FORM 289

HEALTH PROFESSIONS COUNCIL OF SOUTH AFRICA

PROFESSIONAL BOARD FOR EMERGENCY CARE PRACTITIONERS

INTERMEDIATE LIFE SUPPORT PRACTITIONER GUIDELINES

2006

IMPORTANT NOTICE TO ALL REGISTERED INTERMEDIATE LIFE SUPPORT PRACTITIONERS

Herewith the 2006 update containing the most recently approved Medications, Guidelines, Capabilities, Regulations and Ethical Rules for Registered Intermediate Life Support Practitioners as approved by the Professional Board for Emergency Care Practitioners (PBECP).
It is imperative that you familiarise yourself with the entire content thereof, as this document and the inherent recommendations and guidelines replace all previous versions and publications issued under the authority of the Professional Board for Emergency Care Practitioners.
Any comment or enquiries in this regard can be directed in writing to Ms Alta Pieters, the Board Manager of the Professional Board for Emergency Care Practitioners, at the address below:

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PLEASE TAKE CAREFUL NOTE-

- These documents are intended to serve as guidelines for the treatment of patients by registered ILS Providers and do not replace sound clinical judgement.
- Consultation with ALS Paramedics or medical practitioners in challenging or difficult situations is strongly advocated.
- It is your medico-legal responsibility to ensure that all the necessary and appropriate documentation is duly completed and processed.
- The general principle of drug administration is that of titrating the minimum dose to the desired effect / response.
- The onus rests upon the ILS Provider to ensure that he / she is adhering to the correct and most recently HPCSA approved standards and guidelines.
- For acknowledgements and references, please refer to ALS protocol document on HPCSA website

ANNEXURE 3

PROFESSIONAL BOARD FOR EMERGENCY CARE PRACTITIONERS

RULES OF CONDUCT SPECIFICALLY PERTAINING TO THE PROFESSION OF EMERGENCY CARE

In addition to the rules of conduct referred to in rules 2 to 27 a basic life support provider, an intermediate life support provider and an advanced life support paramedic or a basic life support student, an intermediate life support student and a student advanced life support paramedic shall also adhere to the following rules of conduct. Failure to comply with these additional rules of conduct shall constitute an act or omission in respect of which the board may take disciplinary steps in terms of Chapter IV of the Act:

1. Performance of professional acts by a basic life support provider, an intermediate life support provider or an advanced life support paramedic

   Notwithstanding the provisions of rule 21, a basic life support provider, an intermediate life support provider or an advanced life support paramedic –

   (a) shall not perform any professional act or exercise any capability per incident, other than those set out in the relevant protocol or annexure to such protocol as approved by the board;

   (b) shall not hand over the responsibility for the treatment of a patient to any person who is less qualified or experienced than himself or herself, unless such a basic life support provider, intermediate life support provider or advanced life support paramedic assumes full responsibility for the acts performed by such other person.

2. Performance of professional acts by a student basic ambulance assistant, a student emergency care assistant, a student ambulance emergency assistant or a student paramedic

   A student basic life support provider shall only perform professional acts under the supervision of a registered intermediate life support provider and, in the case of an intermediate life support student and/or student advanced life support paramedic, under the supervision of a medical practitioner or an advanced life support paramedic and to limit such acts to acts directly related to his / her education and training.

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MEDICATIONS – ILS PRACTITIONER PROTOCOLS

ACETYL SALICYLIC ACID – ASPIRIN

DESCRIPTION

- Classification: Non-steroidal anti-inflammatory / platelet aggregation inhibitor
- Schedule: 0

PHARMACOLOGICAL ACTION

- Aspirin inhibits the enzyme cyclo-oxygenase thus inhibiting the production of prostaglandins including thromboxane; it has no effect on leukotriene production.

ADVERSE EFFECTS

- Anaphylactic reaction (some patients, especially asthmatics exhibit notable sensitivity to aspirin, which may provoke various hypersensitivity / allergic reactions)
- Potential bronchoconstriction in asthmatics
- Gastric mucosa irritation (dyspepsia; peptic ulceration; peptic bleeding)
- Bleeding tendency
- Foetal distress due to obliteration of foetal ductus arteriosus
- Suppression of uterine contractions

INDICATIONS

- Suspected myocardial infarction

CONTRA-INDICATIONS

- Known hypersensitivity / allergy to aspirin
- Peptic ulceration with active bleeding
- Bleeding tendency
- Patients already receiving Platelet Aggregation Inhibitors or Anticoagulants
- Pregnancy
- Children <12 years of age
- Severe renal impairment/ renal transplant
- No longer recommended in decompression sickness

PRECAUTIONS

- Bronchial asthma (aspirin-sensitive asthmatic)
- Patient must be conscious

PACKAGING

- Regular aspirin: 300mg tablet
- Extra strength: 500mg tablet
- Dispersible aspirin: 100mg & 300mg tablets

DOSAGE AND ADMINISTRATION

- Administer 150mg - 300mg orally, chewed, crushed, or dissolved

WARNING: Do **not** use high dose, such as full 500mg tablet.
Do **not** use enteric coated aspirin.

ACTIVATED CHARCOAL

DESCRIPTION

- Classification: Carbon
- Schedule: 1

PHARMACOLOGICAL ACTION

• Activated charcoal adsorbs many poisonous compounds to its surface, thereby reducing their absorption by the GIT

ADVERSE EFFECTS

The patient may experience mild constipation

INDICATIONS

To assist in the treatment of certain cases of overdoses and poisonings where the agent/s was/were orally ingested – within first hour of ingestion

CONTRA-INDICATIONS

- SHOULD NOT BE USED IN POISONING WITH iron, organophosphates, ethanol, lithium, boric acid, cyanide, ethylene glycol, methanol, petroleum products, strong acids and alkalis
- Unprotected airway in a patient with decreased level of consciousness
- Do not use if the container was not properly sealed (de-activation due to moisture exposure)

PACKAGING

Fine black powder in bottles of 25g and 50g

DOSAGE AND ADMINISTRATION

Adult and Paediatric: 0.5g/kg - 1g/kg mixed with water, given orally.

β_2 ADRENERGIC STIMULANTS

DESCRIPTION

- Classification: Bronchodilators
- Schedule: 2 – Aerosol
  3 – Inhalant solutions and unit dose vials

PHARMACOLOGICAL ACTION

- Fenoterol & Salbutamol are selective β_2 stimulants acting on the β_2 receptors in the lungs:

  bronchial smooth muscle: bronchodilation

- At higher/repeated dosages, the systemic absorption progressively increases, thus acting on other organs with β_2 receptors e.g.
  - Skeletal muscle : contraction
  - Vascular smooth muscle : vasodilation
  - Bladder smooth muscle : relaxation
  - Intestinal smooth muscle : decreased peristalsis
  - Uterine smooth muscle : tocolysis
  - Glycogen stores : break down of glycogen to glucose
- At higher/repeated dosages, the selectivity is also progressively lost and β_1 effects (myocardium) are experienced:
  - Positive inotrope
  - Positive chronotrope
  - Positive dromotrope
  - Increased myocardial oxygen consumption

PHARMACO-KINETICS

- Onset of action : 5-15 minutes
- Duration of action : 3-6 hours

ADVERSE EFFECTS

- Tremors, restlessness, anxiety, confusion, headache
- Hypotension
- Tachycardia, palpitations
- Cramps
- Nausea, vomiting
- Urinary retention
- Tocolysis
- Hyperglycaemia
- Hypokalaemia

INDICATIONS

• Acute bronchospasm

CONTRA-INDICATIONS

• Known hypersensitivity / allergy to β_2 stimulants
• Neonates

PRECAUTIONS

• Special caution must be used when pulse rate exceeds 120 beats / minute

PACKAGING

• Fenoterol:	Berotec aerosol:	100µg
	Inhalant solution:	1mg/ml
	UDV:	1.25mg/2ml or 0.5mg/2ml
• Hexoprenaline Sulphate:	Discontinued	
• Salbutamol:	Ventolin aerosol:	100µg
	Resp. solution:	5mg/ml
	UDV / nebules:	2.5mg/2.5ml or 5mg/2.5ml

DOSAGE AND ADMINISTRATION

A. <u>ACUTE BRONCHOSPASM</u>

Aerosol

• 6 – 10 puffs should be administered during an episode, which may then be repeated every 15 minutes, using a spacer

Inhalant solution: (use half the dosage for paediatrics)
• 2ml Fenoterol (1.25mg/2ml)(UDV) + 3ml N/S
• 2ml Fenoterol (0.5mg/2ml) (UDV) + 3ml N/S (paediatric solution)
• 1ml Fenoterol solution (1mg/ml) + 4ml N/S
• 1ml Salbutamol (5mg/ml) + 4ml N/S
• Repeat continuously if necessary

Unit Dose Vials

UDV + N/S diluted up to 5ml

DEXTROSE 50%

DESCRIPTION

Classification: Carbohydrate
Schedule: 1

PHARMACOLOGICAL ACTION

• Glucose is a monosaccharide – the most basic unit to which all carbohydrates are broken down – and glucose is thus immediately available as a source of energy

ADVERSE EFFECTS

• Local irritation of vein
• Thrombophlebitis
• Local tissue necrosis
• Hyperosmolarity
• Diuresis
• Hyperglycaemia

INDICATIONS

• Acute management of symptomatic hypoglycaemia
• Blood glucose < 3.5mmol/L and patient is clinically symptomatic
• Decreased level of consciousness of unknown cause, with suspicion of associated hypoglycaemia / blood glucose < 3.5mmol/L

CONTRA-INDICATIONS

• There are no absolute contra-indications in the presence of true symptomatic hypoglycaemia
• Do not administer dextrose routinely during resuscitation unless there is confirmed hypoglycaemia

PRECAUTIONS

• Dehydration and hypovolaemia
  - High concentrations of IV dextrose cause an increase in osmolarity that draws H_2O from the cells and causes diuresis, aggravating dehydration
  - Dehydration / hypovolaemia and hypoglycaemia must be corrected simultaneously
• Intracranial haemorrhage
  - Glucose leaking into the cerebral tissue will aggravate the injury and result in cerebral oedema
  - Careful titration in all head injured patients is vital

Complications and adverse effects may be diminished by:

• Limiting the use of dextrose to symptomatic hypoglycaemic patients
• Administering dextrose slowly through a free-flowing IV line
• Re-assessing the blood glucose 5 minutes post administration
• Avoiding hyperglycaemia

• Never combining dextrose and sodium bicarbonate in the same infusion (i.e. hyperosmolarity)

PACKAGING

• 20ml & 50ml ampoules of a 50% solution (0.5g/ml)
• 50ml vacolitre containing a 50% solution

DOSAGE AND ADMINISTRATION

Adults

• 10g (20ml of 50% solution) slowly IVI
• Repeat every 5 minutes should blood glucose remain < 3.5mmol/l

Children (> 8years of age)

• 1ml/kg of a 50% solution which is then diluted to a 12.5% solution with sterile water
• Repeat every 5 minutes should blood glucose remain < 3.5mmol/l

NOTE

• If blood glucose remains < 3.5mmol/l after 3 doses, reassess patient, equipment and administration technique
• Treat the patient and not the test result

ORAL GLUCOSE POWDER/ GEL

DESCRIPTION

- Classification: Carbohydrate
- Schedule: 1

PHARMACOLOGICAL ACTION

Administration of an oral glucose solution / preparation provides a source of soluble carbohydrates to the tissues in order to raise the blood glucose levels

ADVERSE EFFECTS

Hyperglycaemia

INDICATIONS

- Acute management of hypoglycaemia
- HGT < 3,5mmol/l

CONTRA-INDICATIONS

No absolute contra-indications

PRECAUTIONS

- Patient must be lateral if unconscious
- Avoid aspiration

PACKAGING

- 25g and 50g powder sachet
- 25g and 50g gel

DOSAGE AND ADMINISTRATION

- 25g of gel applied to the oral mucosa of the patient with a gloved finger
- Preferably dilute powder in glass of water if patient is conscious
- Repeat after 5 minutes should blood glucose remain < 3.5mmol/l

IPRATROPIUM BROMIDE

DESCRIPTION

- Classification: Bronchodilators - anticholinergic
- Schedule: 2

PHARMACOLOGICAL ACTION

- Ipratropium bromide causes relaxation of bronchial muscles due to its anticholinergic effects (blocks parasympathetic system)
- Its bronchodilation action is particularly effective in conjunction with β_2-stimulants

PHARMACO-KINETICS

- Onset of action: 30 minutes
- Duration of action: 4-6 hours

ADVERSE EFFECTS

- With larger / repeated dosages, it is absorbed from the lungs into the systemic circulation resulting in systemic anti-cholinergic effects
  - Tachycardia
  - Dry, hot skin
  - Mydriasis
  - Urinary retention

INDICATIONS

- To be used in conjunction with β_2-stimulants for acute bronchospasm

CONTRA-INDICATIONS

- Known hypersensitivity to ipratropium bromide or other anti-cholinergic drugs
- Do not use in neonates

PRECAUTIONS

- The onset of action is only after 20 minutes, which is much longer than the β_2-stimulants; peak effectiveness at 60 – 90 minutes
- The duration of action is 4 - 6 hours, which is also longer than the β_2-stimulants

PACKAGING

- Unit dose vial (UDV) containing 0.25 mg/2ml or 0.5 mg/2ml
- Metered Dose Inhaler (300 doses) 40 µg / inhalation (0.04mg)
- Nebulizer solution (bottle) 0.25mg/ml

DOSAGE AND ADMINISTRATION:

Adults

UDV
- Ipratropium bromide 0.5mg + appropriate β_2 stimulant + balance of N/S to a total of 5ml solution
- Nebulised over 10 minutes

Aerosol
- The patient or ILS Provider may administer this during an episode. Two puffs of ipratropium bromide are administered if no improvement occurs following β_2 stimulant administration
  Use of a spacer device is recommended.

Children > 5 years

- Ipratropium bromide 0.5mg + appropriate β2 stimulant + balance of N/S to a total of 5ml solution, nebulised over 10 minutes

Children 1 to 5 years
:
- Ipratropium bromide 0.25mg + appropriate β2 stimulant + balance of N/S to a total of 5ml solution, nebulised over 10 minutes

Children > 1 month to 1 year
:
- Ipratropium bromide 0.125mg + appropriate β2 stimulant + balance of N/S to a total of 5ml solution, nebulised over 10 minutes

NOTE

- Ipratropium bromide + β_2 stimulant have a synergistic effect
- May be particularly useful in patients with bronchospasm who have taken beta-blockers
- Typically given only once because of its prolonged onset of action; higher doses than those advocated above, or dosing intervals less than four hours confer no added benefits.

MEDICAL OXYGEN

DESCRIPTION

Classification: Naturally occurring atmospheric gas

PHARMACOLOGICAL ACTION

- Oxygen is an odourless, tasteless, colourless gas present in the atmosphere at a concentration of approximately 21% of local atmospheric pressure
- It reverses the deleterious effects of hypoxaemia on the brain, heart and other vital organs
- Expired air contains 16-17% oxygen
- During optimal active CPR only 25-30% of the normal cardiac output is maintained and for these reasons supplemental oxygen should be administered

INDICATIONS

- Glasgow Coma Scale < 15/15
- $S_PO_2 < 90\%$
- Any patient with abnormal vital signs
- Any respiratory insufficiency or arrest
- Acute decompensation of COPD / Asthma
- Confirmed or suspected hypoxia
- Severe anaemia
- Chest pain of medical or trauma origin
- Multiple or severe trauma
- Cardiac arrest / cardiac failure
- Toxic inhalations
- Prophylactically during air transportation
- Scuba diving accidents

CONTRA-INDICATIONS

There are no absolute contra-indications for the use of oxygen in the emergency setting

PRECAUTIONS

- High concentrations of oxygen may reduce the respiratory drive of a COPD patient; therefore, careful monitoring of the patient is required. Do not withhold oxygen from these patients if their prevailing condition is such that oxygen is required.
- Long exposures to high concentrations of oxygen may result in retrolental fibroplasia in neonates and pulmonary fibrosis
- Neonates with a patent ductus arteriosus (PDA); should cyanosis and signs of hypoxia develop after oxygen administration, remove oxygen. In some infants with a PDA and congenital heart disease, the presence of the PDA may be lifesaving because of ductal-dependent systemic or pulmonary blood flow. Increased oxygen concentration tends to constrict the foetal ductus arteriosus.
- Oxygen supports combustion - do not use in the presence of fire, smoke or cigarette smoking
- High pressure oxygen should not be used with oil or grease based substances as it causes an exothermic reaction with the risk of explosion

• Production of superoxide radicals in the presence of paraquat (herbicide) – paraquat and oxygen enhance each other's toxicity, causing severe pulmonary injury.
• Remove oxygen source to one metre away from defibrillation pads / paddles.

PACKAGING

Pressurised cylinder containing 100% medical oxygen

DOSAGE AND ADMINISTRATION

• Administered via:
  - Oxygen masks
  - Nasal cannulae
  - Bag-valve-mask / tube-reservoir device
  - Nebulizer device
  - Jet insufflation
• At the correct flow rate the following devices will deliver the following approx. F_iO_2:
  - Simple face mask = 35 - 60% at 6 - 10 L/minute
  - Venturi mask = 24 – 50% at 4 – 12 L/minute (manufacturer's instructions)
  - Nasal cannulae = 21 - 40% at 1 – 6 L/minute
  - Partial re-breather mask = 35 - 70% at 6 – 10 L/minute
  - Non-re-breather mask = 60 – 100% at 6 – 15 L/minute
  - Bag-valve-mask/tube = 50% at 12 - 15 litres/minute
  - Bag-valve-mask/ tube-reservoir device = 95 – 100% at 15 L/minute
    (Adequate flow rate = Reservoir bag inflated > 1/3 of its volume at all times)

NITROUS OXIDE and OXYGEN (ENTONOX®)

DESCRIPTION

- Classification: Analgesic gas
- Schedule: 4

PHARMACOLOGICAL ACTION

- Colourless, sweet-smelling, non-irritant gas
- Heavier than room air / oxygen
- Nitrous oxide has mild analgesic and anaesthetic effects depending on the dose inhaled
- When inhaled it depresses the central nervous system causing anaesthesia
- In addition, the high concentration of oxygen delivered along with the nitrous oxide increases oxygen tension in the blood, thereby reducing hypoxia
- It provides rapid, easily reversible relief of mild to moderate pain

PHARMACO-KINETICS

- Extremely blood-insoluble
- Not metabolised by the body
- Eliminated via lungs (small amounts are eliminated through the skin)
- Onset of action: 30-60 seconds (maximum 3-4 minutes)

ADVERSE EFFECTS

- Light-headedness
- Drowsiness
- Nausea and vomiting

INDICATIONS

- Relief of pain from:
  - Acute myocardial infarction
  - Musculoskeletal trauma
  - Burns - not including burns of the respiratory tract
  - Active labour
  - Any other condition requiring pain relief provided there are no contra-indications present

CONTRA-INDICATIONS

- Neurological impairment:
  - Any altered level of consciousness
  - Inability to comply with instructions
  - Head injuries
- Air entrapment:
  - COPD/asthma patient during an acute episode
  - Acute pulmonary oedema
  - Chest injuries
  - Abdominal trauma

- Diving accidents (specifically Acute Decompression Illness)
- Burns to the respiratory tract

• Other limitations:
- Hypotension (SBP < 90 mmHg)
- Major facial trauma (anatomic)

PRECAUTIONS

• The constituent gases nitrous oxide and oxygen disassociate at < 4°C.
It is imperative that the cylinder is inverted a few times and then placed horizontal when used in cold conditions as the patient will otherwise inhale pure nitrous oxide
• Nitrogen has decreased solubility in blood. Once in a gas-containing space the gas dissociates and nitrogen diffuses out slower than nitrous oxide diffuses in, and there is a net increase in gas volume
• When the mask is removed after prolonged use, the gas will come out of solution in the lungs and displace the oxygen in the alveoli, causing hypoxia
• In order to prevent this, the mask must not be strapped to the patient's face, and the patient must receive oxygen for ± 5-10 minutes, especially after prolonged use
• Nitrous oxide is a non-explosive gas

PACKAGING

• Pressurised cylinders containing a mixture of 52% nitrous oxide and 48% Oxygen (N_2O+O_2 52% : 48%)

DOSAGE AND ADMINISTRATION

• Entonox is predominantly a self-administered gas
• The administration procedure is to be explained to the patient carefully beforehand to prevent unnecessary complications
• Once the patient has inhaled enough Entonox to control the pain, they will remove the mask thereby preventing any chances of overdosing
• Registered paramedics are entitled to administer Entonox to a patient,
but this requires careful monitoring of the patient in order to prevent complications arising
• If the patient becomes drowsy, remove the Entonox and replace immediately with oxygen

Systematic Approach: patient assessment & emergency management

Primary Survey: Assessment & management
Resuscitation & reassessment

- Assess Scene safety
- Assess Responsiveness
- **A**irway & Alignment of c-spine prn
- **B**reathing, ventilation & oxygenation
- **C**irculation & external haemorrhage control
- **D**efibrillation prn. Disability assessment.
- **E**xposure

Secondary Survey

- **A**irway: Adequate & Protected?
- **B**reathing: Confirm Breath sounds? Oxygenation?
- **C**irculation: IV access & fluids prn; Monitors.
- **D**ifferential diagnosis
- History
- Vital signs
- Physical examination (head-to-toe survey)

The systematic approach above serves as a basic, general guideline and memory aid for the assessment, management and re-evaluation of patients. The order of evaluation and intervention may be modified and adapted as the situation demands.
The above approach is implied in all the ILS protocols.

TREATMENT of ACUTE ASTHMA (Bronchial asthma) (Adult & Child)

ASSESS SEVERITY

OXYGENATE
NEBULISE β_2 AGONIST
WITH IPRATROPIUM BROMIDE

Repeat β_2 agonist nebs continuously OR
Repeat MDI with spacer if available

Life Support for Healthcare Providers

(Adult and Child)

[Adapted from Resuscitation Council of SA BLS Algorithm]

RESUSCITATION COUNCIL OF SOUTHERN AFRICA

2006

EMSSA

Hazards?
Ensure scene is safe

Hello?
Check Responsiveness

Responsive →
If safe to do so:
Treat illnesses or injuries as necessary
(?Aspirin / Inhaler / Auto-injector)
Get assistance if needed
Reassess continuously

Unresponsive

Help!
Call for assistance
and Defibrillator/AED

A

Open **Airway**
Remove visible foreign material
Look for adequate breathing

Breathing adequately →
Place in recovery position
Check for continued breathing
Reassess continuously

Not breathing adequately

B

Breathe
Give 2 effective (chest rising) breaths at 1 breath/second
(with O_2 if available). Feel for pulse for up to 10 seconds.
Is a definite pulse present?

Yes →
Continue Rescue breaths:
- Adult:10/min
- Child: 12-20/min
Reassess continuously

No or Don't Know

C

Compressions
Compress chest at a rate of 100/min (almost 2 compressions/second)
Push hard / Push fast / Ensure full chest recoil / Minimize interruptions
CPR Ratios (until airway protected): 1-Rescuer = 30:2 and 2–Rescuers (Child) = 15:2

Continue until **Defibrillator/AED** available and ready

D

If time from collapse > 5 minutes without CPR, first do 2 minutes of CPR before analysing

Analyse Rhythm

Shockable
(VF/Pulseless VT)

Give 1 Shock
Biphasic: 120–360 J (4 J/kg)
Monophasic – 360 J (4 J/kg)

***Immediately* resume CPR for 2 minutes**

Non-Shockable
(PEA/Asystole)

***Immediately* resume CPR for 2 minutes**

During CPR
Check electrode/paddle position & contact
Attempt
- Adjuncts
- Vascular Access

Correct Contributing Causes*

Do not interrupt compressions unless absolutely necessary

After 2 min of CPR, if organized electrical activity returns, check pulse:
- If present – provide post-resuscitation care
- If absent, continue CPR

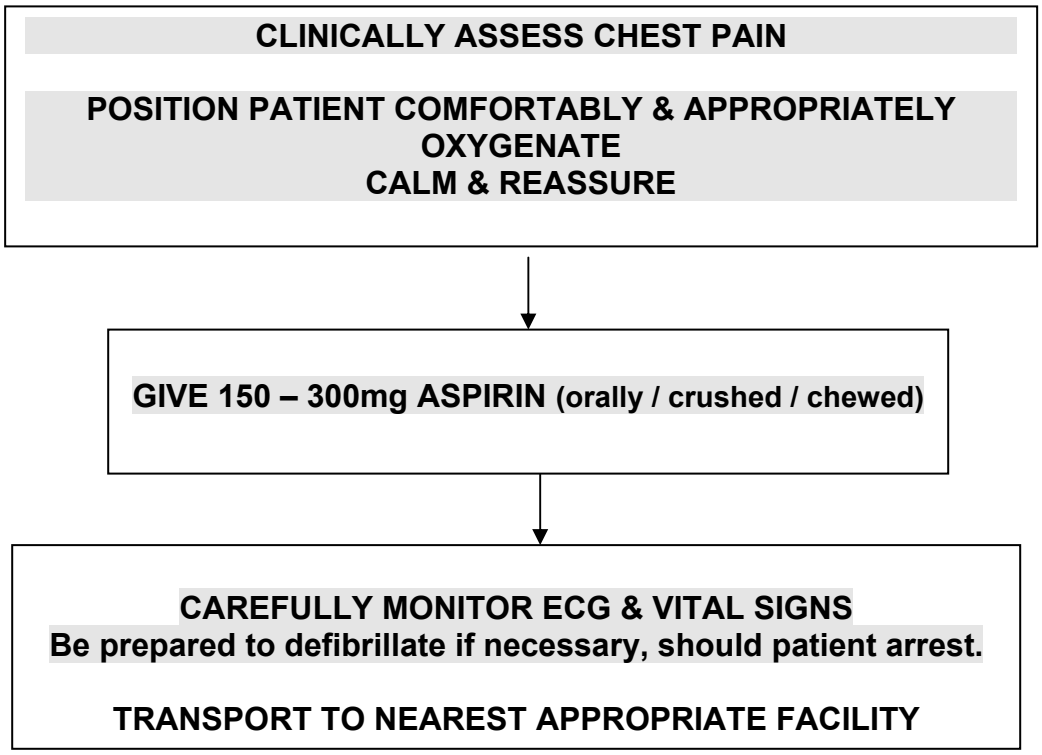
***Identify & Correct Contributing Causes:**

Hypoxia	Hypovolaemia	H - Acidosis	Hypothermia	Hyper/hypoglycaemia
Tamponade	Tension Pneumothorax	Toxins	Trauma	Thrombosis (Pulmonary)
Thrombosis (Coronary)				

AMENDMENT TO ILS CAPABILITY – PROPOSED

Defibrillation for children from one year of age who present with ventricular fibrillation / pulseless ventricular tachycardia, IS ADVISED.

TREATMENT of ACUTE CORONARY SYNDROMES (ACS)



DECLARATION OF DEATH

Death may be declared to have occurred by a registered ILS Provider if:

A. The person is obviously dead due to / evidenced by:

1. Decapitation or mortal disfigurement
2. Rigor mortis
3. Putrefaction
4. Post mortem lividity

OR

B.

1. There is no evidence of cardiac electrical activity on electrocardiogram in all 3 leads for 30 seconds or more (if ECG available) **OR**
2. There are no palpable central pulses **and**
3. There are no audible heart sounds **and**
4. Bilateral fixed dilated pupils are present **and**
5. There has been no spontaneous breathing for the past 5 minutes **and**
6. Absent oculo-cephalic reflex **and**
7. Absent gag and corneal reflexes

Provided that:
The signs B 1 - 7 have been considered in terms of hypothermia, or possible drug effects.
If the above guidelines are adhered to, ILS Providers may declare death and hence further declaration by a medical practitioner would not be necessary before removing the patient from the scene.