

# Clinical Practice Protocols

## First Responders



**Ambulance**Victoria





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## 1. Ensure safety and control hazards - 'Dangers'

### Assess

- Assess the scene for hazards and control if able

### Stop

- Do not enter unless safe to do so
- Use standard precautions (gloves, safety glasses, P2 mask, high visibility vest etc.)
- Remove patient from hazard as priority if necessary and safe

## 2. Manage immediate life threats - Primary Survey - RabCD

### Action

- **Response – assess** using “touch and talk”
  - **IF** responsive proceed to **Point 4**
- Airway -
  - Open airway by placing patient supine with slight head tilt
  - Do not delay at this point with further airway procedures
  - Ensure spinal care if trauma suspected
- Breathing –
  - < 10 second **assess** for effective breathing
- Compressions -
  - < 10 second **assess** for carotid pulse
  - **IF** absent/ineffective breathing but with pulse
    - Provide airway support and assist ventilation as required
  - **IF** absent/ineffective breathing and no pulse present

- Immediately commence chest compressions – **priority**
- **IF** effective breathing with pulse present – **refer point 4**
- Defibrillation – Attach AED per *Cardiac Arrest C4* – priority
- Provide a brief Situation Report to ESTA ambulance dispatch confirming immediate life threat

## 3. Manage immediate life threats – The Pulseless Patient

### Action

- Immediately commence chest compressions
- Airway
  - Suction as required
  - Insert SGA (if accredited)
- Breathing
  - Perform 2 ventilations to ensure lma patency (If inserted)
  - Perform CPR at 15 compressions: ventilation 1 (30:2 if BVM)
  - Compression depth 1/3 of chest diameter at 100 per minute
  - (adults and children).
  - Ratio of 15:2 for children only when 2 rescuers are present
  - Newborn ratio is 3:1

## 4. Carotid pulse present or pulse returns

### Action

- **Bleeding** – manage any life threatening bleeding
- Manage per Points 5 -10 and Acute Altered Consciousness C12

## 5. Identify main presenting problem and time criticality

### ✓ Assess

- Main presenting problem
- Perfusion Assessment
- Conscious State Assessment
- Respiratory Assessment
- Time Critical Assessment

## 6. Provide Initial Management

### ✓ Action

- Physical rest and appropriate position
- Emotional support and reassurance
- Assess SpO<sub>2</sub>
- Apply O<sub>2</sub> therapy where SpO<sub>2</sub> is less than 92% (8L per minute via mask or 100% via Bag Valve Mask)
- Reassess and maintain initial management

## 7. Obtain History and Secondary Survey

### ✓ Action

- Obtain history from patient and / or bystanders (**AMPLE**)
  - Allergies
  - Medications (current)
  - Past Medical History
  - Last Meal

- Event that prompted the call for an ambulance
- If **Trauma** – expose patient and “nose to toes” survey

## 8. Provide a Situation Report

### Action

- Provide a Situation Report to ESTA ambulance dispatch

## 9. Manage Specific Problems

### Action

- Use “pay-off” and manage for best outcome
- Apply appropriate Clinical Protocol(s) based on finding(s) in order of importance

## 10. Reassess and Maintain management

### Action

- Monitor and record vital signs frequently (15 minutely as a minimum, more often if vital signs are abnormal)
- If patient deteriorates during care, return to the primary assessment and reassess
- Modify management as required based on reassessment
- Update ESTA dispatch / hospital / backup as required

## AVPU

AVPU is the preferred tool for assessing conscious state in children where adapting the GCS can be problematic. It is widely used and consistent with practice at the Royal Children's Hospital.

AVPU is quick and simple to apply and is appropriate to determine conscious state whilst initial assessment is conducted and treatment is being established. A formal GCS should be undertaken in more complex patient presentations.

A child cannot have a conscious state assessment done while asleep. They must be woken first. If the child wakes and remains awake and alert, record this as an "A" for AVPU. If the child wakes but remains drowsy and appears inattentive, record this as a "V".

When assessed, is the patient:

Alert?	= <b>A</b>
Responding to Voice?	= <b>V</b>
Responding to Pain?	= <b>P</b>
Unresponsive?	= <b>U</b>



## Glasgow Coma Score

A. Eye Opening		Score	
	Spontaneous	4	
	To voice	3	
	To pain	2	
	None	1	A: _____
B. Verbal Response		Score	
	Orientated	5	
	Confused	4	
	Inappropriate words	3	
	Incomprehensible sounds	2	
	None	1	B: _____
C. Motor Response		Score	
	Obeys command	6	
	Purposeful movements (pain)	5	
	Withdraw (pain)	4	
	Flexion (pain)	3	
	Extension (pain)	2	
	None	1	C: _____
Total GCS (Maximum Score = 15)			
	(A + B + C) = _____		

NB. A GCS < 13 is a criteria for a patient being time critical.

	Normal	Respiratory Distress
<b>Rate</b>	12-16/minute	Rapid (> 20) or Slow (< 8)
<b>Rhythm</b>	Regular even cycles	Asthma: prolonged expiratory phase
<b>Effort</b>	Little with small chest movement	Marked chest movement and may be some use of accessory muscles
<b>Appearance</b>	Calm, quiet	May be distressed, anxious, exhausted. Fighting to breathe
<b>Ability to Speak</b>	Clear and steady	Speaks in short phrases or unable to speak (can they count to ten?)
<b>Noises</b>	Usually quiet	May have a cough Asthma: expiratory wheeze, may also be inspiratory wheeze, may be no breath sounds if severe Heart Failure or infection: audible crackles – with possibly inspiratory +/- expiratory wheeze Upper airway obstruction: inspiratory stridor

These observations need to be taken in the context of:

- the patient's presenting condition;
- repeated observations and trends shown; and
- response to management

The patient with breathing difficulty is time critical and requires expedient transport to hospital with the Paramedic backup crew.

Initial and ongoing communication with the Paramedic backup crew via the ESTA ambulance communications regarding the patient's condition is vital.

The perfusion assessment is made up of a series of observations that, when considered together provide an indication of a patient's perfusion and the function of the cardiovascular system. These observations are:

- Pulse – rate
- Blood pressure
- Skin – colour, temperature and moistness
- Conscious state

	SKIN	PULSE		CONSCIOUS STATE
Adequate Perfusion	Warm, pink and dry	60 – 100 minute	>100 mm Hg systolic	Alert and orientated in time and place
Less than adequate Perfusion	Cool, pale, clammy	< 50 or >100 min	< 100 mm Hg systolic	May be alert or conscious state may be altered
No Perfusion	Cool, pale, clammy	Absence of palpable pulse	Unable to record	Unconscious

A person with two or more of the above meets the criteria for that category of perfusion.

A person with less than adequate perfusion is time critical and requires expedient transport to hospital by the Paramedic backup crew.

A pulse between 50 and 60 bpm and / or a BP less than 100 mmHg may be normal for some patients.

Initial and ongoing communication with the Paramedic backup crew, via ESTA ambulance communications, regarding the patient's condition is vital.

A patient meeting any of the following criteria has, or potentially has a clinical problem of major significance and therefore is time critical.

If a patient meets any of these time critical criteria immediately provide a situation report to the ESTA ambulance dispatch centre.

With time critical trauma patients, triage and aim for transport to the highest level of trauma care available within 45 minutes, however do not bypass any medical facility unless there are plans set in place to rendezvous with other AV services. Medical time critical patients require triage to the nearest appropriate facility. The receiving hospital must be notified for all time critical patients.

Early dispatch centre notification of a time critical patient will expedite transfer to the most appropriate hospital by the most appropriate transport platform (i.e. road or rotary or fixed wing aircraft). Scene information may be used in planning for secondary transfer to an appropriate facility as required.

Patients < 14 or > 55 years, or those who have a pre-existing medical condition or who are pregnant may be at greater risk. Using “pay-off”, manage as potentially time critical even if they don’t fully meet the time critical criteria.

Time Critical Definitions	
Actual	At the time the vital signs survey was taken, the patient was in actual physiological distress. i.e. Altered Conscious state (GCS < 13), Inadequate Perfusion or Respiratory Distress
Emergent	At the time the vital signs survey was taken, the patient was not physiologically distressed, but does have a “pattern of actual injury/illness” which is known to have a high probability of deteriorating to actual physiological distress.
Potential	At the time the vital signs survey was taken, the patient was not physiologically distressed, and there was no significant “pattern of actual injury/illness”, but there is a “mechanism of injury/illness” known to have the potential to deteriorate to actual physiological distress.

## Time Critical Criteria

### Vital Signs - Actual time Critical \*

	Adult	Child (< 12 years)
Pulse	>120 or < 60 / min	Refer to Paediatric Assessment
Respiratory Rate	< 10 or > 30 / min	
Hypotension	< 90 mmHg	
Conscious state	GCS < 13	

### Pattern of Injury - Trauma (Emergent Time Critical)

All Penetrating Injuries	<ul style="list-style-type: none"> <li>Head / neck / chest / abdomen / pelvis, axilla / groin</li> </ul>
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Blunt Injury	<ul style="list-style-type: none"> <li>• Patients with a significant injury to a single region: head / chest/ abdomen / pelvis /axilla / groin</li> <li>• Patients with injuries involving two or more of the above body regions</li> </ul>
Specific Injuries	<ul style="list-style-type: none"> <li>• Limb amputations / limb threatening injuries</li> <li>• Suspected spinal cord injury</li> <li>• Burns &gt; 20% or suspected respiratory tract involvement</li> <li>• Serious crush injury</li> <li>• Major compound fracture or open dislocation</li> <li>• Fracture to two or more of the following: femur / tibia / humerus</li> <li>• Fractured pelvis</li> </ul>

\* These may vary from Paramedic criteria.

## Pattern of Illness - Medical (Emergent Time Critical)

Medical Symptoms / Syndromes	<ul style="list-style-type: none"> <li>• Chest pain of a cardiac nature</li> <li>• Respiratory distress</li> <li>• Altered consciousness or stroke (“brain attack”)</li> <li>• Suspected meningococcal disease</li> <li>• Possible abdominal aortic aneurysm</li> <li>• Undiagnosed severe pain</li> </ul>
Patients in need of possible hyperbaric treatment (e.g. acute decompression illness)	
Hypothermia or heat stress	

## Mechanism of Injury (Potentially Time Critical)

- Car occupants involved in high speed MCA (> 60 km/hour)
- Pedestrian impact
- Ejection from vehicle
- Fall from height (> 3m) or children > 2 times their height
- Struck on head by falling object > 3 metres
- Motor / cyclist impact > 30km/hour
- Explosions
- Prolonged extrication (> 30 minutes)

And one or more of:

- Age < 12 or > 55
- Pregnancy
- Significant underlying medical condition

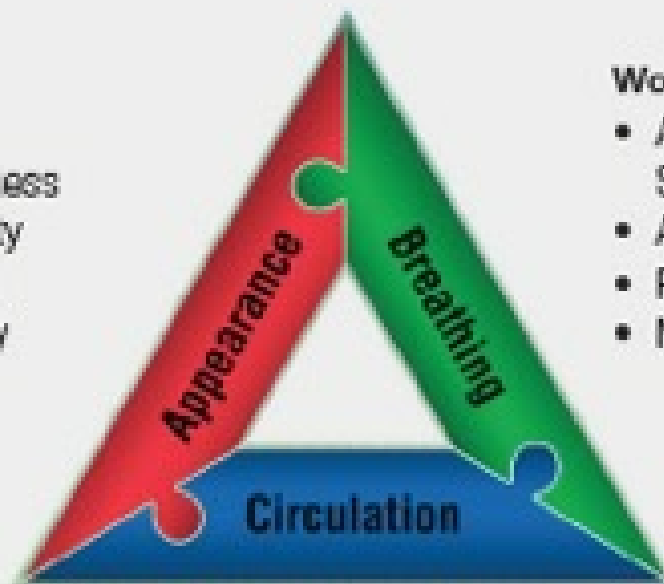
## Initial Paediatric Assessment

It is important to form a rapid first impression of the patient's appearance, breathing, and circulation as illustrated in the Paediatric Assessment Triangle below. Visually evaluate mental status, muscle tone and body position, chest movement, work of breathing, and skin colour whilst also looking for obvious injuries. This assessment should not take more than a few seconds.

## PAEDIATRIC ASSESSMENT TRIANGLE

### Appearance

- Tone
- Interactiveness
- Consolability
- Look/Gaze
- Speech/Cry



### Work of Breathing

- Abnormal Breath Sounds
- Abnormal Positioning
- Retractions
- Nasal Flaring

### Circulation to the Skin

- Pallor
- Mottling
- Cyanosis

If the child appears well with no signs of serious trauma, approach with a calm demeanour whilst explaining your actions to the parents and the child. *If a well-appearing patient has experienced a high-risk mechanism of injury, consider the patient potentially unstable due to the risk of serious internal injuries.*

**For children with a poor appearance and evidence of significant injury, proceed immediately to the primary survey including any lifesaving interventions as appropriate.**

## Definitions

For the purposes of the clinical care protocols, a child is defined as being aged under 12. The rationale for this relates to the physiological parameters and medication doses of older children being equal to adults. This principle does not relate to emotional care, mental health, or legal obligations of caring for a person under the age of 18.

Paediatric Definitions	
Nomenclature	Age
Newborn	Birth to 24 hours
Small infant	Under 3 months
Large infant	3 - 12 months
Small child	1 - 4 years
Medium child	5 - 11 years



## Paediatric weight calculation

### Paediatric Weight Calculation

For children various treatments are based on body weight, such as drug doses, defibrillation joules and fluid volume. It is acceptable to ask a parent the patient's weight. If weight is unknown, it can be estimated using the following guide.

Age	Weight
< 24 hours	3.5kg
3 months	6 kg
6 months	8 kg
1 year	10 kg
1 - 9 years	Age x 2 + 8 kg
10 - 11 years	Age x 3.3 kg

## Respiratory Assessment (Paediatric)

Age	RR
Newborn	25 - 60 breaths/minute
Small infant	25 - 60 breaths/minute
Large infant	25 - 55 breaths/minute
Small child	20 - 40 breaths/minute
Medium child	16 - 34 breaths/minute

**Respiratory distress**

Any deviation from normal respiratory values is a source of concern. Children presenting with abnormal vital signs must be transported to hospital.

**Signs of respiratory distress include:**

- tachypnoea
- chest wall retraction
- use of accessory muscles
- tracheal tugging
- abdominal protrusion

Signs of Hypoxia in Children	
Infants	Children
Lethargy	Restlessness
Bradycardia	Tachypnoea
Hypotension	Tachypnoea
Apnoea	Cyanosis
Pallor	Bradycardia (late sign)

## Perfusion Assessment (Paediatric)

Adequate Perfusion		
Age	HR	BP
Newborn	110 - 170 bpm	> 60 mmHg systolic
Small infant	110 - 170 bpm	> 60 mmHg systolic
Large infant	105 - 165 bpm	> 65 mmHg systolic
Small child	85 - 150 bpm	> 70 mmHg systolic
Medium child	70 - 135 bpm	> 80 mmHg systolic

**Skin** - warm, pink and dry

**Conscious state** - alert and active

## Inadequate perfusion

Any deviation from normal perfusion values is a source of concern. Children presenting with abnormal vital signs must be transported to hospital.

**Skin** - cool, pale, clammy

In the setting of an unwell child, cold hands/feet and mottled skin are a early sign that correlates with subsequent ICU admission. This should always be treated as a significant finding.

**Conscious state** - patient responding to voice, pain or unresponsive. May present as restless / agitated.

**Poor or no perfusion is display by an absent pulse and blood pressure, non-recordable blood pressure, cool pale skin, an altered conscious state or unconsciousness.**

### Conscious state assessment - AVPU

Conscious state can be assessed using **AVPU** in children.

AVPU is quick and simple to apply and is appropriate to determine conscious state whilst initial assessment is conducted and treatment is being established.

When assessed, is the patient:

- Alert
- Responds to Voice
- Responds to Pain
- Unresponsive

A child cannot have a conscious state assessment done while asleep. They must be woken first. If the child wakes and remains awake and alert, record this as an "A" for AVPU. If the child wakes but remains drowsy and appears inattentive, record this as a "V".

### Conscious state assessment - Glasgow Coma Scale (GCS)

Conscious State should be assessed using the Glasgow Coma Scale once stable.

### Child ≤ 4 years

Eye opening
Spontaneous – 4
To voice – 3
To pain – 2
None – 1
Verbal response
Appropriate words/social smile – 5
Cries but consolable – 4
Persistently irritable – 3
Moans to pain – 2
None – 1
Motor response
Spontaneous – 6
Localises to pain – 5
Withdraws from pain – 4
Abnormal flexion to pain – 3
Abnormal extension to pain – 2
None – 1

### Child > 4 years

Eye opening
Spontaneous – 4
To voice – 3
To pain – 2
None – 1
Verbal response
Orientated – 5
Confused – 4
Inappropriate words – 3
Incomprehensible sounds – 2
None – 1
Motor response
Obeys command – 6
Localises to pain – 5
Withdraws from pain – 4
Abnormal flexion to pain – 3
Abnormal extension to pain – 2
None – 1

## Paediatric Pain Assessment

Paediatric pain assessment should be appropriate to the developmental level of the child. Pain can be communicated by words, expressions and behaviour such as crying, guarding a body part or grimacing. The **QUEST** principles of pain (Baker and Wong, 1987) and the following pain rating scales may be helpful in assessing paediatric pain.

- Question the Child
- Use Pain rating scales
- Evaluate behaviour and physiological changes
- Secure parent's involvement
- Take cause of pain into account
- Take action and evaluate results

### Wong – Baker **FACES** Pain Rating Scale

Useful for young children over 3 years or for patients from a non-English speaking background. Point to each face using the words provided to describe the pain intensity. Ask the patient to select face that best describes their pain and record the appropriate number.



From Wong D.L., Hockenberry-Eaton M., Wilson D., Winkelstein M.L., Schwartz P.: Wong's Essentials of Pediatric Nursing, ed. 6, St. Louis, 2001, p. 1301. Copyrighted by Mosby, Inc. Reprinted by permission.

### Verbal Numerical Rating Scale

The patient rates their pain from “no pain” (0) to “worst pain possible” (10). Suitable for use in children over six years of age who have an understanding of the concepts of rank and order. Avoid using numbers on this scale to prevent the patient receiving cues. Some patients are unable to use this scale with only verbal instructions but may be able to look at a number scale and point to the number that describes the intensity of their pain.

## 1. Initial Approach and Assessment

- Follow approach to an incident steps 1 – 6

### ✓ Assess

- Sudden onset of illness (minutes to hours)

#### AND

- Two or more of **R.A.S.H.** with or without confirmed exposure to allergen
  - **R** respiratory distress (SOB, audible wheeze, cough, stridor)
  - **A** Abdominal symptoms (nausea, vomiting, diarrhoea, abdominal pain / cramps)
  - **S** Skin / mucosal symptoms (hives, welts, itch, flushing, angioedema / facial swelling)
  - **H** Hypotension (or altered conscious state)

#### OR

- Isolated hypotension (SBP < 90 mmHg) following exposure to known antigen

## 2. Initial Management

### ✓ Action

- Administer AV Adrenaline auto-injector (Epi-Pen)
  - Adult / Child > 5 years or > 20kg
    - AV Adrenaline auto-injector (**Epi-Pen**) (0.3 mg)
  - Child ≤ 5 years or < 20kg
    - Adrenaline auto-injector (**Epi-Pen Jr**) (Adrenaline 0.15mg)
    - If < 12 months use Epi-Pen Jr (Adrenaline 0.15mg)
- Advise patient of possible side effects
  - heart racing/palpitations/anxiety
- **IF** no improvement or deterioration is observed after 5 minutes, repeat assessment/management as per **point 1 & 2**

- If still no improvement after second dose of Epi-Pen consult with Clinician for consideration of:
  - Adult – 2 x **Epi-Pen Jr** (Adrenaline 0.15mg)
  - Child – 1 x **Epi-Pen** (Adrenaline 0.3mg)

## 3. Supportive management

### Action

- Commence **oxygen therapy** at 8L per minute via face mask
- **IF** Conscious with Breathing Difficulty
  - Position upright or allow patient to adopt own preferred position
  - Patients with inadequate perfusion may prefer supine with legs elevated
- Consider concurrent Salbutamol as per **Breathing Difficulty C2** (if wheeze heard) but do not delay management per *Point 2*
- **IF** Conscious with NO Breathing Difficulty
  - Position patient supine with legs elevated
- **IF** Unconscious and Inadequate Ventilation
  - Position patient supine
  - Provide IPPV using BVM and 100% **Oxygen**
- Manage as Time Critical
  - Provide Situation Report and minimise scene time

## 4. Patient Transport

### Action

- Commence or prepare patient for transport to nearest approved medical facility OR
- Rendezvous with Paramedic backup
- Provide Situation Report
- Continually reassess and modify treatment as required



- Patients with suspected anaphylaxis should be transported to hospital regardless of the severity of their presentation or response to management (including self-administration prior to arrival) for observation
- Where possible, do not allow patient to stand or walk

## Related Resources

[https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 088 Medication Administration by Auto-Injector \[CPP C1\].pdf](https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 088 Medication Administration by Auto-Injector [CPP C1].pdf)

## 1. Initial Approach and Assessment

- Follow approach to an incident steps 1 – 6
  - Place particular emphasis on providing reassurance
- Minimise patient exertion in all cases

### Assess

- Respiratory distress
- Patient choking or possible airway obstruction
- Wheeze present
- History of event
- History of respiratory problems

### Action

- For all patients with breathing difficulty:
- **IF** conscious
  - Position upright or allow patient to adopt own preferred position
  - **Oxygen** therapy at 8L per minute
- **IF** altered conscious state and inadequate ventilation
  - Position supine
  - Provide high concentration **Oxygen** via BVM
  - Assist ventilation as required
- **IF** choking/airway obstruction assist ventilation as per **point 2**
- **IF** asthma suspected assist ventilation as per **point 3**
- Patients with breathing difficulties have the potential to deteriorate even following initial improvement:
  - Aim to keep scene times to a minimum in each case
  - Manage all patients with breathing difficulties as time critical

- Provide early sit-reps to ESTA dispatch
- **IF no pulse found** – manage as **Cardiac Arrest C4**

## 2. Patient Choking – airway obstruction

### Action

- IF able to effectively cough:
  - Encourage coughing
  - No further intervention is required
  - Monitor for clearance or deterioration
- IF conscious but unable to effectively cough
  - Provide back blows (up to 5) and reassess
  - If still obstructed, provide chest thrusts (up to 5)
  - Monitor for clearance or deterioration
  - Administer Oxygen therapy at 8L per minute
  - IF obstruction remains alternate back blows, chest thrusts and reassessment
- IF unconscious or becomes unconscious but with pulse
  - With patient supine perform 5 external chest compressions
  - Assess for clearance of obstruction
  - Re-assess for palpable pulse
  - Attempt to ventilate patient with Bag Valve Mask
  - Repeat alternating 5 compressions and 2 ventilations as req'd
    - Use suction to assist as necessary
- IF pulse is lost or no pulse found – manage as Cardiac Arrest C4

### Stop

- Do not place fingers in patient's mouth as this may cause bite reflex

### 3. Difficulty breathing - wheeze present or asthma history

#### Action

- Adult:
  - **Salbutamol pMDI 4 – 12 doses via spacer** (patient to take 4 breaths for each dose). Repeat at 20 minutes if required
  - If pMDI spacer unavailable or symptoms severe:
    - **Salbutamol 10 mg** (2 nebules) via nebuliser mask **with oxygen** at 8L per minute
    - Repeat **Salbutamol 5mg** (1 nebule) at 5 minute intervals until symptoms relieved or handover to hospital /Paramedic
- Paediatric - children 2 - 5 years old:
  - **Salbutamol pMDI 2 – 6 doses via spacer** (patient to take 4 breaths for each dose). Repeat at 20 minutes if required
  - If pMDI spacer unavailable or symptoms severe:
    - **Salbutamol 2.5 mg** (half a nebule) via nebuliser mask with **Oxygen**
    - Continue treatment with **Salbutamol 2.5 mg** (half nebule) via nebuliser mask every 20 minutes until patient states breathing is normal or handover to hospital / Paramedic
- Paediatric - Children  $\geq$  6 years old:
  - **Salbutamol pMDI 4 – 12 doses via spacer** (patient to take 4 breaths for each dose). Repeat at 20 minutes if required
  - If pMDI spacer unavailable or symptoms severe:
    - **Salbutamol 5 mg** (1 nebule) via nebuliser mask with **Oxygen**
    - Continue treatment with **Salbutamol 5 mg** (1 nebule) every 20 minutes until patient states breathing normal or handover to hospital / Paramedic
- **IF** no improvement after 20 minutes of Salbutamol
  - Add single dose only of **Atrovent** to nebuliser:
    - Adult 500 mcg (2 nebules)
    - Child 250 mcg (1 nebule)
- **Severe Breathing Difficulties (including Thunderstorm Asthma)**

- If patient requires multiple doses of Salbutamol, assess them against the anaphylaxis 'RASH' criteria
- Consult AV Clinician for further treatment (e.g. IM Adrenaline EpiPen)
- If a patient with suspected thunderstorm asthma doesn't respond to salbutamol AND the clinician is not contactable, administer IM Adrenaline (eg: EpiPen adrenaline autoinjector) as per **CPP C01 Anaphylaxis / Severe Allergic Reaction**
- **IF patient is unconscious or becomes unconscious** (with poor or no ventilation but still with a pulse)
  - Commence **100% Oxygen via Bag Valve Mask** and ventilate slowly at age appropriate rate:
    - Adult 5 - 8 per minute
    - Medium Child 10 - 14 per minute
    - Small Child 12 - 15 per minute
  - Do not over-ventilate as this may worsen condition

## 4. Patient Transport

### Action

- Commence or prepare patient for transport to nearest approved medical facility **OR**
- Rendezvous with Paramedic backup
- Provide Situation Report
- Continually reassess and modify Rx as required

### Related Resources

[https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 059 IPPV with a Bag Valve Mask \[CPP C2\].pdf](https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 059 IPPV with a Bag Valve Mask [CPP C2].pdf)

[https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 076 Admin of a Neb Medication to a Conscious Pt via Aerosol Mask \[CPP C2\].pdf](https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 076 Admin of a Neb Medication to a Conscious Pt via Aerosol Mask [CPP C2].pdf)

## 1. Initial Approach and Assessment

- Follow approach to an incident steps 1 – 6

### Stop

- Ensure no hazard remains and/or patient removed from hazard first
  - Beware burnt clothing or chemical contamination in particular

### Assess

- Possible airway involvement
- Burn Surface Area - BSA (refer burn chart)
- Severity of pain

## 2. Initial Management – oxygen therapy

- The patient has inhaled smoke from fire. Signs and symptoms of smoke inhalation or airway burns include:
  - Evidence of burns to upper torso, neck, face
  - Facial and airway swelling
  - Sooty sputum
  - Burns which have occurred in an enclosed space
  - Singed facial hair (nasal, eyebrows, eye lashes, beard)
  - Respiratory distress
  - Hypoxia (restlessness, irritability, cyanosis, decreased GCS)

### Action

- Apply Oxygen therapy (8 L per minute via mask)

NB. Oxygen is a highly flammable gas. Do not commence oxygen therapy where there is the risk of ignition.

NB. Oxygen therapy is required even if the patients SpO<sub>2</sub> is > 92%.

### 3. Initial Management – cool the burn

#### Action

- **Cool the burn – warm the patient**
- Cool affected area with cool running water for 20 minutes
  - Include cooling already done by others prior to arrival
  - Do not continue to cool after 20 minutes
  - Avoid using dirty water i.e. dam water due to infection risk
  - If running water is not available, cooling may be achieved by immersing the injury in still water, using a spray bottle or applying moist towels
- Consider management as Time Critical particularly if burns to face/suspected airway involvement

#### Stop

- Avoid excessive cooling as hypothermia may result
  - Do not use ice / ice water
  - Avoid / eliminate shivering
  - Consider cooling for shorter periods if large BSA

### 4. Analgesia

#### Action

- Provide pain relief as required per **Pain Relief - Non Cardiac C7**

## 5. Maintain normothermia

### Action

- Protect patient from heat loss during and after cooling
  - Take tympanic temperature
  - Provide warm environment as soon as possible
  - Cover all of patient as soon as cooling is completed

## 6. Dress the burn – post cooling

### Action

- Carefully cut clothing from area unless stuck to the skin
- Remove jewellery before swelling occurs
- Cover burn with cling wrap after cooling
  - Cling wrap should be applied longitudinally
- Ensure cling wrap is not applied too tightly to allow for swelling

## 7. Patient Transport

### Action

- Commence or prepare patient for transport to nearest approved medical facility OR
- Rendezvous with Paramedic backup
- Provide Situation Report
- Continually reassess and modify treatment as required
- If prolonged time to hospital and no Paramedic support is available, conscious and alert patients may be allowed to drink water to maintain hydration



## 1. Initial Approach and Assessment

- Follow approach to an incident steps 1 – 3

### Stop

- Attach defibrillator as soon as practicable after commencing High Performance CPR
  - **IF** single responder attach defibrillator before commencing CPR
  - **IF** paediatric patient
    - Use age appropriate pads for specific defibrillator device
- Follow AED or shock advise spoken / visual instructions
- Consider use of LMA to assist BVM ventilation

**NB. Where trauma is the likely cause of cardiac arrest, prioritise control of major haemorrhage over all other interventions. This may include tourniquets, haemostatic dressings, pelvic splints and/or direct pressure.**

## 2. Shock advised

### Action

- Ensure no contact with patient and safety of crew
- Press **SHOCK** Button
- Immediately resume CPR for 2 minutes
- Analyse rhythm and follow **AED** or shock advisory spoken / visual instructions

Continue until signs of life return or Paramedic arrival – refer **Point 3**

## 2. No shock advised

### Action

- Immediately resume CPR for 2 minutes

- Check for pulse (in < 10 secs) Analyse rhythm and follow AED or shock advisory spoken / visual instructions

Continue until signs of life return or Paramedic arrival – refer **Point 3**

## 3. Continued Resuscitation

### Action

- Repeat 2 minute CPR cycles followed by pulse and rhythm analysis
  - Keep all interruptions to compressions to an absolute minimum
- Continue CPR as per age appropriate **Resuscitation Rates E3**
- **IF** 'no shock' is repeatedly advised and there is significant delay in Paramedic support arrival (i.e. > 30 minutes) **and** there are no compelling reasons to continue (i.e. suspected hypothermia, suspected drug overdose, a child < 18 years of age, or family bystander request for continued efforts)
  - Resuscitation efforts may be ceased following consultation with the Ambulance Clinician in the communications centre where possible
- **IF** a shock is delivered at any stage, or compelling reasons exist or reasonable Paramedic arrival is anticipated
  - Continue resuscitation efforts
- **IF** Paramedic backup is not practicable:
  - Consider requesting a local medical officer to attend the scene OR
  - Organise assistance and transport to nearest approved medical facility with resuscitation continued en route
    - Any transport must be undertaken carefully and not at excessive speed
    - Stop the vehicle to re-analyse the rhythm

## Paediatric Basic Life Support

### Introduction

Cardiac arrest in infants and children is most commonly caused by a lack of oxygen, low blood pressure or both, and should be suspected when the child or infant loses consciousness, and appears pale or cyanosed or is not breathing or has no signs of life. Examples of causes of cardiac arrest in infants and children include trauma, drowning, severe infection sudden infant death syndrome, asthma, upper airway obstruction and congenital abnormalities of the heart and lungs. Infants and children most commonly arrest into severe slow heart rate or their heart stops and this influences the order of resuscitative actions.

Ventricular fibrillation may occur, however, associated with congenital heart conditions or secondary to poisoning with cardioactive medicines. Respiratory arrest may occur alone but if treated promptly may not progress to cardio-respiratory arrest. Particular care must be taken to the appropriateness of any defibrillator for paediatric use, placement of defibrillation pads and energy selection.

The basic principles of paediatric life support are similar to those of adults. Some procedures need to be adapted for differences in paediatric anatomy. Older children may be treated as per adult guidelines but it should be noted that they do not have the same susceptibility to ventricular fibrillation.

### Airway

To assess an airway in a newborn, infant or child, the positioning and techniques are similar to those for an adult with the exception that care should be taken to avoid over extension of the neck and head. The small child, infant and newborn may need a small amount of padding beneath the shoulders to keep the occiput from causing too much flexion of the head and compressing the neck. Noisy breathing, stridor or wheeze and/or neck and chest soft tissue retraction on inspiration are signs of significant partial airway obstruction.

To position the head and neck to maintain an open airway:	
Newborn and Infants	<p>Place head and neck in the neutral position</p> <ul style="list-style-type: none"> <li>• Avoid additional neck flexion and head extension.</li> <li>• A small (approximately 2 cm) pad may be needed below the shoulders due to the relatively larger occiput at this age.</li> </ul>
Children	<p>Place head and neck in the neutral position</p> <ul style="list-style-type: none"> <li>• Use neck flexion and head extension with caution in the younger child.</li> <li>• Children may be managed supine to place in a neutral position. Smaller children may also require padding beneath the shoulders as with infants.</li> <li>• If necessary use a chin lift or jaw thrust, to clear the airway.</li> </ul>

### Breathing

If spontaneous ventilation is not present, an appropriate size oropharyngeal airway should be inserted and assisted ventilation should be commenced immediately using supplemental oxygen. Effective airway control and adequate ventilation with oxygen supplementation is the keystone of paediatric resuscitation.

## Circulation

Commence external cardiac compressions (ECC) if a pulse (carotid, brachial or femoral) is not palpable, or is less than 60 beats per minute (infants) or less than 40 beats per minute (children).

## Newborn Resuscitation

### APGAR Scoring System

The APGAR score should be conducted 1 minute after delivery and repeated at 5 minutes after delivery. A score of:

- 7 – 10 is considered satisfactory
- 4 – 6 moderate depression and may need respiratory support
- 0 – 3 indicates a newborn requiring resuscitation

	0 points	1 point	2 points
<b>Appearance</b>	Blue, Pale	Body pink Extremities blue	Totally pink
<b>Pulse</b>	Absent	< 100	> 100
<b>Grimace</b>	None	Grimaces	Cries
<b>Activity</b>	Limp	Flexion of Extremities	Active motion
<b>Respiratory effort</b>	Absent	Slow and weak	Good strong cry

The APGAR system is not intended for guiding resuscitation. The non-vigorous newborn without adequate responses, including inadequate movement, breathing or pulse should have resuscitation commenced before one minute has elapsed.

### Newborn Resuscitation

The majority of newborns that require resuscitation at birth are apnoeic and bradycardic. Hypoxia depresses respiratory drive. Effective breathing is essential in transforming the newborn cardiovascular system for life outside the uterus. Effective ventilation is the key to newborn resuscitation.

There is no requirement to cut the cord in the vigorous newborn. However, if resuscitation is required then the cord should be cut early. This would usually be after initial basic tactile efforts and commencement of ventilation. To cut the cord clamp twice; place the first clamp 10 cm from the baby and the second a further 5 cm from the baby. Cut between the two clamps.

The normal newborn should be vigorous. The non-vigorous baby (i.e. with poor respiratory effort and poor muscle tone) requires ventilation initially followed by CPR if the heart rate is < 60.

The first 30 seconds after birth should involve gentle rubbing of the (very fragile) skin and tapping of the baby's feet. Keep the baby warm, especially the head, using skin to skin contact with the mother and blankets.

If after 30 seconds and there is no improvement, commence ventilation at 40–60 breaths per minute for 30 seconds. No oxygen should be attached to BVM at this stage. Take care not to overinflate, use gentle rise and fall of the chest as a guide.

If after further 30 seconds the baby remains unimproved, and the heart rate < 100 attach high flow oxygen to the BVM and continue ventilation at 40-60 breaths per minute. Continue ventilations until heart rate is above 100, checking every 30 seconds.

If the baby's heart rate is < 60 at any stage commence CPR until heart rate is above 60, checking every 30 seconds.

Airway suction and use of an oropharyngeal airway is not routinely required in the management of the newborn.

**Note:** Newborn includes from the first few minutes of life to hours post birth. AV accepts the first 24 hours to allow for completion of the lung and cardiovascular transition (this may still take longer than 96 hours).

Paediatric Infant Perinatal Emergency Retrieval (PIPER) for all advice and assistance in obstetric and newborn care is available via the clinician or 1300 137 650.

AGE	RATE	RESUCER	COMPRESS	RATIO
Child 9 - 14 yrs	100	One Two	2 hands	30:2 15:2
Child 1 - 8 yrs	100	One Two	2 hands	30:2 15:2
Infant Up to 1 yr	100	One Two	1 hand	30:2 15:2
Newborn	120	One Two	2 fingers 2 thumbs	3:1 3:1

**CPR:**

- CPR position is the middle of the chest (lower half of the sternum).
- Depth for all age groups is 1/3 depth of the chest.
- Ventilation is guided by rise and fall of the chest with a minimal pause in CPR.
- Aim for minimal hands off chest time with 2 minute pulse check and change of operators to reduce fatigue.

On some occasions, First Responders may attend a patient with a terminal illness who is receiving palliative care or cases where it is not appropriate to commence resuscitation.

## Reasons not to start resuscitation include:

- Any patient with an **advance care directive** to not commence resuscitation
- **Obvious death** such as:
  - Injuries incompatible with life
  - Rigor mortis
  - Post mortem lividity
  - Putrefaction/decomposition
- Death declared by a doctor who is or was at the scene

It is expected in these cases that the First Responders will not commence resuscitation and immediately **consult with the AV Clinician** to seek advice.

## Palliative care

Patients with a terminal illness may be managed at home during the end stages of life. This process is supported by the palliative care health care team under guidelines and pathways of care that have been developed with the patient and family. On some occasions, Ambulance Victoria may be asked to assist where the palliative care team cannot be contacted.

If a first responder team attends a palliative care patient, **contact the AV Clinician for care advice**. Depending on the presentation, the AV Clinician may advise the administration of medications for comfort care; these may include salbutamol, ondansetron, or oral suctioning. Reassure the patient and family and where possible assist with simple comfort measures such as positioning or a warm/cold face washer.

For a patient in the care of a community palliative care service, there may be no benefit in measuring vital signs. However, if paramedic backup is delayed, the Clinician may advise the First Responder to contact the palliative care service who may ask you to measure vital signs to aid their assessment.

## Advance care directives

Ambulance Victoria supports a person's right to articulate wishes for medical treatment and care in advance through an advance care directive.

A First Responder may provide or withhold treatment based upon the patient's wishes as recorded on an advance care directive that is sighted by them or accept, in good faith, the advice from those present at the scene of the patient's wishes and that this supporting documentation exists.

A patient's advance care directive must be followed even where the emergency is not directly related to a pre-existing illness. If the person's wishes are unknown or there is doubt about the documentation or its existence, First Responders are to provide routine care.

First Responders are required to include discussions of patient's wishes and decisions in their documentation.

It is expected in these cases that the First Responders will **consult with the AV Clinician** to seek advice.



## Voluntary Assisted Dying

In Victoria, patients with a terminal diagnosis may choose to undertake Voluntary Assisted Dying (VAD)

The medication used will be a barbiturate that leads to deep sedation and respiratory depression. In most patients, death from respiratory depression occurs within one hour after oral ingestion.

In the unlikely event that AV attends a patient who is actively involved in a VAD case, it is important to note:

- There will be a documented instructional advance care directive for "no resuscitation"
- Family members or other health professionals (including First Responders) are **not permitted** to assist in the administration of the VAD medicine
- Attending staff are **not** to administer active clinical therapy or resuscitation such as oxygen therapy or assisted BVM ventilation
- Supportive care such as positioning and other comfort measures are encouraged

If the dying process is prolonged, first responders are encouraged to contact the AV Clinician who will liaise with the patient's specialist VAD doctor or the palliative care team. If making contact with the specialist team is unsuccessful, and the family require support, transport to hospital may be required.

## 1. Initial Approach and Assessment

- Follow approach to an incident **steps 1 – 6**
- Assess SpO<sub>2</sub>
- Apply O<sub>2</sub> therapy where SpO<sub>2</sub> is < 92% (8L per minute via mask)

### Assess

- Pain suspected to be cardiac in origin using DOLOR and 'payoff'
- Pain Score 0 -10

## 2. IF likely to be cardiac pain / discomfort

### Action

- Manage as time critical and immediately prepare for transport to assist the Paramedic backup crew and minimise scene time
- Administer chewable **Aspirin 300 mg (1 tablet)** if no allergy or sensitivity, associated back pain or other contraindications

## 3. IF Pain Score > 2 and Blood Pressure > 110 mmHg Systolic

### Stop

- **Do not** administer nitrate therapy if the patient:
  - Has any contraindications to nitrates
  - Has a known sensitivity to nitrates

### Action

- **Glyceryl Trinitrate 0.3 mg buccal / sublingual**
  - Remove tablet from mouth and rinse out immediately if the tablet causes problems e.g.

collapse or hypotension

- Assess patient for side effects of nitrate therapy

#### 4. IF pain persists and BP remains > 110 mmHg Systolic and there are no side effects

##### ✓ Action

- Repeat **Glyceryl Trinitrate sublingual / buccal** at original dose at 5 minute intervals until pain is reduced to a comfortable level
- Reassess after each administration. Cease **Glyceryl Trinitrate** administration if BP falls below 110 mmHg or side effects occur.

#### 5. If unable to administer nitrate therapy or pain score > 2 persists despite nitrate therapy as above

##### ✓ Action

- Administer **Methoxyflurane per Pain Relief – Non Cardiac C7**

##### Accredited Practice (Pain Relief)

- Administer **Fentanyl IN** instead of **Methoxyflurane**

#### 6. Patient Transport

##### ✓ Action

- Commence or prepare patient for transport to nearest approved medical facility OR rendezvous with Paramedic backup
- Provide Situation Report
- Continually reassess and modify treatment as required

## 1. Initial Approach and Assessment

- Follow approach to an incident **steps 1 – 6**
- Protect patient from heat loss hypothermia

### Assess

- Signs/symptoms/history of hypoglycaemia
- Blood glucose level (BGL)

### Stop

- Be aware that the patient may be agitated / uncooperative / aggressive.
- **IF** BGL > 4mmol/L:
  - No specific treatment req'd. Consider other cause e.g. stroke

## 2. Patient responds to commands with BGL < 4mmol/L

### Action

- Administer **Glucose Paste 15 g orally**

## 3. Patient does not respond to commands with BGL < 4mmol/L

### Action

- Manage as **Acute Altered Consciousness C12**
- Administer
  - Patient  $\geq$  8years **Glucagon 1 mg IM**
  - Patient < 8years **Glucagon 0.5 mg IM**

## 4. Patient Transport

### Action

- Commence or prepare patient for transport to nearest appropriate medical facility OR rendezvous with Paramedic backup
- Provide Situation Report
- Continually reassess and modify treatment as required

## 1. Initial Approach and Assessment

- Follow approach to an incident **steps 1 – 6**

### ✓ Assess

- Pain Score 0 -10
- Consider **non-medication management** options as appropriate such as splinting and cooling.

## 2. If Pain Score < 4

### ✓ Action

- Check for medication allergies
- Adult: offer **Paracetamol 1000 mg oral** if not contraindicated or already administered within the past 4 hours. Reduce dose to **500 mg** if age > 60 or weight ≤ 60 kg.
- Children: if parent or carer requests analgesia consider **Paracetamol 15 mg / kg oral** liquid if not already administered within the past 4 hrs. Confirm dose with label on bottle.

## 3. If Pain Score ≥ 4

- **Methoxyflurane 3mL** via Pentrox analgiser
  - Check for contraindications
  - Only administer in a well-ventilated area
  - Instruct and encourage patient in correct use of analgiser

#### Accredited Practice (Pain relief)

- **Fentanyl IN** instead of **Methoxyflurane**
- Adults (patient ≥ 12 ):
  - IF age < 60 and weight > 60kg -> **Fentanyl 200mcg IN**
  - IF age ≥ 60 or weight ≤ 60kg -> **Fentanyl 100mcg IN**
- Paediatrics (patient < 12):
  - Identify yourself as ACO/CERT/FR and consult with clinician for management advice

## 4. Ongoing Assessment

### ✓ Assess

- Patient conscious state, vital signs
- Pain score (0 - 10)
- Side effects or adverse reaction to medication administration

## 5. Pain Score Remains < 4

### ✓ Action

- Reassure patient and continue to monitor

## 6. Pain Score $\geq$ 4

- A second dose of **Methoxyflurane 3mL** may be administered if needed
- **IF** pain is relieved:
  - Encourage patient to maintain **Methoxyflurane** therapy
- **IF** change in consciousness:
  - Have patient cease therapy until conscious state improves

### Accredited Practice (Pain Relief)

- **IF** pain persists  $\geq$  4, further **Fentanyl IN**
- Adults (patient  $\geq$  12 ):
  - IF age < 60 and weight > 60kg -> **Fentanyl 50mcg IN at 5 minute intervals** titrated to pain relief or side effects (max. total dose 400 mcg)
  - IF age  $\geq$  60, or weight < 60kg -> **Fentanyl 50mcg IN at 5 minute intervals** titrated to pain relief or side effects (max. total dose 200 mcg)
- Paediatrics (patient < 12) as per clinician advice

## 7. Patient Transport

### Action

- Commence or prepare patient for transport to nearest approved medical facility OR rendezvous with Paramedic backup
- Provide Situation Report
- Continually reassess and modify treatment as required

## 8. Special Notes

- Ensure adequate reassurance provided
- Apply appropriate splinting for all traumatic injuries
- The maximum dose of **Methoxyflurane** for any one patient is 6 mL per 24 hour period. This must NOT be exceeded.
- If a patient is allergic to **Fentanyl**, **Methoxyflurane** may be used as an alternative (if otherwise not contraindicated).



1. In cases of clear traumatic cardiac arrest, haemorrhage control and managing correctable causes become the priority prior to attempting resuscitation. This will include pelvic splinting in the setting of significant blunt pelvic injury.
2. For any potential major trauma patient, hypothermia is a significant concern. Preventing heat loss is an important priority.
3. Mechanism of injury is a significant risk factor indicator. Understanding how the incident occurred is key to understanding care urgency and priorities.
4. If a patient has suffered a blunt head injury with or without loss of consciousness and now presents with GCS 13-15 and any of the following:
  - Any loss of consciousness > 5 minutes
  - skull fracture - depressed, open or base of skull
  - vomiting more than once
  - neurological deficit (loss of function or sensation)
  - any reported seizure activity

this should be considered a significant blunt head injury meeting the potential major trauma criteria and AV attendance should be requested.

5. Spinal immobilisation is indicated if the patient:
  - Meets Major Trauma Criteria  
OR
  - Has a mechanism of injury suspected to cause spinal injury (such as fall with head strike) AND any of the following:
    - i. Age > 65 years
    - ii. History of bone disease (e.g. osteoporosis, osteoarthritis, rheumatoid arthritis) or muscular weakness disease (muscular dystrophy)
    - iii. Unconscious, altered conscious state or period of loss of consciousness
    - iv. Drug or alcohol affected
    - v. Significant distracting injury (e.g. extremity fracture or dislocation)
    - vi. Spinal column pain / bony tenderness
    - vii. Neurological deficit or changes
6. Timely and effective pain management is important for long term patient outcomes. Severe trauma pain will require large analgesic doses. Consult the AV Clinician in these cases.
7. Effective splinting can reduce pain and blood loss and should be performed where possible.
8. Patients who have fallen but have no apparent injury still require thorough assessment and close monitoring.  
Higher risk falls include patients:
  - on anti-coagulants; e.g. warfarin, heparin, enoxaparin (Clexane), dabigatran, rivaroxaban
  - with incomplete recall of how the fall occurred
  - who have spent an extended period of time on the ground (there is no specific timeframe defined as safe/unsafe)
  - who have collapsed due to an underlying medical cause.
9. Burns cases hold unique assessment and management challenges. Cooling the burn is a care priority, however keep the patient warm. Monitor for developing airway compromise.

10. In the case of a multiple casualty situation, or in circumstances that result in activation of the State Health Emergency Response Plan, NEPT resources may be responded to assist, and directed by a Health Commander to treat and transport patients that fall outside their normal acuity levels.

### Related Resources

[https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 100 Application of a Rigid Cervical Collar \[CPP C8 CPGA0804\].pdf](https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 100 Application of a Rigid Cervical Collar [CPP C8 CPGA0804].pdf)

## 1. Initial Approach and Assessment

- Follow approach to an incident **steps 1 – 6**

### ✓ Assess

- Assess respiratory status
- Type of chest injury – open, closed

## 2. Initial Management

- Position patient upright or position of comfort unless:
  - **IF** potential spinal injury, place supine with head in neutral position if possible
    - Refer Traumatic Fracture Injuries C10 – Point 4
  - **IF** inadequate perfusion, place supine with legs slightly elevated if possible
  - **IF** patient cannot tolerate chosen position, assist patient to find position of comfort and maintain
- Commence **Oxygen therapy** 8L per minute via Hudson mask
- Provide pain relief per **Pain relief – Non Cardiac C7**
- **IF** inadequate ventilation and altered conscious state
  - Administer high concentration **Oxygen therapy** via BVM
  - Provide assisted ventilation if required
- Manage as Time Critical – prepare patient for transport and minimise scene time

## 3. Specific Injury Management

### ✓ Action

- Expose chest
- **IF** open chest wound
  - Do not occlude open chest wound. Appropriate dressing only if required for haemorrhage control
- **IF** suspected fractured ribs

- Place patient in position of comfort
- Pain associated with rib fractures may lead to hypoventilation. In these instances, prioritise careful titration of analgesia

## 4. Patient deterioration

### ✓ Assess

- Increasing breathing difficulty
- Decreasing conscious state
- Decreasing perfusion – increasing pulse and/or decreasing BP

### ✓ Action

- **IF** providing assisted ventilation
  - Cease then reassess
  - If necessary, continue assisting ventilation at a slower rate
  - Continue to administer high concentration oxygen therapy

## 5. Patient Transport

- Commence or prepare patient for transport to nearest appropriate medical facility OR rendezvous with Paramedic backup
- Provide Situation Report
- Continually reassess and modify treatment as required

## 1. Initial Approach and Assessment

- Follow approach to an incident **steps 1 – 6**
- **IF** patient meets major trauma criteria manage as time critical.
  - Appropriate splinting is essential pre-hospital management. Do not compromise in order to decrease time at scene.

### Assess

- Injuries using PILSDUCT
- Neurovascular condition distal to the fracture site
- Pain score 0 – 10

## 2. Initial Management

### Action

- General Principles of fracture management
  - Control external haemorrhage
  - Support the injured area e.g. slings or padding
  - Immobilise the joint above and below the fracture site
  - Provide pain relief as per **Pain relief – Non Cardiac C7**
- Principles of splinting
  - Re-align long bone fractures in as close to normal position as possible. Do not persist if resistance encountered – manage as found
  - Do not re-align limbs if joints are involved as there is a possibility of vascular or nerve injury
  - Open fractures with exposed bone should be irrigated with sterile water or normal saline before management
  - Femoral shaft fractures and fractures of the upper 2/3 of the tibia and fibula should be managed with a traction splint unless there are distal fractures or joint involvement
  - Suspected neck of femur (NOF) fractures should only be anatomically splinted

### 3. Suspected Pelvic fracture

#### ✓ Action

- Pelvic splints are a haemorrhage control device. If there is suspicion of a pelvic injury, a pelvic splint should be applied as a priority.
- If a patient has inadequate perfusion and/or an altered conscious state following a mechanism that may result in pelvic injury, a pelvic splint should be applied as a priority.
- For all suspected fractures of the pelvis, splint with sheet wrap, bring both legs together and anatomically splint. If leg injuries permit, slightly flex knees and support in position.
- If there is suspicion of both pelvic and leg injury, pelvic splinting and the CT-6 traction splint can be applied, but the pelvic splint is the priority and should be applied first.

### 4. Suspected Spinal Injury

#### ✓ Assess

- Any injury with potential for spinal injury
- Age > 65 years
- History of bone disease (e.g. osteoporosis, osteoarthritis, rheumatoid arthritis) or muscular weakness disease (muscular dystrophy)
- Unconscious, altered conscious state or period of loss of consciousness
- Drug or alcohol affected
- Significant distracting injury (e.g. extremity fracture or dislocation)
- Spinal column pain / bony tenderness
- Changed movement or sensation

Where the patient has self-extricated, it is acceptable to ambulate the patient a short distance to the stretcher only where the patient is conscious, co-operative, not intoxicated, neurologically intact (no altered movement or sensation) and not prevented from doing so by injury. Immobilise supine on the stretcher.

#### ✓ Action

- IF suspected fractures of the spine:

- Return head to neutral position
- Do not force if resistance felt or if pain increases
- One operator should hold patient's head in position continuously
  - This operator should call and coordinate all patient movement
- Apply appropriate sized cervical collar contacting directly to skin
- Move patient with entire spinal column maintained in line
  - Where available, use a purpose built device such as KED
- Manage supine if other injuries permit
  - Support head as patient is lowered to supine position
- Encourage patient to not move, particularly the head
  - Consider full spinal immobilisation application
  - For all suspected

## NOTES:

- If circumstances are such that a collar is judged to significantly worsen support and stability, it may be loosened, removed or omitted where there are no other options (e.g. calming the patient)
- Consider prophylactic antiemetic as per Nausea and Vomiting C13 in all awake spinally immobilised patients

## 5. Patient Transport

### Action

- Commence or prepare patient for transport to nearest appropriate medical facility OR rendezvous with Paramedic backup
- Provide Situation Report
- Continually reassess and modify treatment as required

## Related Resources

[https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 109 Pelvic Sheet Wrap \[CPP C10\].pdf](https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 109 Pelvic Sheet Wrap [CPP C10].pdf)

[https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 156 Application of CT-6 Traction Splint \[CPP C10 CPG A0806\].pdf](https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 156 Application of CT-6 Traction Splint [CPP C10 CPG A0806].pdf)

[https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 177 Pelvic Splint final \[CPP C10 CPG A0806\].pdf](https://av-digital-cpg.web.app/assets/pdf/CWI/CWI OPS 177 Pelvic Splint final [CPP C10 CPG A0806].pdf)



## 1. Initial Approach and Assessment

- Follow approach to an incident **steps 1 – 6**

### Assess

- Stroke signs and symptoms as below
- Assess SpO<sub>2</sub>. If SpO<sub>2</sub> < 92%, commence Oxygen therapy at 8L per minute via Hudson mask
- Hypoglycaemia for exclusion
- Time of onset of signs and symptoms

### Consider

- Stroke mimics
  - Drug or alcohol affected
  - Brain tumour
  - Seizure or post seizure
  - Migraine
  - Syncope
  - Middle ear disorder

Stroke Signs and Symptoms			
Assessment	Findings	Normal	Abnormal
Facial Droop	Patient shows teeth or smiles	Both sides of face move equally	One side of face does not move as well as other
Speech	Patient repeats “You can’t teach an old dog new tricks”	Patient says the correct words, no slurring	Patient slurs words, says the wrong words or is unable to speak or understand
Hand grip	Test same as for GCS	Equal grip strength	Unilateral weakness

## 2. Initial Management

## Action

- **IF** conscious
  - Place patient in position of comfort
- **IF** altered conscious state or seizure evident at any time
  - Manage concurrent per **Acute Altered Consciousness C12**
- **IF** patient is hypoglycaemic with BGL < 4 mmol/L
  - Manage as per Hypoglycaemia (low blood sugar) C6
- Support and protect all limbs
- Manage as Time Critical
  - Provide Situation Report and minimise on scene time

## 3. Patient Transport

## Action

- Commence or prepare patient for transport to nearest approved medical facility OR
- Rendezvous with Paramedic backup
- Provide Situation Report
- Continually reassess and modify treatment as required

## Special Note

- It is important to determine the exact time of onset of stroke symptoms. Patients within 12 hours of onset may benefit from current stroke therapies available in many centres.
- **IF** the patient wakes with stroke signs and symptoms the time is taken from when the patient was last seen well and not from time of awakening.
- **IF** stroke signs and symptoms resolve, the patient should continue to be managed as for acute stroke and transported to hospital.

## 1. Initial Approach and Assessment

- Follow approach to an incident **steps 1 – 6**

### Assess

- History / likely cause for conscious state change e.g.
  - Alcohol / drug intoxication
  - Epilepsy (seizure activity; post ictal)
  - Insulin (diabetic) or other metabolic problem
  - Overdose or low oxygen (hypoxia)
  - Underdose (of medication or drug / alcohol withdrawal)
  - Trauma to the head
  - Infection
  - Pain or psychiatric condition
  - Stroke or TIA

### Stop

- Protect patient and self from injury during any seizure
- Consider risk factors if drug taking suspected e.g. syringe

### Action

- Place patient in lateral position
  - Support head during and after movement
  - Gently suction the airway if necessary and able
- **IF** Pt is biting, do not attempt to insert anything past the teeth
- Commence **Oxygen therapy** 8L per minute
- **IF** inadequate ventilation
  - Position patient supine

- Use BVM with oxygen attached to maintain 12 ventilations/min
- Ventilate children (< 12 years) at appropriate rate/tidal volume
- **IF** stroke suspected manage as per **Acute Stroke C11**
- **IF** Hypoglycaemia suspected manage as per **Hypoglycaemia (Low Blood Sugar) C6**
- Provide Situation Report as soon as practicable
  - Call for other support resources early
- Continually reassess and modify treatment as required

## 2. Seizure Evident

### Action

- Most seizures will self-terminate. Continue basic care and vital sign monitoring as required during and post seizure.
- Protect patient from injury.
- IF patient carer / parent is able to administer prescribed medication, assist them to do so.
  - Patients administered medication to treat seizures must be monitored closely for signs of inadequate breathing
- IF inadequate breathing
  - Use BVM with oxygen attached to maintain 12 ventilations/min
  - Ventilate children (< 12 years) at appropriate rate/tidal volume

## 3. Drug / Medication Overdose Suspected

### Assess

- Evidence of illicit drug administration including paraphernalia
- Evidence of medications taken including bottles and foils

## Stop

- Accidental needle stick injury must be a paramount concern at all times. Beware of / try to locate used needles before continuing
- Scenes involving illicit drug taking can be unpredictable and volatile. Enter such scenes and manage patients with great caution. Wait for police assistance if considered unsafe.

## Action

- Continue to manage per Point 1 initial assessment / approach
- Provide early Situation Report, particularly where hazards are present

## 4. Traumatic Head Injury

- Dress wounds and control bleeding
- Suction airway as appropriate but avoid causing patient gagging
  - Use an airway device only if necessary to allow ventilation
- Provide good cervical spine care as per Traumatic Fracture Injuries C10
- Continue to manage per Point 1 initial assessment / approach
  - Ensure head is maintained in a carefully supported neutral
  - position whether lateral or supine positioned

## 5. Patient Transport

### Action

- Commence or prepare patient for transport to nearest appropriate medical facility OR rendezvous with Paramedic backup
- Provide Situation Report
- Continually reassess and modify treatment as required

## 1. Initial Approach and Assessment

- Follow approach to an incident **steps 1 – 6**

### Assess

- Nausea and or vomiting
- Potential motion sickness or dizziness
- Prophylactic antiemetic for spinally immobilised patient

## 2. Initial Management

- Follow approach to an incident steps 1- 6

### Action

- Nausea and/or vomiting is being tolerated:
  - If nausea and vomiting is being tolerated, basic care, reassurance and transport is the only care required.
- If nausea and/or vomiting is **NOT** being tolerated:
  - **ADULT - Ondansetron 4mg ODT orally**
    - Repeat 4 mg after 20 minutes if symptoms persist (Max. 8 mg)
  - **SMALL CHILD - Ondansetron 2 mg ODT orally**
  - **MEDIUM CHILD - Ondansetron 4mg ODT orally**
- Consult with Clinician if nausea and vomiting persists

## 3. Patient Transport

### Action

- Commence or prepare patient for transport to nearest appropriate medical facility OR rendezvous with Paramedic backup

- Provide Situation Report
- Continually reassess and modify treatment as required

## Preparation

- Reassure including cultural considerations
- Prepare equipment for normal birth
- Provide a warm and clean environment
- Provide analgesia as per Pain Relief (non-cardiac) protocol

## Birth of head

- As head advances, encourage the mother to push with each contraction.
- If head is birthing too fast, ask mother to pant with an open mouth during contractions instead
- Place fingers on baby's head to feel strength of descent of head
- If precipitous (i.e. extremely quick birth), apply gentle backward and downward pressure to control sudden expulsion of the head
  - Do not hold back forcibly.

## Umbilical cord check

- Following the birth of the head, check for umbilical cord around neck:
  - If loose, slip over baby's head and check not wrapped around more than once.
  - If tight, apply umbilical clamps and cut in between.

## Head rotation

- With the next contraction the head will turn to face one of the mother's thighs (restitution)
  - Indicative of internal rotation of shoulders in preparation for birth of body.

## Birth of the shoulders and body

- May be passive or guided birth
- Hold baby's head between hands and if required apply gentle downwards pressure to deliver the anterior (top) shoulder
- Once the baby's anterior (top) shoulder is visible, if necessary to assist birth, apply gentle upward pressure to birth posterior (lower) shoulder – the body will follow quickly
- Support the baby



- Note time of birth
- Place baby skin to skin with mother on her chest to maintain warmth unless baby is not vigorous / requires resuscitation
- Manage the non-vigorous newborn as per 'Newborn Resuscitation' protocol
- If the body fails to deliver in < 60 sec after the head, consult with Clinician urgently.

## Clamping and cutting the cord

- If the newborn is vigorous, the cord can be cut at a convenient time over 1 – 3 min. The cord should stop pulsing
- If the newborn is non-vigorous and may require resuscitation, the cord may need to be cut earlier
- Clamp twice, the first 10 cm from the baby then a second a further 5 cm.
- Cut between the two clamps

## Birthing placenta (third stage)

### Passive (expectant) Management

- Allow placental separation to occur spontaneously without intervention
- This may take from 15 minutes to 1 hour
- Position mother sitting or squatting to allow gravity to assist expulsion
- Breast feeding may assist separation or expulsion
- Do not pull on cord – wait for signs of separation
  - lengthening of cord
  - uterus becomes rounded, firmer, smaller
  - trickle or gush of blood from vagina
  - cramping / contractions return
- Placenta and membranes are birthed by maternal effort. Ask mother to give a little push
- Use two hands to support and remove placenta using a twisting 'see saw' motion to ease membranes slowly out of the vagina
- Note time of delivery of placenta
- Place placenta and blood clots into a container and transfer
- Inspect placenta and membranes for completeness
- Inspect that fundus is firm, contracted and central
- Continue to monitor fundus though do not massage once firm
- If fundus is not firm or blood loss > 500 mL initiate fundal massage and if appropriate let the baby

breast feed. Contact the clinician immediately.

<b>Presentation</b>	<b>Epi-Pen Adult Adrenaline Auto Injector (0.3 mg)</b> <b>Epi-Pen Jnr Adrenaline Auto Injector (0.15 mg)</b>
<b>Primary emergency Indications</b>	<ul style="list-style-type: none"> <li>Anaphylaxis / severe allergic reaction</li> </ul>
<b>Contraindications</b>	<ul style="list-style-type: none"> <li>Nil of significance for the above indication</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>Nil of significance for the above indication</li> </ul>
<b>Route of administration</b>	Intra-muscular injection
<b>Dose</b>	<ul style="list-style-type: none"> <li>As per Doctor's Instructions</li> <li>Epi-Pen Adult Adrenaline auto injector (0.3 mg) - [<math>&gt; 5</math> years or <math>&gt; 20</math>kg]</li> <li>Epi-Pen Jnr Adrenaline auto injector (0.15 mg) - [<math>\leq 5</math> years or <math>&lt; 20</math>kg, including patients <math>&lt; 12</math> months]</li> </ul>
<b>Side effects</b>	<ul style="list-style-type: none"> <li>Tachycardia</li> <li>Hypertension</li> <li>Dilated pupils</li> <li>Feeling of anxiety / palpitations</li> </ul>

<b>Presentation</b>	<b>300 mg chewable tablets</b>
<b>Primary emergency Indications</b>	<ul style="list-style-type: none"> <li>• Cardiac Chest Pain / Discomfort</li> </ul>
<b>Contraindications</b>	<ul style="list-style-type: none"> <li>• Hypersensitivity to aspirin / salicylates</li> <li>• Actively bleeding peptic ulcers</li> <li>• Bleeding disorders</li> <li>• Suspected aortic aneurysm</li> <li>• Chest pain associated with psychostimulant OD &amp; Systolic Blood Pressure &gt; 160mm Hg</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>• History of peptic ulcer</li> <li>• Asthma</li> <li>• Patients on anticoagulants (i.e. warfarin)</li> </ul>
<b>Route of administration</b>	Oral
<b>Dose</b>	300mg tablet
<b>Side effects</b>	<ul style="list-style-type: none"> <li>• Heartburn, nausea, gastrointestinal bleeding</li> <li>• Increased bleeding time</li> <li>• Hypersensitivity reactions</li> </ul>
<b>Special notes</b>	Aspirin is not be administered for any condition other than chest pain / discomfort of a cardiac nature

<b>Presentation</b>	<b>250 mcg in 1 mL ampoule</b>
<b>Primary emergency Indications</b>	<ul style="list-style-type: none"> <li>• Pre hospital pain relief (<u>Accredited Practice</u>)</li> </ul>
<b>Contraindications</b>	<ul style="list-style-type: none"> <li>• Known hypersensitivity</li> <li>• Complications with the nose i.e. Rhinitis or Facial Trauma</li> <li>• Second stage labour pain</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>• Patients &gt; 60 years</li> <li>• Patients &lt; 60 kilograms</li> <li>• Children &lt; 12 years (consult with Clinician)</li> <li>• Kidney or liver failure</li> <li>• Respiratory depression i.e. COPD</li> <li>• Current asthma</li> <li>• Known addiction to narcotics</li> </ul>
<b>Dose</b>	<ul style="list-style-type: none"> <li>• Age &lt; 60 and weight &gt; 60kg IN – 200mcg</li> <li>• Age ≥ 60 OR weight &lt; 60kg IN – 100mcg</li> <li>• Can administer further 50mcg IN at 5/60 intervals titrating to pain or side effects</li> <li>• The maximum total dose is twice the initial dose in either case</li> <li>• Consult with clinician for paediatric (&lt; 12 years) management</li> </ul>
<b>Side effects</b>	<ul style="list-style-type: none"> <li>• Respiratory depression</li> <li>• Apnoea</li> <li>• Bradycardia</li> </ul>
<b>Special notes</b>	<p>Fentanyl is a schedule 8 medicine under the Poisons Act. Its use must be carefully controlled with accountability and responsibility.</p> <p>Severe undesired effects such as respiratory depression can be reversed with Naloxone. Consult for management advice.</p> <p>Intranasal Fentanyl is highly concentrated and must never be administered by another route.</p> <p>Intranasal Fentanyl is not approved for use in children (&lt; 12 years) without approval from the Clinician.</p> <p>NB. First ensure clear identification as a First Responder (ACO/CERT) to the clinician.</p>

<b>Intra-Nasal Effects</b>	<b>Onset:</b> Immediate <b>Peak:</b> < 5 minutes <b>Duration:</b> 30 – 60 minutes
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<b>Presentation</b>	<b>1 mg in 1 mL Hypokit</b>
<b>Primary emergency Indications</b>	<ul style="list-style-type: none"> <li>Diabetic Hypoglycaemia (low blood sugar) with altered BGL &lt; 4 mmol/L and altered conscious state</li> </ul>
<b>Contraindications</b>	<ul style="list-style-type: none"> <li>Nil of significance for the above indication</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>Nil of significance for the above indication</li> </ul>
<b>Route of administration</b>	Intra-muscular injection
<b>Dose</b>	<ul style="list-style-type: none"> <li>≥ 8 years of age – 1 mg (1 mL) IM</li> <li>&lt; 8 years of age – 0.5 mg (0.5 mL) IM</li> </ul>
<b>Side effects</b>	<ul style="list-style-type: none"> <li>Nausea and vomiting (rare)</li> </ul>
<b>Special notes</b>	Not all patients will respond to Glucagon, particularly children, and it is important to ensure early transport / activation of Paramedic backup in all cases of hypoglycaemia
<b>Intramuscular times</b>	<ul style="list-style-type: none"> <li>Onset: 3 – 5 minutes</li> <li>Duration: 12 – 25 minutes</li> </ul>

<b>Presentation</b>	15 g tube
<b>Primary emergency Indications</b>	<ul style="list-style-type: none"> <li>Diabetic hypoglycaemia (low blood sugar) with altered BGL &lt; 4 mmol/L and altered conscious state but able to cooperate</li> </ul>
<b>Contraindications</b>	<ul style="list-style-type: none"> <li>Inability to swallow due to altered conscious state</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>Nil of significance for the above indication</li> </ul>
<b>Route of administration</b>	Oral
<b>Usual Dose</b>	15 g orally
<b>Side effects</b>	<ul style="list-style-type: none"> <li>Nausea and vomiting</li> </ul>
<b>Special notes</b>	Not all patients will respond to Glucose paste and it is important to ensure early transport / activation of Paramedic backup in all cases of hypoglycaemia



<b>Presentation</b>	<b>0.6 mg tablets</b> <b>0.3 mg tablets</b>
<b>Primary emergency Indications</b>	<ul style="list-style-type: none"> <li>• Cardiac chest pain / discomfort</li> </ul>
<b>Contraindications</b>	<ul style="list-style-type: none"> <li>• Known hypersensitivity</li> <li>• Systolic blood pressure &lt; 110 mmHg</li> <li>• Sildenafil Citrate” VIAGRA” or Vardenafil “LEVITRA” administered in the previous 24 hours</li> <li>• Tadalafil “CIALIS” administered in the previous 2 days</li> <li>• Heart rate &gt; 150 per minute</li> <li>• Heart rate &lt; 60 per minute</li> <li>• Pale / grey moist skin</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>• No previous administration of Glyceryl Trinitrate</li> <li>• Elderly patients</li> </ul>
<b>Route of administration</b>	Sublingual, buccal
<b>Dose</b>	0.3 mg sublingual
<b>Side effects</b>	<ul style="list-style-type: none"> <li>• Hypotension</li> <li>• Tachycardia</li> <li>• Headache</li> <li>• Bradycardia (uncommon)</li> <li>• Skin flushing (occasionally)</li> </ul>
<b>Special notes</b>	<p>Glyceryl Trinitrate is susceptible to heat and moisture and tablets must be stored tightly sealed in their original container. Anginine brand tablets require to be discarded 6 months after the container is opened and Nitrostat brand require to be discarded 6 months after opening (write date on bottle).</p> <p>Do not administer a patient’s own medication as it may not have been stored in optimal conditions.</p>
<b>Sublingual/buccal effects</b>	<b>Onset:</b> 30 seconds – 2 minutes <b>Peak:</b> 3 – 5 minutes <b>Duration:</b> 15 – 30 minutes

<b>Presentation</b>	250 mcg in 1 mL nebule	
<b>Primary emergency Indications</b>	<ul style="list-style-type: none"> <li>Severe asthma</li> </ul>	
<b>Contraindications</b>	<ul style="list-style-type: none"> <li>Known hypersensitivity to Atropine or its derivatives</li> </ul>	
<b>Precautions</b>	<ul style="list-style-type: none"> <li>Glaucoma</li> <li>Avoid contact with eyes</li> </ul>	
<b>Route of administration</b>	Nebulised	
<b>Dose</b>	Adults: 500 mcg (2 nebules) concurrently with salbutamol	Children: 250 mcg (1 nebule) concurrently with salbutamol
<b>Side effects</b>	<ul style="list-style-type: none"> <li>Headache</li> <li>Skin rash</li> <li>Nausea</li> <li>Tachycardia (rare)</li> <li>Dry mouth</li> <li>Palpitations (rare)</li> <li>Acute angle closure glaucoma secondary to direct eye contact (rare)</li> </ul>	
<b>Special notes</b>	<p>There have been isolated reports of eye complications as a result of direct eye contact with Atrovent (eye pain, glaucoma).</p> <p><b>The nebuliser mask must therefore be fitted properly during inhalation and care taken to avoid Atrovent entering the patient's eyes.</b></p> <p>Atrovent must be nebulised in conjunction with Salbutamol</p>	

<b>Presentation</b>	<b>3 mL glass bottle with plastic seal</b>
<b>Primary emergency Indications</b>	<ul style="list-style-type: none"> <li>• Pre-hospital pain relief</li> </ul>
<b>Contraindications</b>	<ul style="list-style-type: none"> <li>• Pre-existing kidney disease</li> <li>• Patients taking tetracycline antibiotics</li> <li>• Exceeding total dose of 6 mL in any 24 hour period</li> <li>• Personal or family history of malignant hyperthermia</li> <li>• Muscular Dystrophy</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>• Pre-eclampsia</li> <li>• Pentrox inhaler must be held by patient so that if unconsciousness occurs it will fall from patient's face</li> <li>• Patient must be supervised at all times during Methoxyflurane administration</li> </ul>
<b>Route of administration</b>	Supervised self-administration via hand held Pentrox inhaler
<b>Dose</b>	3 mL via Pentrox inhaler. This will provide approximately 25 minutes of pain relief and may be followed by one further dose once the original dose has expired, if required.
<b>Side effects</b>	<ul style="list-style-type: none"> <li>• Drowsiness</li> <li>• Exceeding maximum total dose of 6 ml in 24 hour period may lead to kidney damage</li> <li>• Decrease in blood pressure and bradycardia (rare)</li> </ul>
<b>Special notes</b>	Analgesia commences after 8 - 10 breaths and lasts for approximately 3 - 5 minutes once discontinued

<b>Presentation</b>	4 mg ODT
<b>Primary emergency Indications</b>	<ul style="list-style-type: none"> <li>Nausea and vomiting</li> </ul>
<b>Contraindications</b>	<ul style="list-style-type: none"> <li>Known hypersensitivity to Ondansetron</li> <li>Concurrent Apomorphine use (treatment for Parkinson's disease)</li> <li>Known Long Q-T Syndrome</li> <li>Low potassium or low magnesium</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>Patients with liver disease should not receive more than 8 mg/day</li> </ul>
<b>Dose</b>	<ul style="list-style-type: none"> <li><b>Adult:</b> Ondansetron 4 mg wafer orally; repeat 4 mg after 20 minutes if symptoms persist (Max. 8 mg)</li> <li><b>Small child:</b> Ondansetron 2 mg wafer orally</li> <li><b>Medium child:</b> Ondansetron 4 mg wafer orally</li> <li>Consult with Clinician if nausea and vomiting persists</li> </ul>
<b>Special notes</b>	<p>If nausea and vomiting is the likely result of motion sickness or dizziness, then Ondansetron management is less likely to benefit patient.</p> <p>May cause headache</p>

<b>Presentation</b>	<p><b>High pressure white cylinder</b></p> <p><b>“C” cylinder – 400-490 litres</b></p> <p><b>“D” cylinder – 1500-1650 litres</b></p>
<b>Primary emergency Indications</b>	<ul style="list-style-type: none"> <li>• Treatment of hypoxia / hypoxaemia (SpO<sub>2</sub> &lt; 92%)</li> <li>• Cardiac arrest or resuscitation</li> <li>• Major trauma / head injury</li> <li>• Carbon monoxide poisoning</li> <li>• Shock / anaphylaxis</li> <li>• Severe sepsis</li> <li>• Decompression illness</li> <li>• Seizure</li> </ul>
<b>Contraindications</b>	<ul style="list-style-type: none"> <li>• Nil of significance for the above indications</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>• Beware of fire or explosive hazards</li> </ul>
<b>Dose</b>	<p>Moderate concentration (40% - 60%) via face mask at 8L per minute</p> <p>High concentration (60% - 95%) via Bag Valve Mask (BVM) device with reservoir bag at 8 – 15L per minute</p>
<b>Side effects</b>	<ul style="list-style-type: none"> <li>• Drying of the mucous membranes of the upper airway</li> </ul>
<b>Special notes</b>	<p>The minimum oxygen flow through a face mask is 6L per minute</p> <p>The maximum oxygen flow through nasal prongs is 3L per minute</p>

## General Notes

<b>Presentation</b>	500 mg tablets 120 mg in 5 mL (24 mg/mL) oral liquid
<b>Primary emergency Indications</b>	<ul style="list-style-type: none"> <li>Mild pain</li> </ul>
<b>Contraindications</b>	<ul style="list-style-type: none"> <li>Hypersensitivity to paracetamol</li> <li>Children &lt; 1 month of age</li> <li>Total paracetamol intake within past 24 hours exceeding 4 g (adults) or 60 mg/kg (children)</li> <li>Paracetamol administered within past 4 hours</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>Impaired liver / renal function</li> </ul>
<b>Route of administration</b>	Oral
<b>Dose</b>	<ul style="list-style-type: none"> <li><u>Adult</u>: Paracetamol 1000 mg oral <ul style="list-style-type: none"> <li>Reduce dose to 500 mg if age &gt; 60 or weight ≤ 60kg</li> </ul> </li> <li><u>Children</u>: Paracetamol 15 mg / kg oral liquid <ul style="list-style-type: none"> <li>Confirm dose with label on bottle.</li> </ul> </li> </ul>
<b>Side effects</b>	<ul style="list-style-type: none"> <li>Hypersensitivity reactions including severe skin rashes (rare)</li> </ul>
<b>Special notes</b>	<ul style="list-style-type: none"> <li>There are several brands of paracetamol available in Australia. Paracetamol is also found in many combination medicines, both prescription and over-the-counter. Carefully determine previous paracetamol intake before dose administration.</li> <li>The usual dose of paracetamol for children is 15 mg/kg per dose.</li> </ul>

## Paediatric Paracetamol Dosing

<b>Paracetamol 15mg/kg dose (based on 120mg in 5mL liquid) CONFIRM DOSE WITH LABEL ON BOTTLE</b>			
<b>Age (years)</b>	<b>Weight (kg)</b>	<b>Dose (mg)</b>	<b>Volume (nearest mL)</b>
2 month	5	75	3
6 month	7	105	4
1 year	10	150	6
2	12	180	8
3	14	210	9
4	16	240	10
5	18	270	11
6	20	300	13
7	22	330	14
8	24	360	15
9	26	390	16
10	33	495	21
11	36	540	23

- Recommended dosages are based on 15 mg of paracetamol per kg of bodyweight.
- Children  $\geq$  10 years can have 500 mg (1 tablet)

<b>Presentation</b>	<b>5 mg in 2.5 ml nebulers</b> <b>pMDI (100 mcg per actuation)</b>
<b>Primary emergency Indications</b>	<ul style="list-style-type: none"> <li>Breathing difficulty with wheeze and/or history of asthma</li> <li>No relief from patients own Ventolin administration</li> <li>Breathing difficulty with severe allergic reactions</li> <li>Breathing difficulty with smoke inhalation</li> </ul>
<b>Contraindications</b>	<ul style="list-style-type: none"> <li>Children &lt; 2 years old</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>Nil</li> </ul>
<b>Dose</b>	<ul style="list-style-type: none"> <li>Children 2 - 5 years old: <ul style="list-style-type: none"> <li>pMDI 2 – 6 doses via spacer (patient to take 4 breaths for each dose). Repeat at 20 minutes if required</li> <li>If pMDI spacer unavailable or symptoms severe: <ul style="list-style-type: none"> <li>Nebulised 2.5 mg (half a nebule) via nebuliser mask with oxygen</li> <li>Continue treatment with 2.5 mg (half a nebule) every 20 minutes until patient states breathing normal or handover to hospital / Paramedic</li> </ul> </li> </ul> </li> <li>Children &gt; 6 years old: <ul style="list-style-type: none"> <li>pMDI 4 – 12 doses via spacer (patient to take 4 breaths for each dose). Repeat at 20 minutes if required</li> <li>If pMDI spacer unavailable or symptoms severe: <ul style="list-style-type: none"> <li>Nebulised 5 mg (1 nebule) via nebuliser mask with oxygen</li> <li>Continue treatment with 5 mg (1 nebule) every 20 minutes until patient states breathing normal or handover to hospital / Paramedic</li> </ul> </li> </ul> </li> <li>Adults: <ul style="list-style-type: none"> <li>pMDI 4 – 12 doses via spacer (patient to take 4 breaths for each dose). Repeat at 20 minutes if required</li> <li>If pMDI spacer unavailable or symptoms severe: <ul style="list-style-type: none"> <li>Nebuliser 10 mg (2 nebules) via nebuliser mask with oxygen.</li> <li>Continue treatment with 5 mg (1 nebule) every 5 minutes until Patient states breathing normal or handover to hospital / Paramedic</li> </ul> </li> </ul> </li> </ul>
<b>Side effects</b>	<ul style="list-style-type: none"> <li>Tachycardia</li> <li>Muscle tremor</li> </ul>



<b>Special notes</b>	<p>pMDI administered via spacer is at least as effective as nebulisation for treating asthma in almost all circumstances, including mild to moderate acute exacerbations.</p> <p>Unused nebules remaining in the pack at the completion of a case should be disposed of.</p> <p>Nebules should be stored in an environment &lt; 30 C</p>
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## Information

The Ambulance Victoria (AV) Medical Advisory Committee has approved these Protocols for use by Ambulance First Responders.

The Protocols are designed to provide guidance for First Responders when providing emergency patient care. There is a strong emphasis on the importance of first responder safety when delivering patient care in the field. Safety of the carer will also be reinforced during the Continued Vocational Education program.

Feedback regarding this document is most welcome. Please provide feedback to your Team Manager, Team Leader or Trainer or email [Vocational.Programs@ambulance.vic.gov.au](mailto:Vocational.Programs@ambulance.vic.gov.au)

## Information

The “Approach to an Incident” Protocol provides a systematic approach that should be followed at each incident you attend. Protocols for specific clinical problems should be initiated. For example, if you follow “Approach to an Incident” and the patient has pain that is cardiac in nature apply the “Cardiac Chest Pain / Discomfort” Protocol.

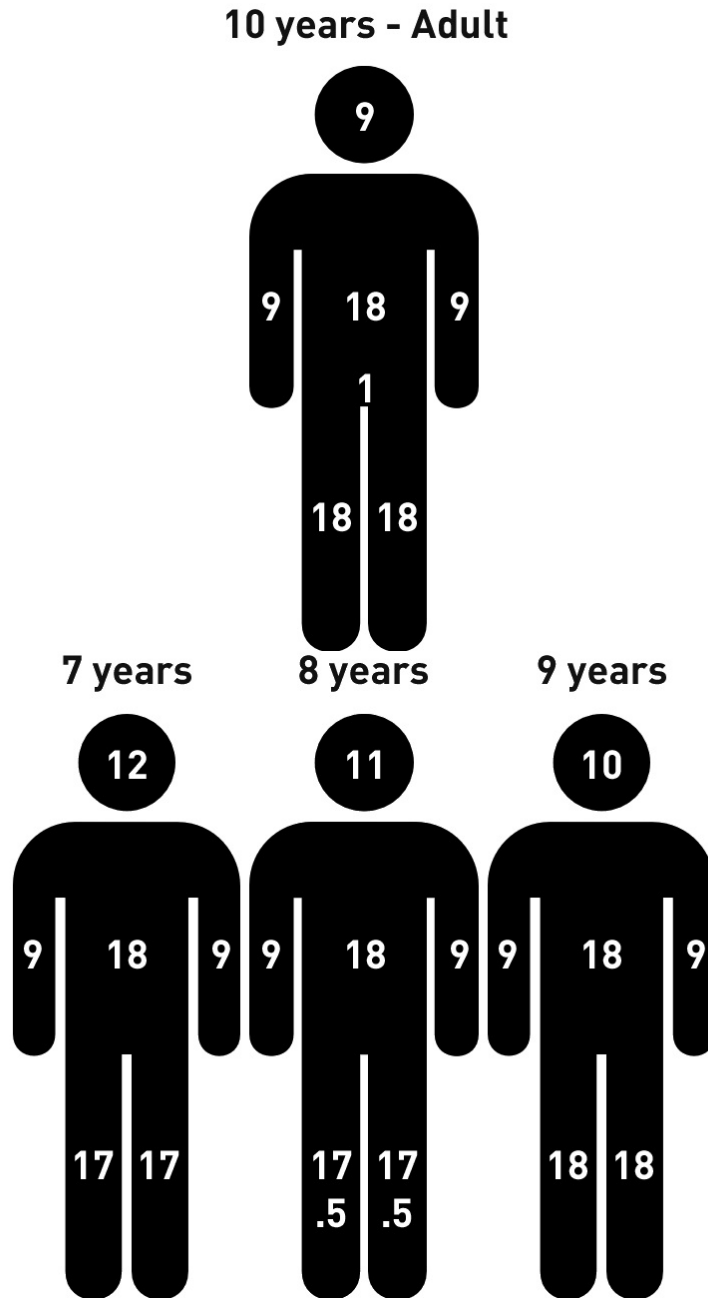
Not all clinical situations can be covered by a Protocol. Protocols are provided for situations that are more common or that require using medicines as part of the treatment. Seek early advice from the Clinician when unsure of treatment options.

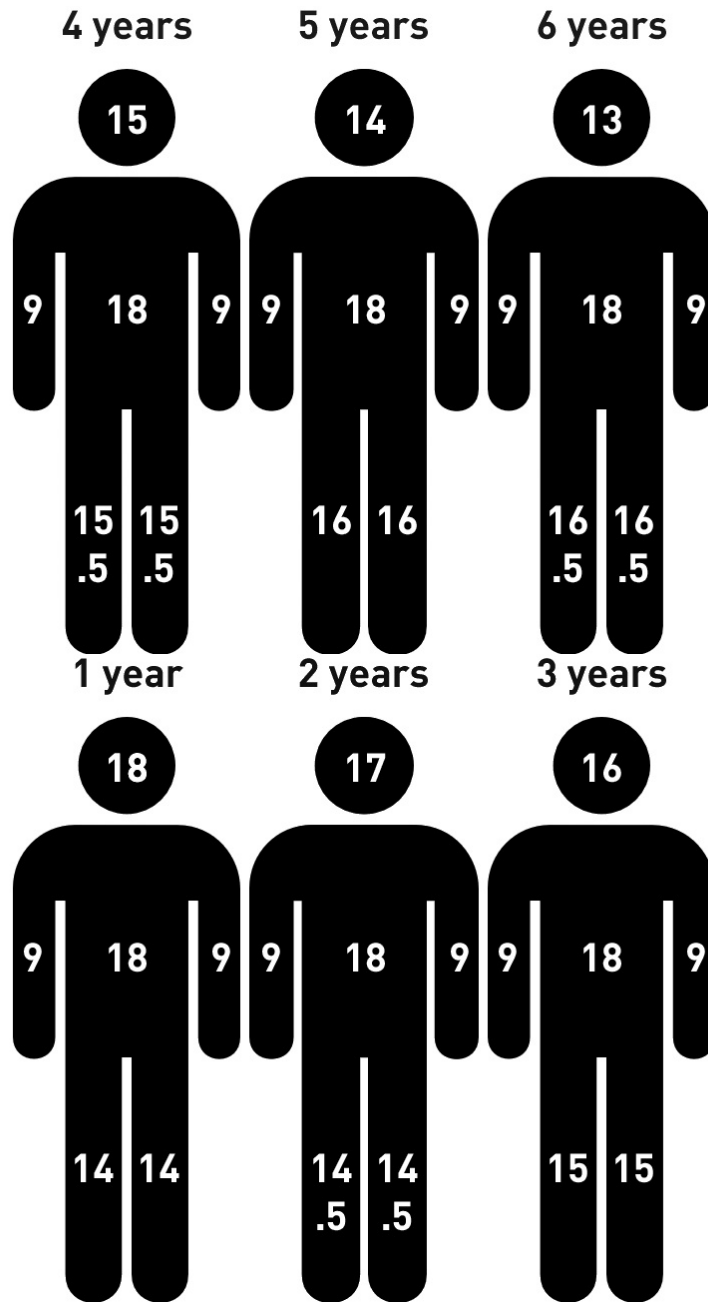
The medication reference material in this manual covers key issues such as indications for use, contraindications, side effects and dose ranges. More comprehensive information about these medicines are available from other sources. For Ambulance First Responder practice in AV the information in this protocol will override information from other sources.

All staff must ensure that they only operate within their approved accreditation level. Failure to do so puts the patient, yourself and AV at risk and may lead to loss of individual accreditation.

## Paediatric-Adult Burns Assessment Ruler

Expressed as a % of Total Body Surface Area





**Chest + Abdomen = 18% Front or 18% Back**

**Limbs are measured circumferentially**

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Anytime you are upset by an experience or event, the following avenues are available within Ambulance Victoria.

- Nominated peer support personnel are available for contact in the field. All staff are encouraged to provide notification of critical incidents.

**Telephone: 1800 MANAGERS (1800 626 377)**  
**Email: [employeesupport@ambulance.vic.gov.au](mailto:employeesupport@ambulance.vic.gov.au)**

- Contact can be for peer support, VACU counselling line, emergency services chaplain, health safety and wellbeing including WorkCover) and police statements / court attendance.
- Available to all community officers and first responders and immediate family members.
- Road Trauma Support Services Victoria: 1300 367 797 (for members of the public)
- Suicide Helpline: 1300 651 251
- Support after suicide: (03) 9427 9899
- Bereavement Counselling and Support Service: (03) 9265 2111
- SIDS and Kids: 1800 240 400 or 1300 308 307
- Life Line: 13 11 14
- Kids Help Line: 1800 551 800
- Nurse-On-Call: 1300 60 60 24

## First Ambulance on Scene

- Notify dispatcher of your arrival.
- Advise the exact location of the incident, including cross streets and what can be seen from initial observations.
- Assume the duties of the Triage Officer and Transport Officer, until the arrival of the first Paramedic crew.

## Triage Officer

- Wear all the appropriate personal protective equipment provided.
- Undertake a quick reconnaissance and provide an initial ETHANE Situation Report to the Communications Centre.
  - **E** – Exact location
  - **T** – Type of incident (e.g. RTA, CBR, Hazmat)
  - **H** – Hazards (e.g. power lines, fuel, spills)
  - **A** – Access/egress
  - **N** – number of patients (walking, stretcher, deceased)
  - **E** – Emergency services required (ambulances, other agencies)
- When ascertaining the number of casualties, only pause to undertake immediate lifesaving management (i.e. Basic airway management, lateral positioning and major haemorrhage control).
- Utilise the assistance of bystanders and other emergency personnel, where available and appropriate to assist in caring for casualties.
- Apply triage tags using SMART Triage Pac using the “Sieve” method.
- Liaise with the Police Coordinator and Incident Controller.
- Liaise with the Transport Officer regarding the establishment of the Ambulance Loading Point.
- Liaise with the Field Emergency Medical Officer (if on scene).
- Select a suitable site for the Casualty Collecting Post (CCP).
- Direct walking patients (green tag) to the CCP. These should be transported after transport of the higher priority patients.
- Further classify patients using the “Sort” process.
- Monitor patients as they may change from one category to another.
- Provide updated ETHANE Situation Report as further details are obtained, including numbers of each triage category.
- Hand command of the incident over to the first Paramedic crew to arrive, or the Ambulance Commander.
- If directed to continue Triage Officer role, direct Paramedics and medical teams to the most urgent cases until relieved.

## Transport Officer

- Wear all protective equipment as provided by Services.
- Ensure vehicle safety and remain with vehicle.
- Establish communication / radio with ESTA Communications.
- Ensure access/ egress for incoming ambulances, use police and/or bystanders to assist with keeping the area clear.
- Establish an ambulance loading point in consultation with the Triage Officer and liaise with Triage Officer to establish the Casualty Collecting Post.
- Establish an ambulance holding point and coordinate all ambulances arriving on scene (these must report via the Transport Officers location unless otherwise directed).
- If directed continue Triage Officer role after Paramedic arrival.
- Maintain Casualty Movement Log regarding transport of all patients (the log is located inside the sleeve of the PCR pad).
- Liaise with the Field Emergency Medical Officer (if on scene) regarding appropriate patient distribution to available hospitals.
- Apply a smart tag bar code to the Triage Label/Disaster Tag of each victim prior to transport; ensure that the smart tag bar code corresponds to the number used on the Casualty Movement Log.



Only approach from upwind and remain at least 250 metres from incident site

Look for identifying marks/symbols, Emergency Procedures Guide (EPG) on containers or vehicles

Contact Incident Controller if in attendance, or on-site expert if available

Access DATA CHEM information via ESTA dispatch

If identification is not available contact ESTA dispatch with the following information if visible:

Manufacturer's name	
Container	Type, shape, size and markings
Materials	Physical characteristics, behaviour
Transport company's name	
Vehicle registration number	

If the hazard cannot be identified DO NOT enter the 250 metre perimeter until expert advice from control agency personnel or the Incident Controller has been provided, and the area declared safe to enter.

## Remember







If you don't think CBR, (Chemical, Biological or Radiological) you won't suspect CBR!

- Multiple casualties
- Similar Signs and Symptoms
- Think CBR – Ensure Safety! Stay uphill and upwind

Abbreviation	Meaning
b.d.	twice daily
t.d.s.	three times daily
q.i.d.	Four times daily
p.r.n.	Whenever necessary
a.c.	Before food
p.c.	Immediately after food
stat.	Immediate, once only dose
daily	Once daily
nocte	Given on settling (at night)
6/24	6 hourly
PEARL	Pupils equal and reacting light
Hx	History
C/O	Complaining of
Ca	Cancer
O/A	On arrival
PHx	Past history
Mx	Manage/Management
I.M.	Intramuscularly
I.V.	Intravenously
S.L.	Sublingual

C/C	Chief complaint
P.R.	Per rectal
P.V.	Per vagina
'O'	Orally
Pt	Patient
O/E	On examination
Rx.	Treatment
B.P.	Blood pressure
B.G.L.	Blood Glucose Level
E.C.G.	Electrocardiogram
E.S.S.	Emergency surgical suite
I.V.T.	Intravenous therapy
N.A.D.	No abnormalities detected
I.D.C.	In-dwelling catheter
Med <sup>n</sup>	Medication

## Patient positioning

	Trendelberg (legs up)
	Supine (face up)
	Sitting
	Semi-recumbent
	Prone (face down)
	Lateral (side)

## List of Tetracycline Antibiotics

GENERIC NAME	TRADE NAME
TETRACYCLINE HCL	ACHROMYCIN, MYSTECLIN, TETREX
MINOCYCLINE HCL	AKAMIN, MINOMYCIN
DOXYCYCLINE HCL	DORYX, DOXIG, DOXY TABLETS, DOXYCYCLINE-BC, DOXYHEXAL TABS DOXYLINE, GENRX DOXYCYCLINE' VIBRATABS-50, VIBRAMYCIN"
DEMECLOCYCLINE HCL	LEDERMYCIN

When providing pre-arrival information, or handing over a patient to another health care professional, it is important that incident / patient information is provided in a structured way using the IMIST-AMBO format.



## Ambulance Victoria

### Standard Handover Protocol

I	<b>Identification</b> <i>Patient's name, DOB, age, sex</i>
M	<b>Mechanism/Medical Complaint</b> <i>Presenting problem</i>
I	<b>Injuries/Information</b> <i>Symptoms and/or injuries</i>
S	<b>Signs</b> <i>Vital signs (HR, RR, BP, etc)</i>
T	<b>Treatment and Trends</b> <i>Treatment and patient's response</i>
<i>Pause for questions</i>	
A	<b>Allergies</b>
M	<b>Medication</b> <i>Patient's regular medications</i>
B	<b>Background History</b> <i>Patient's medical history</i>
O	<b>Other information</b> <i>Social, scene, relatives present</i>
<i>Pause for questions</i>	

<p><b>Signs &amp; symptoms of a fracture</b></p>	<p><b>P</b>ain  <b>I</b>rregularity  <b>L</b>oss of movement or power  <b>S</b>welling  <b>D</b>eformity  <b>U</b>nnatural movement  <b>C</b>repitus  <b>T</b>enderness</p>
<p><b>Treatment of fracture</b></p>	<p><b>F</b>ix  <b>R</b>eassure  <b>A</b>fford limb support  <b>C</b>over any wounds  <b>T</b>ry for natural position  <b>U</b>se appropriate splint  <b>R</b>eact to haemorrhage  <b>E</b>very occasion suspect fracture  <b>S</b>hock – Treat &amp; manage</p>
<p><b>Pain assessment</b></p>	<p><b>D</b>escription  <b>O</b>nset  <b>L</b>ocation  <b>O</b>ther symptoms  <b>R</b>elief</p>

<p><b>Suspected anaphylaxis</b></p>	<p><b>R</b>espiratory distress  <b>A</b>bdominal symptoms  <b>S</b>kin/mucosal symptoms  <b>H</b>ypotension (altered conscious state)</p>
<p><b>Situation Report (Sit-rep)</b></p>	<p><b>S</b>ex  <b>A</b>ge  <b>D</b>escription  <b>I</b>njuries  <b>E</b>stimated time of arrival (ETA)</p>
<p><b>History &amp; Secondary Survey</b></p>	<p><b>A</b>llergies  <b>M</b>edications (current)  <b>P</b>ast Medical History  <b>L</b>ast Meal  <b>E</b>vent that prompted the call for an ambulance</p>
<p><b>Pre-Arrival Notification</b></p>	<p><b>I</b>dentification – patient name, D.O.B age and sex  <b>M</b>echanism of Injury / main presenting problem  <b>I</b>llness or Injury  <b>S</b>igns &amp; Symptoms, including vital signs survey  <b>T</b>reatment provided and response to treatment</p>

<p><b>Ethane</b></p>	<p><b>Exact Location</b></p> <p><b>Type of Incident</b> (e.g. Road Traffic Accident. Chemical /Biological / Radiological [CBR], HAZMAT, etc.)</p> <p><b>Hazards at Scene</b> (e.g. power lines, vapour, spillage etc.)</p> <p><b>Access and Egress</b></p> <p><b>Number of Casualties</b> (walking, stretcher, deceased etc.)</p> <p><b>Emergency Services at Scene Required</b> (e.g. additional ambulance resources and other agencies)</p>
<p><b>Causes of altered consciousness</b></p>	<p><b>Alcohol/drug intoxication</b></p> <p><b>Epilepsy</b> (post ictal)</p> <p><b>Insulin</b> (diabetic) or other metabolic problem</p> <p><b>Overdose</b> or oxygen (hypoxia)</p> <p><b>Underdose</b> (of medication or drug/alcohol withdrawal)</p> <p><b>Trauma</b> to the head</p> <p><b>Infection</b></p> <p><b>Pain</b> or psychiatric condition</p> <p><b>Stroke</b> or TIA</p>