - 5 min to max 3 doses
- If no IV, Midazolam first dose IM after 10 min

Overall Max Dose = .25 mg/kg

Consult if further doses required

Borderline / inadequate Perfusion, OR Resp Distress with Bronchospasm, OR ACS, WITH Angioedema OR Urticaria, OR GIT...

- Cardiac Monitor
- Adrenaline 1:1000 0.01 mg/kg IM every 5 min
- Dexamethasone 600 mcg/kg IV x 1 (max 12 mg)
- NaCl 20 ml/kg IV (max 60 ml/kg)
- If bronchospasm, give Ventolin & Atrovent

If Extremely Poor Perfusion ...

- All of the above except ...
- Adrenaline 1:10,000 0.01 mg/kg IV every 1 min OR
- If no IV but ETT.. Adrenaline 0.1 mg/kg IV every 5

What is the **treatment**
of the **Cardiac Arrest Child**
with
Hypothermia

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What
Drugs
can be given via
ETT

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What is the **treatment**
of the **Child** with
Complete
Upper Airway Obstruction

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What is the **treatment**
of the **Child** with
Meningococcal
Meningitis

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What is the **treatment**
of the **Child** with
Pain

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What is the **treatment**
of the **Child**
to
Sedate To Intubate

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What are the **Child**
Suction Catheter Sizes

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What are the **Child**
Orogastric Tube Sizes

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What are the **Child**
Weight Calculations

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What are the **Child**
ETT Calculations

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Adrenaline Atropine Salbutamol

**DO NOT ADMINISTER ANY OTHER
DRUGS VIA THIS ROUTE**

• Clinical approach & **DO NOT** delay transport
Confirm Clinical Evidence Of Meningococcal

- Ppuric rash, AND
- Septicemia (Headache, fever, joint pain, hypotension, ACS, and / or tachycardia)

Administer Ceftriaxone IV over 2 mins

- Dilute Ceftriaxone 1 gm with 9.3 ml Sterile Water
- Administer Ceftriaxone 50 mg/kg IV (max 1 gm)

If No IV Access, administer Ceftriaxone IM

- Dilute Ceftriaxone 1 gm with 3.5 ml Lignocaine 1%
- Administer 50 mg/kg IM (max 1 gm) into upper lateral thigh

- Fentanyl 2 mcg/kg IV & Midazolam 0.2 mg/kg IV
- Flush with fluid bolus
- Cricoid Pressure
- Repeat drugs x 1 if required (Grade 1 or 2 only)
- If intubation fails, return to BVM / OP / NP
- If Grade 3 or 4 view, go to Failed Intubation Drill

Maintain Sedation with

- Midazolam 0.1 mg/kg & Morphine 0.1 mg/kg boluses
- Begin infusion (Midazolam 15mg & Morphine 15 mg with 10.5 ml NaCl) Run at 0.1 - 0.2 ml/kg/hr
- Pancuronium 0.1 mg/kg IV
- Additional Midazolam boluses for seizures

If <30C ...

- Only 1 x Defib
- Only 1 x Adrenaline/Amiodarone/Atropine
- No Sodi Bic
- Continue CPR & rewarming until >30°C

If 30C-32C ...

- Defib as per protocol
- All drugs double normal intervals
- Do not rewarm beyond 33°C if ROSC

If >32C ...

- As per standard protocols

• Clinical evidence

If Foreign Object

- Gravity
- Finger Sweeps
- Back Slaps x 5
- Lateral Chest Thrusts x 5
- Laryngoscope & Magils

If pain likely controlled by Non IV or no IV avail

- Penthrane 3 ml x 2 (20 min apart) AND/OR
- Fentanyl 2 mcg/kg IN, then 1 mcg/kg IN 5 minly x 4

If pain requires narcotic.... Or ongoing therapy

- Morphine up to 0.05 - 0.1 mg/kg IV
- Repeat 0.05 mg/kg IV every 5 min (max .2 mg/kg)
- If no IV
- Morphine 0.1 mg IM, then 0.1 mg IM x 1 & consult for further doses

If Nausea

- Consultation is required

< 4 years	12 FG	6 FG	3mm
> 4 Years	14 FG	8 FG	3.5 - 5.5 mm
		10 FG	6 mm

Newborn 3.0 mm ID / 9.5 cm length

6 Months 3.5 mm ID / 11 cm Length

12 Months 4.0 mm ID / 12 cm Length

ETT Tube Size Age/4 + 4 mm

Length at Lips Age/2 + 2

Uncuffed ETT below 10 yrs of age

- Newborn 3.5 kg
- 5 Months 7 kg
- 1 year 10 kg
- 1-9 years age x 2 + 8 kg
- 10-14 years age x 3.3 kg

What is the **Adult criteria**
for
Adequate Perfusion

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What are the **Causes**
of
Non Cardiogenic APO

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What is the **Adult criteria**
for
Borderline Perfusion

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What is the
Adult
Rule Of Nine's

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What is the **Adult criteria**
for
Inadequate Perfusion

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What is the **treatment**
of the
Child with Croup

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What is the **Adult criteria**
for
Extremely Poor Perfusion

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What is the **criteria** to
Spinal Immobilise

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What is the **Adult criteria**
for
No Perfusion

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What are
Stroke Mimics

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- **Smoke** inhalation
- **Toxic gas** inhalation
- Near **drowning**
- **Aspiration**
- **Anaphylaxis**

- **Skin** Warm, pink, dry
- **Pulse** 60 - 100 / min
- **BP** > 100 systolic
- **GCS** Alert & orientated

- 9% Head
- 9% Anterior Chest
- 9% Posterior Chest
- 9% Anterior Abdomen
- 9% Posterior Abdomen
- 9% Each Arm
- 9% Each Anterior Leg
- 9% Each Posterior Leg
- 1% Genitals

- **Skin** Cool, pale, clammy
- **Pulse** 50 - 100 / min
- **BP** 80 - 100 systolic
- **GCS** Alert & orientated

If Croup with

- Increasing respiratory distress
- Increasing lethargy
- Decreasing stridor

- **Skin** Cool, pale, clammy
- **Pulse** < 50 - > 100 / min

Then

- **Adrenaline 1:1000 5 mls Nebulised**
- Reassess
- Repeat **Adrenaline 1:1000 5 mls Nebulised** if required

- **BP** 60 - 80 systolic
- **GCS** Alert & orientated or ACS

If pt meets Major Trauma Criteria

OR

has positive MOI and any of the following:

- Age > 55 yrs
- History of **bone disease**
- **Unconsciousness** or episode of LOC
- **Altered conscious** state
- **Drug** or **alcohol** affected
- Significant **distracting injury**
- **Neurological** deficit
- Spinal **column pain** tenderness

- **Skin** Cool, pale, clammy
- **Pulse** 50 - 110 / min
- **BP** < 60 systolic
- **GCS** ACS or unconscious

- Intoxication drugs/alcohol
- Hyperglycemias or hypoglycaemia
- Seizures
- Brain Tumour primary/secondary
- Syncope
- Middle ear disorder
- Migraine
- Subdural haematoma
- Sepsis
- Electrolyte disturbances

- **Skin** Cool, pale, clammy
- **Pulse** Absence of palpable pulse
- **BP** Unrecordable
- **GCS** Unconscious

What are the
Indications
for
RSI
in an **Adult**

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What are the
Contraindications
for
RSI
in an **Adult**

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What are the
Drugs & Dosages
For
Initiation Of RSI
With **normal** BP and Pulse

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What are the
Steps
Of
Actual ETT Insertion
during
Intubation

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What is the
General Care
of an
Intubated Adult

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What are the
Indications
for
Paralysis Post ETT
in an **Adult**

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What are the
Contraindications
for
Paralysis Post ETT
in an **Adult**

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What are the
Drugs
for
Sedation/Paralysis Post ETT
in an **Adult**

Version MICA 3.0

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What is the
Criteria for RSI
in an
Adult Overdose

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What is the
Failed Intubation Drill
for an
Adult

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Contraindications

- Any **contraindication** in the use of **Sux**
- Coma due to **uncontrolled bleeding**
- **No functional** electronic **capnograph** available
- Clinical situations where failed **intubation drill** would **not** be **feasible**
- **No functional** electronic **ETCO2**

1. Observe ETT pass through **cords**
2. Check position with **ODD**
3. Inflate **Cuff**
4. Connect **ETCO2** detector
5. Tracheal **squash test** to exclude RMB
6. Note **length** of ETT at lips/teeth
7. **Auscultate** 5 positions
8. Check for **misting**
9. Check **SPO2**
10. **Secure** into place
11. Provide **circulatory support** if hypotension

- Primary Neuro patients (**traumatic / non traumatic brain injury**)
- Prevention of **shivering** for patients receiving therapeutic cooling
- Patients intubated for **severe Hyperthermia**
- As described for interhospital **transfer**
- Where **sedation alone is ineffective** in maintaining ETT or adequate ventilation / oxygenation
- **Midaz or Midaz/Morp** Boluses **0.5 - 5 mg IV** until infusion is established
- **Morph / Midaz infusion**
30 mg Morph/30 mg Midaz to 30 mls NaCl
Run at **0.5 - 10 mls** per hour
(**0.5 - 10 mg** per hour)
Boluses 0.5 - 5 mg as required
- **Pancuromium 8 mg IV** and repeat if evidence of returning muscular activity (movement, chewing, cough, gag, curare cleft)

- Unable to see **Vocal Cords**
- Insert **OP** & ventilate **100% O2**
- **Reattempt** intubation with **Bougie**
- Reinsert **OP** & ventilate **100% O2**
- **LMA** (if **unable** to Ventilate)
- **Cric** (if **unable** to Ventilate)

GCS < 10 in the following:

- **Primary neurological injury**
 - **Traumatic Brain Injury**
 - **Non Traumatic Brain Injury** (Stroke/Subarachnoid)
- **Hypoxic brain injury**
 - Post hanging, near drowning,
 - ROSC
- **Overdose with any of**
 - Suspected **TCA overdose**
 - **Difficult extrication** or prolonged trans time **> 30 mins**
 - **unable** to maintain **SPO2 > 90%**
- **Severe Hypothermia >39.5°** despite **10 min** of Tx
- **Status Epilepticus**

Drugs & Dosages

- **Prehydrate** with **NaCl 10 ml/kg IV**
 - **Fentanyl 100 mcg IV** WITH **Midazolam 0.1 mg/kg IV**
 - **Atropine 0.6 mg** if **HR <60** before or immediately after suxamethonium
 - **Sux 1.5 mg/kg IV** (round to nearest 25 mg - **max 150 mg**)
 - IF **HR >100** (TBI only), &/or **BP <100 mmhg**, &/or **age >60**, then **halve the dose** of sedation drugs (**Midaz 0.05** and **Fentanyl 50 mcg**)
1. **C-Collar** on all ETT pts **> 4 yrs** old
 2. **Recheck** ETT after **every** move with ETCO2
 3. If electronic ETCO2 fails, use **colourmetric**
 4. **Suction** ETT and oropharynx in **ALL** patients
 5. Insert **NG tube, aspirate**, then **plug** into **bag** OR use **orogastric** in all **head & facial** injuries
 6. Ventilate **10 ml/kg**
 7. Maintain **ETCO2 30 - 35 mmhg** (see exceptions)
 8. Maintain **SPO2 >95%**
 9. **Document all** checks & observations

Status Epilepticus where clinical monitoring of seizure activity is required

In these cases use additional **Midazolam**

- Suspected **TCA overdose**
- **Unable** to maintain **SPO2 >90%**
- **Extrication difficult**
- Transport time **> 30 mins**

What are the
Indications
for
Cricothyrotomy
in an **Adult**

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What are the
Contraindications
for
Cricothyrotomy
in an **Adult**

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What are the
Primary Indications
for an
LMA

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What are the
Contraindications
for an
LMA

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What Are The
Sizes & Inflation Volume
of a
Portex LMA

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What Are The
Precautions
of a
LMA

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What Are The
Side Effects
of a
LMA

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What are the
Mechanisms Of Injury
for the **trauma** patient

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What Are The
Illnesses
of a
Time Critical Criteria

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What are the
Patterns Of Injury

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Nil

In circumstances where oxygenation & ventilation are not possible using alternative techniques

Contraindications

- Intact gag reflex
- Resistance to insertion
- Strong jaw tone
- Trismus
- Suspected epiglottitis
- Upper airway obstruction

Precautions

- Inability to place in sniffing position
- Patients who require high airway pressure (advanced pregnancy, morbid obesity, stiff lungs such as cystic fibrosis, severe asthma)
- Pt <14 due to enlarged tonsils
- Significant volume of vomit
- Ejection from a motor vehicle
- Motor/cyclist impact > 30 kmph
- Fall > 3 m
- Struck on head by falling object > 3 m
- Explosion
- High speed MCA > 60 kmph
- Vehicle rollover
- Fatality in the same vehicle
- Pedestrian impact
- Prolonged extrication > 30 min

AND

Age > 55 / Pregnancy / Significant medical condition

All penetrating injuries to the

- Head / Neck / Chest / Abod / Pelvie / Axilla / Groin

Blunt injuries

- Significant injury to a single region Head / Neck / Chest / Abod / Pelvie / Axilla / Groin
- Injuries involving 2 or more of the above body regions

Specific injuries

- Limb amputations/ limb threatening injury
- Suspected spinal cord injury
- Burns >20% or involving respiratory tract
- Serious crush injury
- Major compound fracture or open dislocation
- Fractured pelvis
- Fracture to 2 or more femur / tibia / humerus

Indications

Unconscious & unable to be oxygenated & ventilated using BVM, OP/NP, LMA or ETT where:

- RSI attempted but failed
- RSI not authorised
- Massive facial trauma & RSI unsafe as unable to perform failed intubation drill
- RSI not possible as no IV Access
- Upper airway obstruction not able to be cleared
- Air Transport with partial airway obstruction

Indications

- Unconscious patient without a gag reflex
- Airway management when ETT fails
- Ineffective ventilation with a BVM or OP/NP
- >10 min assisted Ventilation required
- Unable to intubate or difficult intubation

<u>Size</u>	<u>Weight</u>	<u>Inflation</u>
Size 3	30 - 50 kg	25 ml
Size 4	50 - 70 kg	35 ml
Size 5	70 - 140kg	55 ml

Correct place LMA does not prevent

- Gastric distention
- Passive regurgitation

- Chest pain of a cardiac nature
- Acute stroke
- Possible AAA
- Severe sepsis
- Undiagnosed severe pain
- Need for hyperbaric treatment
- Hypothermia
- hyperthermia

What are the
Drugs & Dosages
For
IFS To Intubate
in an Adult

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What are the
Indications
of a
Difficult intubation

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When do you give
Half Doses
of sedating drugs in
Adult RSI

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What are the
Signs
of
Inadequate Sedation
in RSI

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What are the
Signs
of
Inadequate Sedation
in the
Non RSI patient

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What are the
Contraindications
for
IFS to Intubate
in an Adult

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What is
Actual
Time Critical

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What is
Emergent
Time Critical

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What is
Potential
Time Critical

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What is the Giving Set
formulae for
Drops per minute
&
Volume to give

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- Morbidity obesity
- Shork fat neck
- Large tongue
- Small mouth < 2 fingers
- Misaligned teeth
- Facial trauma
 - Fractures
 - Severe distorted anatomy
- Airway or oropharyngeal swelling
 - Allergic reaction
 - Burns

1. Pulse & BP trending up together
2. BP increasing
3. Tearing
4. Diaphoresis

or

1. Movement
2. Chewing
3. Cough
4. Gag
5. Curare cleft

- Clinical situations where failed intubation drill would not be feasible
- No functional electronic capnograph
- Non Traumatic Brain Injury (CVA/subarachnoid bleed)
- Hypoxic brain injury due to post hanging, near drowning, brief arrest
- Status epilepticus

At the time VSS is taken the patient is **NOT** in physiological distress but does have a pattern of injury or significant medical condition which is known to have a high probability of deteriorating to actual physiological distress

$$\text{Drops per minute} = \frac{\text{Drops per ml} \times \text{Vol (mls)}}{\text{Time (minutes)}}$$

$$\text{Volume to give} = \frac{\text{Strength required} \times \text{Vol (mls)}}{\text{Stock strength}}$$

- Fentanyl 100 mcg IV AND
- Midazolam 0.1 mg IV (max 10 mg)

IF BP <100 mmhg &/or age >60

- Halve the dose of sedation drugs (Midaz 0.05 and Fentanyl 50 mcg)

If failed initially and Grade 1 or 2 view only

- May repeat dose once

If failed initially and Grade 3 or 4 view only

- Go to failed intubation drill

- BP <100

- P > 100 (TBI only)

- Age > 60 years

1. Pulse & BP trending up together
2. BP increasing
3. Tearing
4. Diaphoresis
5. Coughing
6. Gag reflex

At the time VSS is taken the patient is in **actual** physiological distress

At the time VSS is taken the patient is **NOT** in physiological distress and there is no significant pattern of actual injury/illness, but does have a mechanism of injury/illness known to have the potential to deteriorate to actual physiological distress

What are the
Drugs & Dosages
For
IFS Intubation
in an **Child**

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What are the
Indications
of a
Difficult Intubation

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What are the
SITREP Components
of a
Major Incident
Situation Report

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30 August 2009

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What are the
Indications
for
IFS Intubation
in an **Child**

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What are the
Contraindications
for
IFS & Maintaining Intubation
in an **Child**

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What are the
Indications
for
Paralysis Post Intubation
in an **Child**

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What are the
Contraindications
for
IFS Intubate
in an **Child**

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What are the
Adult
Prehospital Major Trauma
Criteria in regards to
Vital Signs (Actual TC)

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What are the
Adult
Prehospital Major Trauma
Criteria in regards to
Injuries (Emergent TC)

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- Morbidity **obesity**
- Shork fat **neck**
- Large **tongue**
- Small **mouth** < 2 fingers
- Misaligned **teeth**
- Facial **trauma**
 - **Fractures**
 - Severe **distorted** anatomy
- Airway or oropharyngeal **swelling**
 - **Allergic** reaction
 - **Burns**

Status epilepticus where clinical **monitoring** of seizure activity is required

- **Coma** due to **neurological injury** (TBI, or intracranial haemorrhage)
- Clinical situations where **failed intubation drill** would not be feasible such as upper airway obstruction
- **No functional** electronic **capnograph**

All penetrating injuries to the

- **Head / Neck / Chest / Abod / Pelvie / Axilla / Groin**

Blunt injuries

- **Significant injury** to a **single region** Head / Neck / Chest / Abod / Pelvie / Axilla / Groin
- Injuries involving 2 or more of the above body regions

Specific injuries

- Limb **amputations/ limb threatening injury**
- Suspected **spinal cord injury**
- **Burns >20% or involving respiratory tract**
- Serious **crush injury**
- **Major compound fracture** or **open dislocation**
- Fractured **pelvis**
- Fracture to 2 or more **femur / tibia / humerus**

Preparation To enable intubation

- **NaCl 10 ml/Ig IV** Bolus (unless APO)

To enable intubation

- **Fentanyl 2 mcg/kg IV** WITH
- **Midazolam 0.2 mg/kg IV**

To Maintain Intubation

- **Morphine/Midazolam Infusion** at 0.1 - 0.2 mg/kg/hr
- **Morphine/Midazolam 0.1 mg/kg** boluses prn
- **Pancuronium 0.1 mg/kg IV** (on Consult only)

Exact Location

Type of incident

Hazards at the scene

Access and Egress

Number of casualties

Emergency Services at Scene & Required

Patients with a GCS < 10 with intact airway reflexes and

- **Respiratory failure** unresponsive to non invasive ventilation and drug therapy
- **Status epilepticus** continuous nil return of consciousness or recurrent seizure of 10 min or where there is airway or ventilation compromise which cannot be effectively managed using BVM or oro/nasal airway
- **DKA** with BGL reading high
- **Near drowning** or **brief cardiac arrest**

- Prescribed for **interhospital transfer** and already **intubated**.
- Where **sedation** is ineffective in maintaining **intubation** or adequate **ventilation**

• Resp Rate < 8 or > 20 / Min

• Hypotension < 100 mmhg Systolic

• Pulse < 50 or > 100 / Min

• GCS < 13

• SPO2 < 90%

How do you make up a
Amiodarone Infusion
in a
Springfuser
in an **Adult**

Version MICA 3.0

30 August 2009

How do you make up a
Amiodarone Infusion
in a
Syringe Pump
in an **Adult**

Version MICA 3.0

30 August 2009

How do you make up a
Salbutamol Infusion
In a
Springfuser
in an **Adult**

Version MICA 3.0

30 August 2009

How do you make up a
Salbutamol Infusion
in a
Syringe Pump
in an **Adult**

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How do you make up a
Salbutamol Infusion
in a
Giving Set
in an **Child**

Version MICA 3.0

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How do you make up a
Morph/Midaz Infusion
in a
Syringe Pump
in an **Adult**

Version MICA 3.0

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How do you make up a
Salbutamol Infusion
in a
Syringe Pump
in an **Child**

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How do you make up a
Morph/Midaz Infusion
in a
Syringe Pump
in a **Child**

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How do you make up a
Amiodarone Infusion
in a
Giving Set
in an **Adult**

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July 2008

How do you make up a
Adrenaline Infusion
in a
Syringe Pump
in an **Adult**

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- Add Amiodarone 5 mg/kg (max 300 mg)
- With 5% Dextrose to make up 50 mls
- Run at 100 mls per hour (30 mins)

- Add Salbutamol 1 mg
- With NaCl to make up 50 mls
- Run at 45 mls per hour (15 mcg/min)
- 1 ml = 20 mcg

- 30 mg Morphine and 30 mg Midazolam
- Make up to 30 mls with NaCl
- Run at 5 - 10 mls per hour
- Boluses 2.5 - 5 mg as required
- 1 ml = 1 mg

- 15 mg Morphine and 15 mg Midazolam
- Make up to 15 mls with NaCl
- Run at 0.1 - 0.2 mg/kg per hour
- Boluses 0.1 mg/kg as required
- Each 1 ml contains 1 mg of Morp/Midaz

- Add Adrenaline 3 mg
- With NaCl or 5% Dextrose to make up 50 ml (each 1 ml contains 60 mcg)

- Add Amiodarone 5 mg/kg (max 300 mg)
- With 5% Dextrose to make up 10 mls
- Use a 10 ml in 30 minutes infusion device

- Add Salbutamol 500 mcg (1 ml)
- With NaCl to make up 11 mls
- Use a 10 ml in 30 minutes infusion device
- 1 ml = 45 mcg
- Runs at 15 mcg/min

- Add Salbutamol 200 mcg/kg from 5 mg/5 ml
- With 100 ml NaCl or D5W bag
- Run at 20 drops per minute (2 mcg/kg/min)

- Add Salbutamol 100 mcg/kg from 5 mg/5 ml
- With D5W or NaCl to make up 50 mls
- Run at 60 mls per hour (2 mcg/kg/min)

- Add Amiodarone 5 mg/kg (max 300 mg)
- With 5% Dextrose 100 mls bag
- Run at 60 drops per min (30 mins)

In the **GCS**
what are the
Components
of
Eye Opening

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In the **GCS**
what are the
Components
of
Verbal Response

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In the **GCS**
what are the
Components
of
Eye Opening

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What is the **treatment**
of the **Children**
with a
Severe Traumatic
Head Injury

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What are some of the
Illicit Psychostimulant
drugs

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What is the
Treatment
of
Chest Injuries
in **Children**

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What are some of the
TCA
drugs

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What is the
Child criteria
for
Adequate Perfusion

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What is a **Child's**
Normal Respiratory Rate

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What is the **Child criteria**
for
Inadequate Perfusion

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- Orientated 5
- Confused 4
- Inappropriate Words 3
- Incomprehensible Sounds 2
- None 1

- Spontaneous 4
- To Voice 3
- To Pain 2
- None 1

No protocol exists in the guidelines

- Obeys Command 6
- Movement (Pain) 5
- Withdraw (Pain) 4
- Flexion (Pain) 3
- Extension (Pain) 2
- Incomprehensible Sounds 1

- Oxygen
- Pain Relief
- Position upright unless
 - < adequate perfusion
 - altered conscious state
 - associated barotrauma
 - potential SCI

- Amphetamine
- Methamphetamines
- Cocaine
- Ecstasy (MDMA / MDEA / MDA / MMDA)
- Para methoxy amphetamine (PMA)
- Phencyclidine (PCP)

Then

- If Flail / Rib # .. ? Ventilatory assistance
- If open chest wound .. 3 sided dressing
- If tension pneumothorax .. decompress

- Amitriptyline
- Clomipramine
- Desipramine
- Dothiopin
- Doxepin
- Imipramine
- Nortriptyline
- Trimipramine

	PULSE	BP
• Newborn	120-160	N/A
• Infant	100-160	>70
• Sm Child	80-120	>80
• Lg Child	80-100	>90

	PULSE	BP	Resp Rate
• Newborn	<100 - >170	N/A	40 - 60
• Infant	<90 - >170	<60	20 - 50
• Sm Child	<75 - >130	<70	20 - 35
• Lg Child	<65 - >100	<80	15 - 25

What is the **Adult criteria**
for
Normal
Resp Status Assessment
in **Asthma**

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What is the **Adult criteria**
for
Normal
Resp Status Assessment
in **LVF**

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What is the **Adult criteria**
for
Mild Distress
Resp Status Assessment
in **Asthma**

Version MICA 3.0

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What is the **Adult criteria**
for
Mild Distress
Resp Status Assessment
in **LVF**

Version MICA 3.0

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What is the **Adult criteria**
for
Moderate
Resp Status Assessment
in **Asthma**

Version MICA 3.0

30 August 2009

What is the **Adult criteria**
for
Moderate
Resp Status Assessment
in **LVF**

Version MICA 3.0

30 August 2009

What is the **Adult criteria**
for
Severe (Life Threat)
Resp Status Assessment
in **Asthma**

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30 August 2009

What is the **Adult criteria**
for
Severe (Life Threat)
Resp Status Assessment
in **LVF**

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What is the
Concept
of
Time Critical

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What are the
Significant underlying
medical conditions
for the
Potential Time Critical
Patient (MIO)

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Appearance Calm, Quiet
Speech Clear & steady sentences
Chest Ausc Quiet no wheezes
Resp Rate 12—16
Resp Rhythm regular even cycles
Resp Effort Normal chest movement
Pulse 60-100
Skin Normal
Cons State Alert

Appearance Calm, Quiet
Speech Clear & steady sentences
Chest Ausc Quiet no wheezes
Resp Rate 12—16
Resp Rhythm regular even cycles
Resp Effort Normal chest movement
Pulse 60-100
Skin Normal
Cons State Alert

Appearance Calm or mildly anxious
Speech Full sentences
Chest Ausc ? Fine crackles at bases
Resp Rate 16—20
Resp Rhythm
Resp Effort Slight incr chest movement
Pulse 60-100
Skin Normal
Cons State Alert

Appearance Calm or mildly anxious
Speech Full sentences
Chest Ausc mild expiratory wheeze
Resp Rate 16—20
Resp Rhythm slight prolonged expir phase
Resp Effort Slight incr chest movement
Pulse 60-100
Skin Normal
Cons State Alert

Appearance Distressed or anxious
Speech Short phrases only
Chest Ausc Crackles bases to midzone
Resp Rate >20
Resp Rhythm
Resp Effort Marked chest movement
 +/- use accessory muscles
Pulse 100 —120
Skin Pale & sweaty
Cons State May be altered

Appearance Distressed or anxious
Speech Short phrases only
Chest Ausc expiratory +/- insp wheeze
Resp Rate >20
Resp Rhythm prolonged expiratory phase
Resp Effort Marked chest movement
 +/- use accessory muscles
Pulse 100 —120
Skin Pale & sweaty
Cons State May be altered

Appearance Distressed, anxious fighting to breath
Speech Words only or unable to speak
Chest Ausc Fine crackle—full field with possible wheezes
Resp Rate >20 Bradypnea (<6-8)
Resp Rhythm
Resp Effort Marked chest movement, access muscles +/- tracheal tugging
Pulse >120, Bradycardia late sign
Skin Pale & sweaty, +/- cyanosis
Cons State Altered or unconscious

Appearance Distressed, anxious fighting to breath
Speech Words only or unable to speak
Chest Ausc Expiratory +/- insp wheeze or nil sounds
Resp Rate >20 Bradypnea (<6-8)
Resp Rhythm Prolonged expiratory phase
Resp Effort Marked chest movement, access muscles +/- tracheal tugging
Pulse >120, Bradycardia late sign
Skin Pale & sweaty, +/- cyanosis
Cons State Altered or unconscious

- Poorly controlled **hypertension**
- Morbid **obesity**
- **CCF**
- Symptomatic **COAD**
- **Ischemic Heart Disease**
- Chronic **Renal Failure**

Allow the recognition of the severity of a patients condition, or the likelihood of deterioration

The identification directs appropriate clinical management and the appropriate destination to improve outcome

What is the **treatment**
of the **trauma patient**
who is
Actual or Emergent
Time Critical

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What is the **treatment**
of the **trauma patient**
who is
Potentially
Time Critical

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What is the **treatment**
of the **trauma patient**
who is **NOT**
Actual, Emergent or
Potential
Time Critical

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What is the **treatment**
of the **medical patient**
who is
Actual or Emergent
Time Critical

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What is the **treatment**
of the **medical patient**
who is **NOT**
Actual, Emergent or
Potential
Time Critical

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What are possible
CoMorbidities
of a
Stroke

Version MICA 3.0

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What are the
Onset time Conditions
for
Stroke Treatment

Version MICA 3.0

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What are the
Principles
of
CPR

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What are the
Adult
Compression to Ventilation
rates of CPR
Unintubated

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What are the
Adult
Compression to Ventilation
rates of CPR
Intubated / LMA

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Triage to the **highest** level of trauma services within **30 minutes**

Consider
MICA / Aeromedical support

Triage to the **nearest** appropriate facility with notification

Consider
MICA / Aeromedical support

Triage to the **highest** level of trauma services within **30 minutes**

Consider
MICA / Aeromedical support

Triage to the **nearest appropriate facility** if required

Dementia

Pre-existing physical ability

- Assumption that CPR is commenced **immediately** and **continued throughout**
- Must **NOT** be interrupted for more than **10 seconds** during **rhythm/pulse checks**
- If **unsure** of **pulse recommence** CPR immediately
- **Change operators every 2 mins** to improve CPR performance and reduce fatigue
- **Depth 50%** chest volume
- **Rhythm pulse check every 2 mins**
- CPR commenced **IMMEDIATELY** after Defib, then pulse check **after 2 mins** of further CPR

15: 1

Rate

Approx **100 compressions** per min

- **NO PAUSE** for **ventilations**
- **< 8** ventilation per min

General Care & Transport

It the patient **wakes** with a **deficit of inability to communicate**, the **time is taken from** when the patient was **last seen deficit free**

Accurate timeframe for onset of symptoms is **critical for treatment**
< 3 hrs for **IV thrombolytic**
<6 hrs for **other therapies**

30: 2

Rate

Approx **100 compressions** per min

Pause for **ventilations**

What are the
Causes
Of
PEA

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What are the possible
Clinical Causes
relating to the
Agitated Patient

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What is the
Basic Summary
of **Treatment** of the
Adult
Post Arrest with ROSC

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What is the **Treatment**
of the **Adult**
Post Arrest with ROSC
Not Intubated
regarding **RSI & Cooling**

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What is the
Perfusion Management
Of
ROSC

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What is the **criteria** to initiate
Therapeutic Management
Of
ROSC

Version MICA 3.0

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What Are The
Sizes & Inflation Volume
of a
Unique LMA

Version MICA 3.0

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What is the
Therapeutic Management
Of
ROSC

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What are the
Indications
for
Unassisted ETT
in an **Adult**

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What are the
Indications
for
IFS ETT
in an **Adult**

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- Hypoglycemia
- Hypoxia
- Postical
- Drug intoxication
- Drug withdrawal
- Intracerebral pathology
- Mild to moderate head injury (consult)
- Acute psychiatric conditions

- Hypoxia
- Exsanguination
- Anaphylaxis
- Asthma
- Tension Pneumothorax
- Upper airway obstruction

If GCS < 10 post ROSC

Collapse to ROSC >10 mins

- RSI if > 10 mins
- Therapeutic cooling (Fluid < 8°C)

Collapse to ROSC <10 mins

- RSI if coma persists despite initial oxygenation & ventilation
- NO Therapeutic cooling

- Intubated
- Collapse to ROSC > 10 mins
- Normal functional status
- Temp > 34.5
- Nil APO present
- Cardiac arrest not due to bleeding

- Assess patient's temp

• Sedation

- Midaz 1 - 5 mg IV
- Pancuronium 8 mg IV

• Rapid Infusion cold fluid

- NaCl 2000 mls IV if available
- cease if APO occurs & treat the APO

Intubated Facilitated By Sedation

Respiratory failure

Unresponsive to non-invasive ventilation and drug therapy

DKA

With BGL reading high

- Therapeutic cooling if Collapse > 10 mins
- Maintain BP at 120 mmhg with
 - NaCL (max 20 ml/kg) &
 - Adrenaline Infusion
- ETCO2 30-35 mmhg
- Ventilate 10 ml/kg
- RGB - Aviod Hypo/Hyperglycemia
- 12 Ld ECG
- Temp

- Maintain BP at 120 mmhg with ..
 - NaCl 250 mls & repeat to max 20 ml/kg
 - Adren Inf (3 mg/50 ml NaCl) 5 mls/hr
 - Increase every 2 min by 5 mls/hr
- Accurately assess pulse during movement loading to ensure output
- Do not administer Amiodarone unless breakthrough VT/VF

<u>Size</u>	<u>Weight</u>	<u>Inflation</u>
Size 3	30 - 50 kg	20 ml
Size 4	50 - 70 kg	30 ml
Size 5	70 - 140kg	40 ml

• Respiratory arrest

• Cardiac Arrest

• Absent airway reflexes

What are the
General Precautions
in
Non Assisted intubation
in an **Adult**

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What are the
General Precautions
in
IFS intubation
in an **Adult**

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30 August 2009

What are the
Contraindications
in
IFS intubation
in an **Adult**

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What are the
Precautions
in
RSI intubation
in an **Adult**

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In the **RSI protocol**
what are the
Special Notes
for
Status Epilepticus

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In the **RSI protocol**
what are the
Special Notes
for
TCA Overdose

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30 August 2009

In the **RSI protocol**
what are the
Special Notes
for
Overdose

Version MICA 3.0

30 August 2009

In the **RSI protocol**
what are the
Special Notes
for
Severe Hyperthermia

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In the **RSI protocol**
what are the
Special Notes
for
Combative patient

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In the **RSI protocol**
what are the
Special Notes
for
Absent reflexes in Head Injury

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- As per **general precautions**
- Anticipation of **difficulty BVM ventilation**
- Anticipation of **difficult intubation**
 - **morbid obesity**
 - **short neck**
 - **facial trauma**
- **Transport time <10 mins**

- **Time** to intubation at hospital vs time to intubate at scene
- As per **general precautions**
- Anticipation of **difficulty BVM ventilation**
- Anticipation of **difficult intubation**
 - **morbid obesity**
 - **short neck**
 - **facial trauma**
- **Transport time <10 mins**

Requiring **hyperventilation** for **cardiac arrhythmia** prevention or management

- **Hyperthermia** may result from
 - **drug overdose**
 - **heat exposure**
- After **10 mins** active **cooling**, if
 - temp remains **>39.5C**
 - **GCS < 10**

Then pt should be **intubated with RSI**

Use
RSI
even if
Airway Reflexes
are
Absent

- **Time** to intubation at hospital vs time to intubate at scene
- **Poor** baseline **neurological** function & major comorbidities
- Advanced care plan / **refusal of medical treatment** document specifies “Not for Intubation”
- Clinical situations where failed **intubation drill** would **not** be **feasible**
- **No** functional electronic **ETCO2**
- Patients indicated for **RSI**
- **Continuous recurrent** seizure with
 - **>10 mins** duration or
 - **no return** of **consciousness** between episodes
- May require intubation where there is:
 - **airway / ventilation compromise**
 - which is **unable** to be effectively **managed** using BVM and OP/NPA

The intent of the overdose (**difficult extrication**) **indication for RSI** is for the patient to be **intubated** at the scene to allow for a **safer extrication**

- Midaz **should not** be used to control **combative pt** prior to RSI in **Head Injury**
- Judicious amounts of **narcotics** for pain relief **should be used**
- If combativeness is **preventing adequate oxygenation** (rare), then prepare for RSI and then give **Fentanyl**
- Then **preoxygenate** for **2-3 mins** then given Midaz & Sux, and intubate

What are the
Uncontrolled Bleeds
referred to in
RSI
in an **Adult**

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Why is
Uncontrolled Bleeding
harmful in
RSI
in an **Adult**

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What are the
General Preparations
for
Intubation

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30 August 2009

What is the
General care
of the
Intubated Patient
regarding **Ventilation**

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30 August 2009

What is
Treatment for **Hypotension**
following
Intubation

Version MICA 3.0

30 August 2009

What are the
Drugs
for
Sedation Post ETT
in an **Adult**

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30 August 2009

What is the
Treatment for side effects
of an
Adrenaline Infusion

Version MICA 3.0

30 August 2009

What is the
Symptomatic
Signs and Sypmtoms
of an
SVT

Version MICA 3.0

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How do you
Perform a **Valsalver**
in an
SVT

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What is the
treatment
of the **Conscious Adult**
with an
SVT and **Asymptomatic**

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- May lead to:
 - poor cerebral perfusion &
 - coma
- Sedation may drop BP further
- Added scene time allows further bleeding
- Remember TREATMENT is TRANSPORT

- 100% oxygen
- Tidal volume 10 ml/kg
- SPO2 > 95%
- ETCO2
 - normal pt 30 - 35 mmhg
 - asthma & COAD >35 mmhg
 - TCA overdose 20 - 25 mmhg
 - DKA maintain at same level detected when post intubation with 25 mmhg max

- Midaz or Midaz/Morp Boluses .5 - 5 mg IV until infusion is established
- Morph / Midaz infusion
 - 30 mg Morph/30 mg Midaz to 30 mls NaCl
 - Run at 0.5 - 10 mls per hour
 - 0.5 - 10 mg per hour
 - Boluses 0.5 - 5 mg as required

Rate related severe or persistent chest pain

Shortness of breath with crackles

Abdominal Valsalva

BLS

- Ruptured AAA
- Ruptured ectopic pregnancy
- Penetrating truncal trauma
- Intra abdominal trauma
- Limb avulsion
- Position patient
- Open Collar with Manual cervical support
- Preoxygenate 100% O2 and Capnograph
- Ensure SPO2 & Cardiac Monitor
- Prepare equipment
 - Suction
 - ETT plus 1 size small
 - ODD
 - Equipment ready for failed intubation
 - Mark Cricothyroid membrane
 - Brief assistant & if SCI second assistant
- Ensure functional and secure IV line

If hypotension post intubation:

- Consider reduce the dose of sedation
- Consider fluid
- Consider adrenaline infusion

Cease infusion

Recommence once side effects have resolved titrating to patient response

- Position supine
- Blow into a 10 ml syringe (need 40 mmhg pressure)
- Duration of at least 15 sec if tolerated by pt

An **AMI** Is
Diagnosed
with what
3 Factors

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What is the
Goal in Management
In
Acute Coronary Syndrome
and why

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What is the
Criteria
for
Treating
VT and why

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What are the
Doses of Fentanyl IN
In
Adult Pain Relief

Version MICA 3.0

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What is the
ETCO₂ levels
relating to
Asthma

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What are the
Dangers
relating to
Assisted Ventilation in the
Asthma

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What is the
Adult Criteria
for an
Stemetil

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30 August 2009

What is the
Adult Criteria
for an
Maxalon

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What is the
Special Notes
relating to
Anti-emetics

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What are
Examples
of
Narcotic substances

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To
resolve all pain
 completely if safe to do so

This reduces
cardiac workload

Prepare from a 900 mcg/3 ml vial

	<60/>60kg	>60/<60kg
Initial dose	200 mcg	100 mcg
Volume	0.75 mls	0.45 mls
Addit dose	50 mcg	50 mcg
Volume	0.25 mls	0.25 mls

All doses include 0.1 ml for atomiser
 Max 1 ml into each nostril

- History
- Serial ECGs
- Serial Blood Enzymes

- VT greater than 30 seconds
- QRS >0.12 sec
- AV disassociation / absent P waves
- Rate > 100

Beware of **air trapping** if attempting to
 reduce **ETCO2** by increasing
 the **ventilation** rate

Levels up to **120 mmhg** are
 considered **safe**

Assisted Ventilation can easily cause
air trapping and **barotrauma**

Nausea & or vomiting for

- Cardiac chest pain
- Iatrogenic secondary to **opioid admin**
- Previous diagnosed **migraine**
- 2ndary to **cytotoxic drugs** or **radiotherapy**
- Severe **gastroenteritis**

Nausea & or vomiting but with known allergy or contraindication to Maxalon in

- Associated with **cardiac chest pain**
- Iatrogenic secondary to **opioid admin**
- With previous diagnosed **migraine**
- 2ndary to **cytotoxic drugs** or **radiotherapy**
- Associated with severe **gastroenteritis**

Prophylaxis for

- Awake patients (GCS 13-15) with suspected **spinal injury** immobilised on the stretcher
- **Eye trauma** (penetrating eye injury/

Prophylaxis for

- Potential motion sickness
- Planned aeromedical evacuation

- Heroin
- Morphine
- Codeine

- Stemetil can only be administered by the **IM route**
- Maxalon & Stemetil should **not be administered in the same patient** without medical consultant
- If there is a **long transport** time and no IV route, give **Maxalon IM**
- If nausea & vomiting is tolerated, give **basic care & transport**

What is the
Treatment
of
Chest Injuries
in Adults

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What is the treatment for
an Adult with a
Spinal Injury

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What are the
Age Classifications
in
Children

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What are the
Newborn
CPR Rates

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What are the
Signs
of
Hypoxia
in
Children

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What are the
Signs
of
Carbon Dioxide Retention
in
Children

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What is the
Paediatric Pain Assessment
in
Children

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What are the
Order Of Priority
during
CPR
in
Children

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What is the
Basic Summary
of Treatment of the
Child
Post Arrest with ROSC

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What are the
Indications
of an
Unassisted Intubation
in a child

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- Spinal immobilisation
 - *Manual head stabilisation*
 - *C-Collar*
 - ***Padded Long Spine Board*** or *Vacuum Mattress*
 - *Full spine immobilisation*
- Pain relief
- Manage hypovolemia (up to **500 mls Hatmanns IV**)

A correctly padded Board RESOLVES the need to remove after 30 minutes

3:1 (single rescuer)

3:1 (two rescuers)

At **120 compressions** per min

- Sweating
 - Tachycardia
 - Papillary diatation
 - Hypertension
 - Bounding pulse
 - Cardiac & CNS depression
-
- Adequate airway control
 - Ventilation
 - Chest Compressions
 - Adrenaline

Respiratory Arrest

Cardiac Arrest

Absent airway reflexes

- **Oxygen**
- **Pain Relief**
- **Position** upright unless
 - < adequate perfusion
 - altered conscious state
 - associated barotrauma
 - potential SCI

Then

- If **Flail / Rib #** .. ? Ventilatory **assistance**
- If **open chest wound** .. **3 sided dressina**
- If **tension pneumothorax** .. **decompress**

Newborn 1st Min to hr following birth

Infant < 1 year

Young Child 1 - 8 years

Older Child 9 - 14 years

	Infants	Children
x	Lethargy Bradycardia Hypotension Apnea Pallor	Restlessness Tachypnoea Tachycardia Cyanosis

Question the child

Use pain rating **scales**

Evaluate **behaviour** & **Physiological** changes

Secure **parent** involvement

Take **cause** of pain into account

Take **action** and evaluate results

- **Determine** if ETT is required & if so **ETT**
- **Maintain ETT** as required
 - **Morph / Midaz** infusion
 - **Pancuronium** (if Sedation inadequate)
- Ventilate **10 ml/kg**
- **ETCO2 30-35** mmhg
- Maintain **BP** at normal for age

What are the
Precautions
for
IFS Intubation
in an Child

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What are the
Contraindications
for
RSI
in an Child

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What are the
Checks
of
Intubation

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What are the
Paediatric
Size
LMAs

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What is the
Failed Intubation Drill
for an
Adult

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What is the
Preparation of Fentanyl IN
for
Pain Management
in an Child

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What is the Treatment
of the Child with
Partial
Upper Airway Obstruction

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How do you make up a
Salbutamol Infusion
in a
Giving Set
in an Adult

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What is the Treatment
For
Therapeutic Cooling
in an
Adult

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How is Cricoid Pressure
Performed In
RSI

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Not permitted by Road MICA Paramedics in Paediatrics

- ODD
- Capnography
- Length lip / teeth
- Cuff palpation
- Auscultate epigastrium / chest
- SP02
- Color
- Tube misting

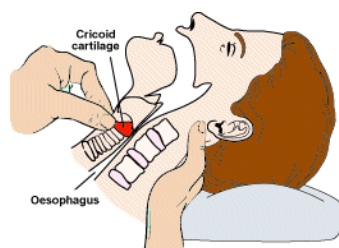
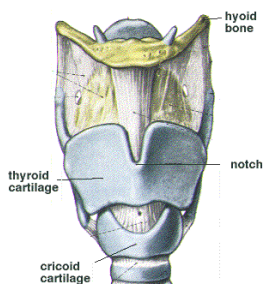
NOTE - if ETCO2 is negative (including Cardiac Arrest), the ETT MUST be removed

If child <25 kg
prepare dose from a
900 mcg/3 mls

If Child >25 kg
prepare dose from a
100 mcg/2 mls

- Add **Salbutamol 2 mg**
 - With **D5W** or **NaCl** to make up 100 mls
- Run at **15 drops** per min (15 mcg/min)
- 1 ml = 20 mcg

- **3kg** pressure required once unconscious
- Use **thumb** and **2 fingers**
- **Support spine** with other hand



- **Time** to ETT at hospital vs time to ETT
- **Advance care plan** stating DO NOT ETT
- Anticipation of **difficulty** with **BVM**
- Anticipation of **difficult ETT** eg facial trauma
- In general **transport time** to hospital of **< 10 min** then no IFS

SIZE	WEIGHT
1.0	<5 kg
1.5	5 - 10 kg
2.0	10 - 20 kg
2.5	20 - 30 kg
3.0	30 - 50 kg

- Unable to see **Vocal Cords**
- Insert **OP** & ventilate **100% O2**
- **Reattempt** intubation with **Bougie**
- Reinsert **OP** & ventilate **100% O2**
- **LMA** (if **unable** to Ventilate)
- **Cric** (if **unable** to Ventilate)

• Encourage Cough

• Gravity

• Maintain BLS

Criteria

- if Collapse >10 mins
- **Intubated**
- Temp >34.5
- **Nil APO**
- Arrest **not** due to **bleeding**

Procedure

- Sedation / Paralysis
 - **Midaz 1-5 mg IV**
 - **Pancuronium 8 mg IV**
- Rapid infusion cold **NaCl 2000 mls IV <8C**
- Cease if APO occurs
- Do not allow Temp to drop below 33C