



# **Ambulance Victoria**

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**Ambulance Community Officer**

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## **Protocol Manual**

**Version 1**

**January 2009**

OPM 0010

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## Foreword – A1

### Introduction

The Ambulance Victoria (AV) Medical Standards Committee has approved these Protocols for use by Ambulance Community Officers (ACO) throughout AV.

The Protocols are designed to provide guidance to ACOs who provide immediate emergency first response and care to rural and remote communities in Victoria.

Medically approved protocols will assist in improving the standard of ACO knowledge, education, training and patient management; and will provide a consistent framework for future education and training.

Some useful reference material is also included in this manual. The selection of reference material has been based on feedback from ACOs. The booklet has been produced in a size that should make it useful in the field, not just a reference that sits on a bookshelf.

It is intended to update this manual annually. If you have any constructive feedback regarding this document, please contact your Regional Clinical Manager or Clinical Support Officer so that your suggestions can be considered for the next edition.



**Assoc Prof Tony Walker ASM**  
**Executive General Manager**  
**Quality and Education Services**

## Foreword – A2

### How to Use these Protocols

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. That is, follow “*Approach to an Incident*” and then, if the patient has pain that is cardiac in nature follow the “*Cardiac Chest Pain / Discomfort*” Protocol.

Obviously not all clinical situations can be covered by a Protocol. Initially, it has been decided to provide protocols for situations that are more common, or that require using drugs as part of the treatment.

The drug reference material in this manual covers key issues such as indication for use, contraindications, side effects and dose ranges. More comprehensive information about these drugs is available from other sources. For ACO practice in AV the information in this manual will override information from other sources.

All staff must ensure that they only operate within their approved accreditation level. Failure to do so puts you and AV at risk and may lead to loss of accreditation as a Ambulance Community Officer (ACO).

## Authority to Practice

Protocol	ACO 1	ACO 2	Extended
<b>Anaphylaxis</b>			
Epi-Pen (Adrenaline)	x	✓	✓
<b>Breathing Difficulties</b>			
Salbutamol	x	✓	✓
Ipratropium Bromide	x	✓	✓
<b>Cardiac Arrest</b>			
AED	✓	✓	✓
<b>Cardiac Chest Pain/Discomfort</b>			
Aspirin	x	✓	✓
Glyceryl Trinitrate (Anginine)	x	✓	✓
Methoxyflurane	x	✓	✓
Glyceryl Trinitrate (Extended Protocol)	x	x	✓
<b>Hypoglycaemia</b>			
Glucose Paste	x	✓	✓
Glucagon	x	x	✓
<b>Pain Relief – Non-Cardiac</b>			
Methoxyflurane	x	✓	✓

### Legend

✓	Authorised	x	Not Authorised
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# Assessment Criteria

## Approach to an Incident – B1

### 1. Ensure safety and control hazards

- Assess the scene for hazards and control if able. Do not enter unless safe
- Use standard precautions (gloves, safety glasses, high visibility vest etc)
- Remove patient from hazard as priority if necessary



### 2. Manage immediate life threats

- **Response** – assess using “talk and touch”
- **Airway** – open using position, manual skills, OP airway and suction as required. Ensure spinal care if trauma or unconscious
- **Breathing** – assess using “look listen and feel”. If not breathing give 2 initial ventilations using Bag and Mask with 100% Oxygen
- **Compressions** – If no pulse commence CPR and manage as per cardiac arrest
- **Defibrillation** – Attach AED if indicated
- **Bleeding** – manage any life threatening bleeding.



### 3. Identify main presenting problem and time criticality

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

## Approach to an Incident

### 4. Provide Initial Management

- Physical rest and appropriate position
- Emotional support and reassurance
- Oxygen therapy (8 lpm via mask or 100% via Bag and Mask)
- Reassess and maintain initial management



### 5. Obtain History and Secondary Survey

- Obtain history from patient and/or bystanders (**AMPLE**)
  - **A**llergies
  - **M**edications (current)
  - **P**ast Medical History
  - **L**ast Meal
  - **E**vent that prompted the call for an ambulance
- If **Trauma** – expose patient and “nose to toes” survey



### 6. Provide a Situation Report to OpCen ASAP



### 7. Manage Specific Problems

- Use “Pay-off” and manage for best outcome
- Apply appropriate Clinical Protocol(s) based on finding(s) in order of importance
- Notify OpCen / back-up using **MIST**



### 8. Reassess and Maintain management

- Monitor and record vital signs frequently
- Modify management as required based on reassessment
- Update OpCen / hospital / back-up as required

## Conscious State Assessment – B2

### 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: _____
<b>Total GCS (Maximum Score = 15)</b>			
		(A + B + C) = _____	

## Respiratory Assessment – B3

	<b>Normal</b>	<b>Respiratory Distress</b>
<b>Rate</b>	12-16/min	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	<p>May have a cough</p> <p>Asthma: expiratory wheeze, may also be inspiratory wheeze, may be no breath sounds if severe</p> <p>LVF: audible crackles –with possibly inspiratory +/- expiratory wheeze</p> <p>Upper airway obstruction: Inspiratory stridor</p>

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 back-up crew.

Initial and ongoing communication with the paramedic back-up crew, via the ambulance OpCen, regarding the patient's condition is vital.

## Perfusion Assessment – B4

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

	<b>SKIN</b>	<b>PULSE</b>	<b>BP</b>	<b>CONSCIOUS STATE</b>
Adequate Perfusion	Warm, pink and dry	60 – 100 minute	>100 mm Hg systolic	Alert and orientated in time and place
Inadequate Perfusion	Cool, pale, clammy	<50 or >100 min	60-80 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 inadequate perfusion is time critical and requires expedient transport to hospital by the paramedic back up crew.

Initial and ongoing communication with the paramedic back up crew, via the ambulance OpCen, regarding the patient's condition is vital.

## Time Critical Assessment – B5

A patient that meets any of the following criteria should be considered to have, or potentially have, a clinical problem of major significance and is therefore time critical.

If a patient meets any of these time critical criteria immediately provide a situation report to the paramedic back up crew, via the ambulance OpCen.

It is also important to recognise that those aged < 10 years or over 55 years, or who have a pre-existing medical condition or who are pregnant may be at greater risk and, using “pay-off”, should be managed as being potentially time critical even if they don’t fully meet the time critical criteria.

Early OpCen 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). Based on the information provided from the scene the OpCen can also begin planning for secondary transfer to an appropriate facility as required.

### Time Critical Criteria

<b>Vital Signs (Physiological Distress)</b>		
	<b>Adult</b>	<b>Child (&lt; 14 years)</b>
Pulse	< 50 or >100 / min	Refer to Paediatric Assessment, Page 41
Respiratory Rate	< 8 or > 20 / min	
Hypotension	< 100 mmHg	
Conscious state	GCS < 13	

## Pattern of Actual Injury or Illness

### Trauma

All Penetrating Injuries	<ul style="list-style-type: none"> <li>• Head / neck / chest / abdomen / pelvis, axilla / groin</li> </ul>
Blunt Injury	<ul style="list-style-type: none"> <li>• Patients with a significant injury to a single region: head / neck/ 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</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>

## Pattern of Actual Injury or Illness

### Medical

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

## Time Critical Assessment

### Mechanism of Injury (Injury potential)

- Car occupants involved in high speed MCA (> 60 KPH)
- Pedestrian impact
- Ejection from vehicle
- Vehicle rollover
- Fatality in same vehicle
- Fall from height (>3m) or children >2 times their height
- Struck on head by falling object >3 metres
- Motor / cyclists / impact >30km/h
- Explosions
- Prolonged extrication (>30 min)

*And*

- Age >55
- Pregnancy
- Significant underlying medical condition

# Clinical Protocols

## Anaphylaxis / Severe Allergic Reaction – C1

### 1. Initial Management

- Follow *Approach to an Incident* steps 1-5
- Commence Oxygen Therapy 8 LPM
- If inadequate perfusion, and no breathing difficulty, place supine with legs elevated
- If breathing difficulty sit patient upright and administer Salbutamol and Oxygen as per *Breathing Difficulty* protocol
- If inadequate ventilation provide assisted ventilation using Bag and Mask and 100% Oxygen
- Manage as time critical – notify back-up crew via OpCen

### 2. If breathing difficulty or inadequate perfusion or altered conscious state with facial swelling and allergic rash:

- Immediately administer **Epi-Pen (Adrenaline)** autoinjector
- If patient has own Epi-Pen administer in accordance with their Doctor's instructions.
- If no patient Epi-Pen available advise patient of possible side effects of **Adrenaline** and administer AV Epi-Pen to outer mid-thigh:
  - Adult / Large Child (> 5 yrs) **Epi-Pen (Adrenaline)**
  - Small Child / infant (< 5 yrs) **Epi-Pen Jr (Adrenaline)**

### 3. Commence Transport

- Immediately commence transport to the nearest approved medical facility or rendezvous with paramedic back-up in accordance with local arrangements
- Notify receiving facility / back-up crew
- Continually reassess patient during transport and modify treatment as required

## Breathing Difficulties – C 2

### 1. Initial Management

- Follow *approach to an incident* steps 1-5
- Assist into an upright position
- Commence Oxygen Therapy 8 LPM
- Manage as time critical – immediately prepare for transport and keep on scene times at a minimum



### 2. If wheeze present or patient has history of asthma

- Administer Salbutamol 10 mg (2 nebulers) via nebuliser mask with Oxygen 8 LPM
- Continue Salbutamol (1 nebuler every 5 minutes) until patient states breathing normal or handover to hospital / paramedic



### 3. If severe breathing difficulty or no improvement after 10 minutes of Salbutamol

- Add single dose only of Atrovent. Adult 500mcg (2 nebulers) Child 250 mcg (1 nebuler) to nebuliser



### 4. Commence Transport

- Immediately commence transport to the nearest approved medical facility or rendezvous with paramedic back-up in accordance with local arrangements
- Notify receiving facility / back-up crew
- Continually reassess patient during transport and modify treatment as required

.....this Protocol continued

## Breathing Difficulties

### 4. Special Notes

- If foreign body suspected, and patient not able to talk, breathe or cough, perform anterior chest thrusts as required, otherwise administer oxygen and prepare patient for transport by back-up paramedic crew
- If altered conscious state occurs at anytime immediately commence 100% Oxygen via Bag and Mask and assisted ventilation as required
- If patient is non-breathing be aware that over ventilation of the asthmatic patient may worsen their condition. In the case of asthma, ventilate at the following rates:
  - Adult                    5 - 8 per minute
  - Large Child        8 - 12 per minute
  - Small Child        10 -15 per minute
  - Infant                    15 - 20 per minute
- If the patient becomes pulseless at any stage manage as per *Cardiac Arrest*

## Burns – C3

### 1. Initial Management

- Follow *Approach to an Incident* steps 1-5
- Manage as time critical – immediately prepare for transport to assist the paramedic back-up crew



### 2. Burn Management

- Actively cool the affected area with cool running water until burn area has cooled
- Avoid excessive cooling as hypothermia may result
- Gently cut clothing from affected area unless stuck to the skin
- Assess area of burn (see burn chart)
- Provide pain relief as per *Pain relief – non cardiac* Protocol as required



### 3. Dress the burn

- Cover affected area with clean dressing and / or cling wrap once the burn area has been cooled
- Clear plastic cling wrap should be applied longitudinally over the burn area / dressings where possible. It is important to ensure that it is not applied too tightly to allow for possible swelling



### 4. Commence Transport

- Immediately commence transport to the nearest approved medical facility or rendezvous with paramedic back-up in accordance with local arrangements
- Notify receiving facility / back-up crew
- Continually reassess patient during transport and modify treatment as required

## Cardiac Arrest – C4

### 1. Initial Management

- Follow *Approach to an Incident* steps 1-2
- If no Signs of Life commence age appropriate CPR
- Attach **AED** (> 8 years use adult pads < 8 years use paediatric pads) and follow **AED** spoken / visual instructions

#### SHOCK ADVISED

- Ensure no contact with casualty and safety of crew
- Press **SHOCK** Button
- Immediately resume **CPR** for 2 minutes
- **Analyse** Rhythm and follow **AED** prompts

#### NO SHOCK ADVISED

- Immediately resume **CPR** for 2 minutes
- **Analyse** Rhythm and follow **AED** prompts

Continue until Signs of Life return

### Continued Resuscitation

- If “no shock” is advised X 3, 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), then resuscitation efforts may be ceased.
- If a shock has been delivered at any stage, or compelling reasons exist, then resuscitation efforts should be continued.
- If paramedic back up is not practicable, consider requesting a local medical officer to attend the scene or organise assistance and transport to the nearest approved medical facility with resuscitation continued enroute.
- In these circumstances transport should be undertaken carefully, and not at excessive speed. Stop the vehicle to reanalyse the rhythm and follow the voice prompts as per step 3 if “Shock Advised”.

## Cardiac Chest Pain / Discomfort – C5

### 1. Initial Management

- Follow *Approach to an Incident* steps 1-5
- Assess if likely to be cardiac pain / discomfort using DOLOR and determine pain severity using verbal pain rating scale

### 2. If Likely to be Cardiac Pain / Discomfort

- Manage as time critical and immediately prepare for transport and keep on scene times at a minimum
- Administer chewable **Aspirin 300 mg** (1 tablet) if no allergies or associated back pain

### 3. If Pain Score > 2 and previous Anginine administration

- Administer **Anginine 0.6 mg** (1 tablet) sublingually if BP > 110 mmHg and no contraindications (see drug sheet)
- Repeat **Anginine 0.6 mg** (1 tablet) every 5 minutes until pain is reduced to a comfortable or tolerable level or the onset of side effects
- Assess vital signs between each administration and cease Anginine administration if BP falls below 110 mmHg
- In the event of a sudden collapse, altered conscious state or sudden fall in blood pressure following Anginine administration immediately remove the tablet from the patient's mouth

### 4. If Pain Score > 2 and no previous Anginine administration

- Administer **Methoxyflurane 3 ml** via Pentrox inhaler with Oxygen if no contraindications (see drug sheet)
- Repeat **Methoxyflurane 3 ml** after 25 minutes if pain score remains > 2

.....this Protocol continued

## Cardiac Chest Pain / Discomfort

### 5. Commence Transport

- Immediately commence transport to the nearest approved medical facility or rendezvous with paramedic back-up in accordance with local arrangements
- Notify receiving facility / back-up crew
- Continually reassess patient during transport and modify treatment as required
- If the patient become pulseless at any stage manage as per *cardiac arrest*



### 6. Extended Protocol

#### If Pain Score > 2 and no previous Anginine administration

- Administer **Anginine 0.3 mg** (1/2 tablet) sublingually if BP > 110 mmHg and no contraindications (see drug sheet)
- Repeat **Anginine 0.3 mg** (1/2 tablet) every 5 minutes until pain is reduced to a comfortable or tolerable level, or onset of side effects. (See drug sheet)
- Assess vital signs between each administration and cease Anginine administration if BP falls below 110 mmHg
- In the event of a sudden collapse, altered conscious state or sudden fall in blood pressure following Anginine administration immediately remove the tablet from the patient's mouth

## Hypoglycaemia (Low Blood Sugar) – C6

### 1. Initial Management

- Follow *Approach to an Incident* steps 1-5
- Be aware that the patient with hypoglycaemia may be agitated, uncooperative or aggressive



### 2. If Patient Responds to Command

- Administer Glucose Paste 15 g orally



### 3. If Patient does not respond to command

- Manage as an unconscious patient



### 4. Commence Transport

- Immediately commence transport to the nearest approved medical facility or rendezvous with paramedic back-up in accordance with local arrangements
- Notify receiving facility / back-up crew
- Continually reassess patient during transport and modify treatment as required



### 5. Extended Protocol

- Perform random blood glucose (RBG)
- If RBG < 4 mmol and the patient is conscious, administer **Glucose Paste 15 g** orally
- If RBG < 4 mmol, and the patient has an altered conscious state and is > 8 years of age, administer **Glucagon 1 mg IMI**
- If the patient has an altered conscious state, and is < 8 years of age, administer **Glucagon 0.5 mg IMI**
- If RBG > 4 mmol, no specific treatment is required and other causes, such as stroke, should be considered

## Pain Relief – Non Cardiac – C7

### 1. Initial Management

- Follow *approach to an incident* steps 1-5
- Assess Pain Score (1-10) using verbal pain rating scale

### 2. If Pain Score > 2

- Administer **Methoxyflurane 3 ml** via Pentrox analgiser with Oxygen if no contraindications (see drug sheet)
- If **Methoxyflurane** providing effective pain relief one further dose of **Methoxyflurane 3 ml** may be administered if required (pain score remains > 2)

### 3. Commence Transport

- Immediately commence transport to the nearest approved medical facility or rendezvous with paramedic back-up in accordance with local arrangements
- Notify receiving facility / back-up crew
- Continually reassess patient during transport and modify treatment as required

### Special Notes

- In patients with trauma it is important to ensure adequate basic care (including adequate splinting) as effective pain relief is achieved with a combination of basic care and **Methoxyflurane**.
- The **MAXIMUM** dose of **Methoxyflurane** for any one patient is 6 ml per 24 hour period. Under no circumstances is this to be exceeded.

## Traumatic Chest Injuries – C8

### 1. Initial Management

- Follow *Approach to an Incident* steps 1-5
- Position upright unless potential spinal injury, inadequate perfusion or altered conscious state
- Commence Oxygen Therapy 8 LPM. If inadequate ventilation or altered conscious state administer 100% Oxygen via Bag and Mask and assist ventilation as required
- Manage as time critical and immediately prepare for transport and keep on scene times at a minimum



### 2. Manage specific chest injuries

- Expose the chest, and if sucking chest wound apply a 3 sided dressing
- Support any suspected fractured ribs in the position of comfort. If multiple fractured ribs (flail segment) suspected, stabilise the chest wall using padding and the patient's arm
- Administer pain relief as per *Pain Relief – Non Cardiac* as required



### 3. Commence Transport

- Immediately commence transport to the nearest approved medical facility or rendezvous with paramedic back-up in accordance with local arrangements
- Notify receiving facility / back-up crew
- Continually reassess patient during transport and modify treatment as required
- If condition deteriorates (e.g. increasing breathing difficulty with deteriorating conscious state and/or worsening perfusion) a tension pneumothorax may be present. If this occurs avoid ventilation (but continue Oxygen 8 LPM) and immediately advise the receiving hospital or back-up crew.

# ACO Drugs

## Acetylsalicylic Acid - Aspirin – D1

### **Presentation**

- 300 mg Chewable Tablet

### **Indications for ACO Use**

- Cardiac Chest Pain / Discomfort

### **Contraindications**

- Hypersensitivity to aspirin / salicylates
- Actively bleeding peptic ulcers
- Bleeding disorders
- Suspected aortic aneurysm

### **Precautions**

- Nil of significance for the above indication

### **Dose**

- 300 mg tablet

### **Side effects**

- Heartburn / nausea / gastrointestinal bleeding
- Increased bleeding time
- Hypersensitivity reactions

### **Special Notes**

- Aspirin is not be administered by ACO's for any condition other than chest pain / discomfort of a cardiac nature

## Adrenaline – D2

### **Presentation**

- Epi-Pen Adult Adrenaline Auto Injector (0.3 mg)
- Epi-Pen Jnr Adrenaline Auto Injector (0.15 mg)

### **Indications for ACO Use**

- Anaphylaxis / Severe Allergic Reaction

### **Contraindications**

- Nil of significance for the above indication

### **Precautions**

- Nil of significance for the above indication

### **Dose**

- As per Doctor's Instructions
- Epi-Pen Adult Adrenaline Auto Injector (0.3 mg)  
[> 5 yrs or > 20kg]
- Epi-Pen Jnr Adrenaline Auto Injector (0.15 mg)  
[< 5 yrs or < 20kg]

### **Side effects**

- Tachycardia
- Hypertension
- Dilated pupils
- Feeling of anxiety / palpitations

## Glucagon – D 3

### Presentation

- 1 mg in 1 ml Hypokit

### Indications for ACO Use

- Diabetic Hypoglycaemia (low blood sugar) with altered BGL < 4 mmol/l and altered conscious state

### Contraindications

- Nil of significance for the above indication

### Precautions

- Nil of significance for the above indication

### Dose

#### Extended Protocol

- > 8 years of age - 1 mg (1 ml) IMI
- < 8 years of age – 0.5 mg (0.5 ml) IMI

### Side effects

- Nausea and vomiting

### Special Notes

- Not all patients will respond to Glucagon, particularly children, and it is important to ensure early transport / activation of paramedic back-up in all cases of hypoglycaemia

## Glucose Paste – D4

### **Presentation**

- 15 g tube

### **Indications for ACO Use**

- Diabetic Hypoglycaemia (low blood sugar)

### **Contraindications**

- Inability to swallow due to altered conscious state

### **Precautions**

- Nil of significance for the above indication

### **Dose**

- 15 g orally

### **Side effects**

- Nausea and vomiting

### **Special Notes**

- Not all patients will respond to Glucose paste and it is important to ensure early transport / activation of paramedic back-up in all cases of hypoglycaemia

## Glyceryl Trinitrate (Anginine) – D5

### Presentation

- 0.6 mg tablets

### Indications for ACO Use

- Cardiac Chest Pain / Discomfort

### Contraindications

- Known hypersensitivity
- Systolic Blood Pressure < 110 mmHg
- Sildenafil Citrate "VIAGRA" or Vardenafil "LEVITRA" administered in the previous 24 hours or Tadalafil "CIALIS" administered in the previous 4 days (PED5 inhibitors)
- Heart rate > 150 per minute
- Heart rate < 60 per minute

### Precautions

- No previous administration of Anginine
- Elderly patients

### Dose

- 0.6 mg (1 tablet) sublingual if previous administration

### Extended Protocol

- 0.3 mg (1/2 tablet) sublingual if no previous administration

### Side effects

- Hypotension
- Tachycardia
- Headache

### Special Notes

- Anginine is susceptible to heat and moisture and tablets must be stored tightly sealed in their original container and tablets discarded 1 month after the container is opened
- Do not administer a patient's own medication as it may not have been stored in optimal conditions

## Ipratropium Bromide – Atrovent – D6

### Presentation

- 250mcg in 1ml nebule

### Indications for ACO Use

- Severe asthma

### Contraindications

- Known hypersensitivity to Atropine or its derivatives

### Precautions

- Glaucoma
- Avoid contact with eyes

### Dose

- Adults: 500 mcg (2 nebules) concurrently with salbutamol
- Children: 250 mcg (1 nebule) concurrently with salbutamol

### Side effects

- Headache
- Nausea
- Dry mouth
- Acute angle closure glaucoma secondary to direct eye contact (rare)
- Skin rash
- Tachycardia (rare)
- Palpitations (rare)

### Special Notes

- There have been isolated reports of eye complications as a result of direct eye contact with Atrovent (eye pain, glaucoma). The nebuliser mask must therefore be fitted properly during inhalation and care taken to avoid Atrovent entering the patient's eyes.
- *Atrovent must be nebulised in conjunction with salbutamol*

## **Methoxyflurane – Penthrane – D7**

### **Presentation**

- 3 ml glass bottle with plastic seal

### **Indications for ACO Use**

- Pre-hospital pain relief

### **Contraindications**

- Pre-existing kidney disease
- Patients taking tetracycline antibiotics
- Exceeding total dose of 6 ml in any 24 hour period

### **Precautions**

- Pre-eclampsia
- Pentrox inhaler must be held by patient so that if unconsciousness occurs it will fall from patient's face
- Patient must be supervised at all times during Methoxyflurane administration

### **Dose**

- 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.

### **Side effects**

- Drowsiness
- Exceeding maximum total dose of 6 ml in 24 hour period may lead to kidney damage

### **Special Notes**

- Analgesia commences after 8-10 breaths and lasts for approximately 3-5 minutes once discontinued

## Oxygen – D8

### **Presentation**

- High pressure black cylinder with white shoulder
- “C” cylinder – 440 litres
- “D” cylinder – 1550 litres

### **Indications for ACO Use**

- Treatment of hypoxia / hypoxaemia
- To assist organ oxygenation in patients with injury or illness

### **Contraindications**

- Nil of significance for the above indications

### **Precautions**

- Beware of fire or explosive hazards

### **Dose**

- Moderate concentration (40% - 60%) via face mask at 8 LPM
- High concentration (60% - 95%) via Bag Valve mask device with reservoir bag at 8 – 15 LPM

### **Side effects**

- Drying of the mucous membranes of the upper airway

## Salbutamol – Ventolin – D9

### Presentation

- 5 mg in 2.5 ml nebulules

### Indications for ACO Use

- Breathing difficulty with wheeze and/or history of asthma
- No relief from patients own Ventolin administration

### Contraindications

- Nil of significance for the above indication

### Precautions

- Continue to administer Oxygen 8 LPM between doses

### Dose

- 10 mg ( 2 nebulules) via nebuliser mask with Oxygen
- Continue treatment with 5 mg (1 nebule) every 5 minutes until patient states breathing normal or handover to hospital / paramedic

### Side effects

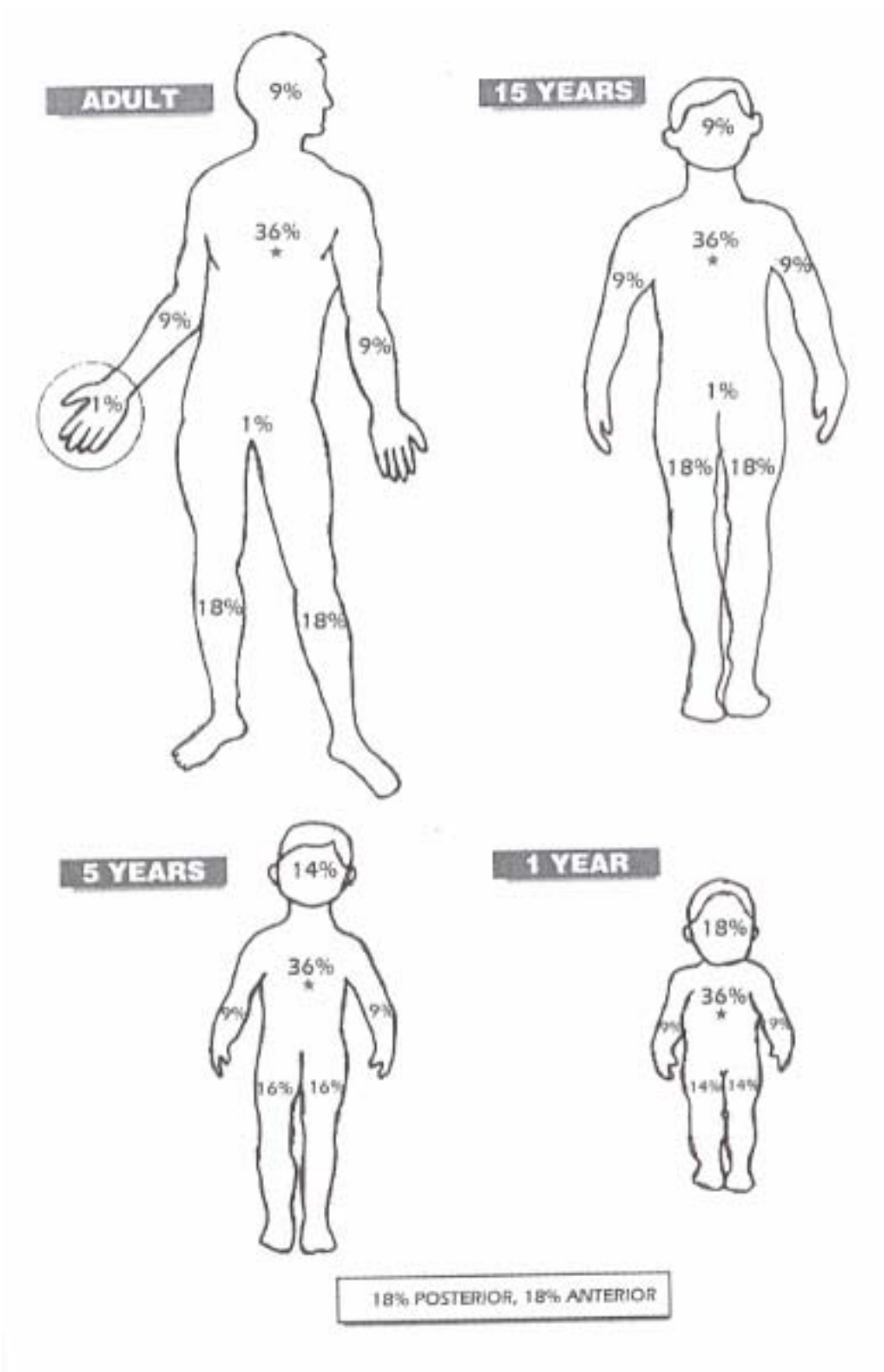
- Tachycardia
- Muscle tremor

### Special Notes

- Unused nebulules remaining in the pack at the completion of a case should be disposed of.
- Nebulules should be stored in an environment < 30 C

# Reference Material

# Burns Assessment Chart – E 1



## Resuscitation Rates – E2

	Adult	Older Child	Young Child	Infant
Age Range	15+	9-14 yrs	1-8 yrs	Neonate to 1 yr
Compress with	2 hands	2 hands	2 hands	2 fingers
Depth of compression	1/3 depth of chest			
Rate of compression	100 /min			
Compression point	Middle of the Chest (Lower half of the sternum)			
Initial breaths	2 breaths			
Compressions: breaths Single rescuer	30 compressions : 2 breaths			
Compressions: breaths Two rescuer	30 : 2	15 compressions : 2 Ventilations		
Breathe	Until chest rises (effective breath)			

*Special Note:*

*Resuscitation of a newly born: 1 breath to 3 compressions at a compression rate of 120 compressions per minute*

## Handover / Notification – E3

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 **MIST** format

Introductory Information, including patient's name age and sex
<b>M</b> echanism of Injury / Main Presenting Problem
<b>I</b> llness or Injury
<b>S</b> igns and Symptoms, including vital signs survey
<b>T</b> reatment provided and response to treatment
Any other relevant information, i.e. past history, allergies, medication etc

## Victoria Ambulance Counselling Unit (VACU) Peer Support Program – E4

Where staff are exposed to critical incidents or require psychological / emotional support, the following avenues are available through the Victoria Ambulance Counselling Unit / Peer Support Program:

<b>Nominated Peer Support Personnel available in the field</b>	
AV Peer Support Coordinator	0407 855 647
Barwon South West Peer Coordinator	0438 537 750
Grampians Peer Coordinator	0409 800 682
Loddon Mallee Peer Coordinator	0438 533 682
Hume Peer Coordinator	0409 971 756
Gippsland Peer Coordinator	0418 325 034

Other Peer support members contact details are displayed on the AV Intranet with other relevant information about these services.

VACU has also appointed 21 Psychologists to support staff, their partners or immediate family members throughout regional Victoria. Referrals can be made by Peer Support Personnel or via the counselling line.

### **24 Hour Counselling Line: 1800 226 617**

Employees, or a concerned person acting on their behalf, can contact this number any hour, night or day. This is a paging service, and the duty psychologist will return the call either immediately, or within the hour

Note: These services are available to all AV employees, casual workers, volunteers, their partners and immediate family members.

## Multi Casualty Incidents – E5

### First Ambulance on the Scene

- Notify the OpCen 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 Casualty Collecting Officer / Transport Control Officer, until the arrival of the first Paramedic crew.

### Casualty Collection Officer

- Wear all protective equipment as provided by Services
- Undertake a quick reconnaissance of the scene and report on the following to the Communications Centre.
  - The type of incident,
  - Estimated number of casualties, including numbers of casualties trapped,
  - Resource requirements:
    - Additional vehicles / personnel (i.e. MICA / Air Ambulance / Medical Teams, rescue equipment/ Ambulance Disaster Kits)
- Commence only immediate life saving treatment, eg, clearing an obstructed airway. More definitive treatment can be provided after the necessary information above has been communicated.
- Utilise the assistance of bystanders and other emergency services personnel where available and appropriate, to assist in caring for the casualties.
- Liaise with the Police Coordinator and Incident Controller from the control agency; the TCO regarding the establishment of an ambulance loading point; the Field Emergency Medical Officer from Field Emergency Medical Officer's program if he/she arrives on scene before the Ambulance Commander
- Select a suitable site for a Casualty Collecting Post
- Direct all walking patients (green triage tag) to the Casualty Collecting Post (these should not be sent to hospital at this stage as they will tend to block Emergency Departments)
- Classify stretcher patients into two groups:

## Multi Casualty Incidents (cont.)

- Urgent removal: may survive with urgent treatment (red triage tag)
- Less urgent removal: injuries that will need hospital care eventually but are not currently time critical by definition, and patients beyond medical intervention in whom treatment may jeopardise the survival of other patients (orange triage tag).
- Direct further ambulance paramedics and medical teams to the most urgent cases.
- Hand command of the incident over to the first Paramedic crew on scene or the Ambulance Commander.

### Transport Control Officer

- Wear all protective equipment as provided by Services
- Ensure vehicle safety and remain with vehicle.
- Establish communication / radio link with the Communications Centre.
- 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 Casualty Collection Officer (CCO) and liaise with CCO to establish the Casualty Collecting Post.
- Establish an ambulance holding point and coordinate all ambulances arriving on scene (these must report via the TCO's location unless otherwise directed).
- 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 patient number to the Triage Label/Disaster Tag of each victim prior to transport; ensure that the number on the tag corresponds to the number used on the Casualty Movement Log.

## Hazardous Materials

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 OpCen

If identification is not available contact OpCen 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.

## The Paediatric Patient – E6

### Definitions

Newborn	First minutes to hours following birth
Infant	Less than 1 year of age
Small Child	1- 8 years of age Weight = (age x 2) + 8 = kg
Large Child	9 – 14 years Weight = age x 3.3 = kg

### Respiratory Assessment (Paediatric)

#### Signs of Respiratory Distress in Children

tachypnoea	use of accessory muscles
grunting	pallor
wheezing	abdominal protrusion
chest wall retraction	cyanosis (late sign)

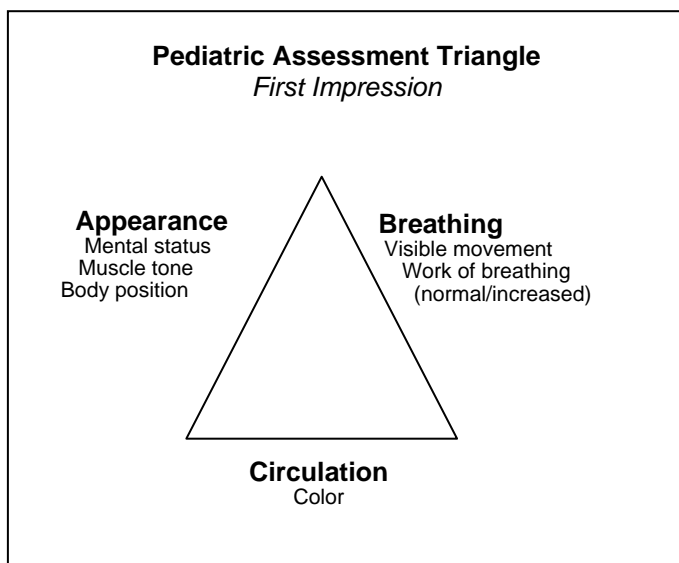
#### Signs of Hypoxia in Children

Infants	Children
Lethargy	Restlessness
Bradycardia	Tachypnoea
Hypotension	Tachycardia
Apnoea	Cyanosis
Pallor	Bradycardia (late sign)

## The Paediatric Patient

### Initial Paediatric Assessment

When approaching a child 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, looking for obvious injuries at the same time.



If the child appears well with no signs of serious trauma, approach at a moderate pace, maintaining a calm demeanour and 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 with lifesaving interventions.

## The Paediatric Patient

## Perfusion Assessment (Paediatric)

Adequate Perfusion				
Age	Pulse	BP mmHg	Skin	Conscious State
Newborn	120 – 160	N/A	Pink, warm and dry	Conscious, alert active
Infant	100 – 160	> 70	Pink warm and dry	Conscious, alert active
Small child	80 – 120	> 80	Pink warm and dry	Conscious, alert active
Large child	80 – 100	> 90	Pink warm and dry	Conscious, alert active

Inadequate Perfusion				
Age	Pulse	BP mmHg	Skin	Conscious State
Newborn	< 100 or > 170	N/A	Cool, pale clammy, peripheral cyanosis	Altered Conscious State / restless
Infant	< 90 or > 170	< 60	Cool, pale clammy, peripheral cyanosis	Altered Conscious State / restless
Small child	< 75 or > 130	< 70	Cool, pale clammy, peripheral cyanosis	Altered Conscious State / restless
Large child	< 65 or > 100	< 80	Cool, pale clammy, peripheral cyanosis	Altered Conscious State / restless

## The Paediatric Patient (cont.)

### Perfusion Assessment (Paediatric) (cont.)

No Perfusion				
Age	Pulse	BP mmHg	Skin	Conscious State
Newborn	Absent	Not recordable	Cool, pale	Unconscious
Infant	Absent	Not recordable	Cool, pale	Unconscious
Small child	Absent	Not recordable	Cool, pale	Unconscious
Large child	Absent	Not recordable	Cool, pale	Unconscious

## The Paediatric Patient (cont.)

### Conscious State Assessment (Paediatric)

Assess Conscious State using **AVPU**

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

#### Extended Protocol

Assess Conscious State using Glasgow Coma Scale

Child 4 years or less		Child over 4 years	
<b>Eye Opening</b>			
Spontaneously	4	Spontaneously	4
React to speech	3	To voice	3
Reacts to pain	2	To Pain	2
No response	1	No response	1
<b>Best Verbal Response</b>			
Appropriate words or social smile, fixes, follows	5	Orientated	5
Cries but consolable	4	Confused	4
Persistently irritable	3	Inappropriate words	3
Restless and agitated	2	Incomprehensible sounds	2
No response	1	No response	1
<b>Best Motor Response</b>			
Spontaneous	6	Obeys command	6
Localises to pain	5	Localises to pain	5
Withdraws from pain	4	Withdraws from pain	4
Flexion response	3	Flexion to pain	3
Extension response	2	Extension to pain	2
No response	1	No response	1
<b>Total</b>		<b>Total</b>	

## The Paediatric Patient (cont.)

### 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 has moderate depression and may need respiratory support
- 0 – 3 indicates a newborn requiring resuscitation

	<b>0 points</b>	<b>1 point</b>	<b>2 points</b>
<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 Paediatric Patient (cont.)

### 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.

**Q**uestion the Child

**U**se Pain rating scales

**E**valuate behaviour and physiological changes

**S**ecure parent's involvement

**T**ake cause of pain into account

**T**ake action and evaluate results

### Wong – Baker FACES Pain Rating Scale

This scale can be used with young children aged three years and older and may also be useful for adults and those from a non-English speaking background. Point to each face using the words provided to describe the pain intensity. Ask the child to choose face that best describes own 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

This scale asks the patient to rate their pain from “no pain” (0) to “worst pain possible” (10) and is 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.

## The Paediatric Patient (cont.)

### 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 conditions causing cardiac arrest in infants and children are 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 to cardioactive drugs and is often encountered during the course of resuscitation. Respiratory arrest may occur alone but if treated promptly may not progress to cardio-respiratory arrest.

The basic principles of paediatric life support are similar to those of adults, however 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. Noisy breathing, stridor or wheeze and/or neck and chest soft tissue retraction on inspiration are signs of significant partial airway obstruction.

## The Paediatric Patient (cont.)

### Basic Life Support (cont.)

<b>To position the head and neck to maintain an open airway:</b>	
Newborn and Infants	head and neck should be placed in the neutral position, avoiding additional neck flexion and head extension.
Children	use neck flexion and head extension with caution in the younger child. If necessary use chin lift or jaw thrust, to clear the airway.

### **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.



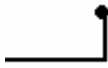



### **CIRCULATION**

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

## Common Abbreviations – E 7

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
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

## Common Abbreviations

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

### LIST OF TETRACYCLINE ANTIBIOTICS

**GENERIC NAME**

TETRACYCLINE HCL  
 MINOCYCLINE HCL  
 DOXYCYCLINE HCL

**TRADE NAME**

"ACHROMYCIN, MYSTECLIN, TETREX"  
 "AKAMIN, MINOMYCIN"  
 "DORYX, DOXIG, DOXY TABLETS",  
 "DOXYCYCLINE-BC, DOXYHEXAL TABS"  
 "DOXYLINE, GENRX DOXYCYCLINE"  
 "VIBRATABS-50, VIBRAMYCIN"

DEMECLOCYCLINE HCL

"LEDERMYCIN"

## Case Review Log – E8

Date	Case NO.	Case Type	Findings, Treatment	Outcome	Reviewed by

## Case Review Log

Date	Case NO.	Case Type	Findings, Treatment	Outcome	Reviewed by

## Case Review Log

Date	Case NO.	Case Type	Findings, Treatment	Outcome	Reviewed by

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## Case Review Log

Date	Case NO.	Case Type	Findings, Treatment	Outcome	Reviewed by

## Contact Telephone Numbers – E9

Regional Management Teams can be contacted via the Administration Support Officer in each region.

<b>Barwon South West</b>		(03) 5228 2806
<b>Grampians</b>		(03) 5330 4602
<b>Loddon Mallee</b>		(03) 5444 6900
<b>Hume</b>		(03) 5720 0613
<b>Gippsland</b>		(03) 5136 8905
<b>Group Manager</b>		
<b>Clinical Support Officer</b>		
<b>RAV Ballarat Head Office</b>		(03) 5338 5000
<b>Branch Station Officer</b>		
<b>Training Officer</b>		

### Additional Numbers


## MNEMONICS – Common examples - E10

<b>Signs &amp; symptoms of a fracture</b>	<b>Pain</b> <b>Irregularity</b> <b>Loss of movement or power</b> <b>Swelling</b> <b>Deformity</b> <b>Unnatural movement</b> <b>Crepitus</b> <b>Tenderness</b>
<b>Treatment of fracture</b>	<b>Fix</b> <b>Reassure</b> <b>Afford limb support</b> <b>Cover any wounds</b> <b>Try for natural position</b> <b>Use appropriate splint</b> <b>React to haemorrhage</b> <b>Every occasion suspect fracture</b> <b>Shock – Treat &amp; manage</b>
<b>Pain assessment</b>	<b>Description</b> <b>Onset</b> <b>Location</b> <b>Other symptoms</b> <b>Relief</b>
<b>Situation Report</b>	<b>Sex</b> <b>Age</b> <b>Description</b> <b>Injuries</b> <b>Estimated time of arrival (ETA)</b>
<b>History &amp; Secondary Survey</b>	<b>Allergies</b> <b>Medications (current)</b> <b>Past Medical History</b> <b>Last Meal</b> <b>Event that prompted the call for an ambulance</b>
<b>Pre-Arrival Notification</b>	<b>Mechanism of Injury / main presenting problem</b> <b>Illness or Injury</b> <b>Signs &amp; Symptoms, including vital signs survey</b> <b>Treatment provided and response to treatment</b>