QAS CLINICAL PRACTICE MANUAL

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Table of contents

Drug administration

enFlow® blood warmer
Intramuscular injection
Intranasal drug administration
Nebulisation
Oral drug administration
Springfusor®
Subcutaneous injection
Sublingual drug administration

Obstetrics

Bimanual compression
Breech birth
Cephalic delivery
Shoulder dystocia

Respiratory

Bag valve mask (BVM)
Controlled mechanical ventilation (CMV)
Positive end expiratory pressure
Tension pneumothorax
Thorocostomy

Resuscitation

Cardio pulmonary resuscitation (CPR)
Defibrillation

Trauma

Application of bandages and slings
Application of stifneck® collar
Care of an amputed body part
Combat application torniquet® (C.A.T®)
Donway traction splinting
Extrication board
Fracture reduction
Helmet injury
Manual inline stabilisation
NEANN
SAM Pelvic Sling™
Scoop stretcher
Vacuum splints

Other

Clinical consultation
Clinical handover
Emergency evacuation
Gastric intubation
Insertion of arterial line
Sedation and procedural sedation

DRUG THERAPY PROTOCOLS

Adrenaline
Amiodarone
Aspirin
Atropine
Benztropine
Box jellyfish antivenom
Calcium gluconate 10%
Ceftriaxone
Clopidogrel
Enoxaparin
Fentanyl
Frusemide
Glucagon
Glucose 5%
Glucose 10%
Glucose gel
Glyceryl trinitrate
Haloperidol
Heparin
Hydrocortisone
Hydroxocobalamin
Hypertonic saline 7.5%
Insulin (Actrapid®)
Ipratropium bromide
Isoprenaline
Ketamine
Lignocaine 2%
Magnesium sulphate
Methoxyflurane
Metoclopramide
Metoprolol
Midazolam
Morphine
Naloxone
Noradrenaline
Ondansetron
Oseltamivir
Oxygen
Packed red blood cells
Paracetamol
Phenytoin
Promethazine
Salbutamol
Sodium bicarbonate 8.4%
Sodium chloride 0.9%
Tenecteplase
Tirofiban
Water for injection

APPENDIX

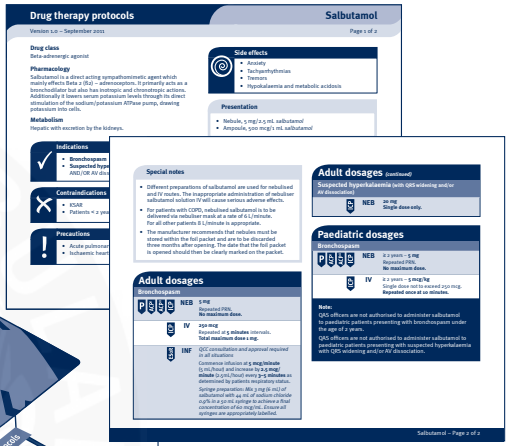
Medical abbreviations

The QAS aims to provide high standards of emergency treatment, patient care and transportation for sick and injured people. The new CPM reflects contemporary standards of clinical practice in the pre-hospital environment. It includes assessment and treatment information based on expert evidence.

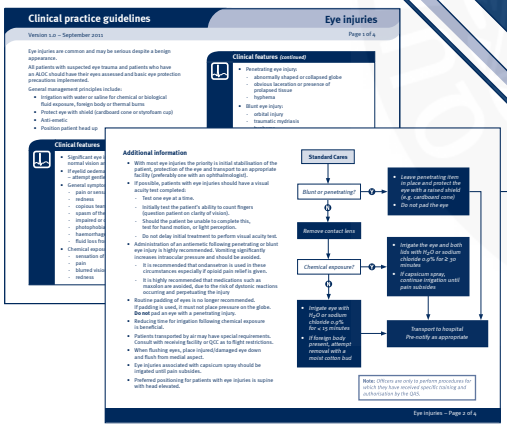
The CPM is divided into **three** parts:

- clinical practice guidelines ('CPGs')
- clinical practice procedures ('CPPs')
- drug therapy protocols ('DTPs').

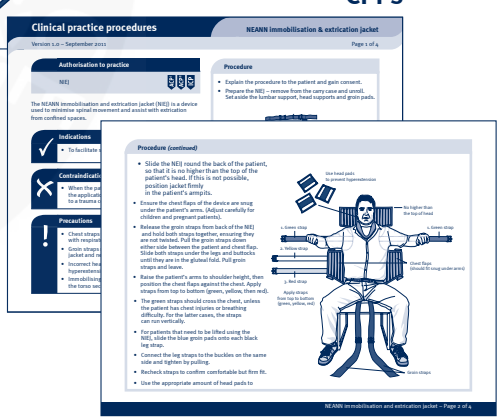
DTPs



CPGs



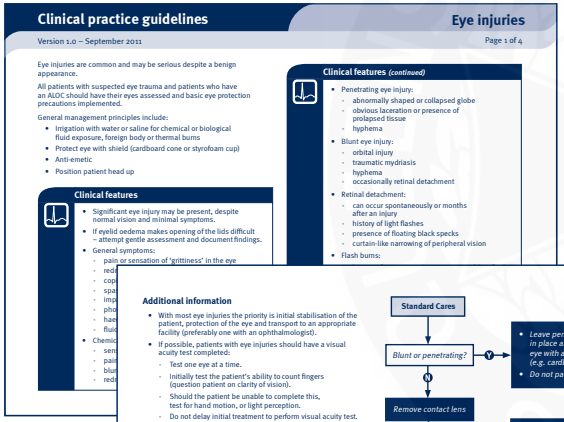
CPPs



The **CPGs** cover a range of clinical conditions and situations commonly encountered by paramedics in the pre-hospital environment. In the case of a clinical condition, each CPG provides:

- information regarding a typical clinical presentation
- the diagnostic pattern associated with the relevant condition
- guidelines for clinical management.

The **CPPs** cover specific clinical procedures that may be performed as part of the clinical management of a patient. The use of specific items of equipment carried by QAS ambulances is also addressed through relevant CPPs.


Clinical practice guidelines

Eye injuries

Version 1.0 – September 2011

Page 1 of 4

Eye injuries are common and may be serious despite a benign appearance.

All patients with suspected eye trauma and patients who have an ALOC should have their eyes assessed and basic eye protection precautions implemented.

General management principles include:

- Irrigation with water or saline for chemical or biological fluid exposure, foreign body or thermal burns
- Protect eye with shield (cardboard cone or styrofoam cup)
- Anti-emetic
- Position patient head up

Clinical features

- Significant eye injury may be present, despite normal vision and minimal symptoms.
- If eyelid oedema makes opening of the lids difficult – attempt gentle assessment and document findings.
- General symptoms:
  - pain or sensation of 'grittiness' in the eye

Clinical features *(continued)*

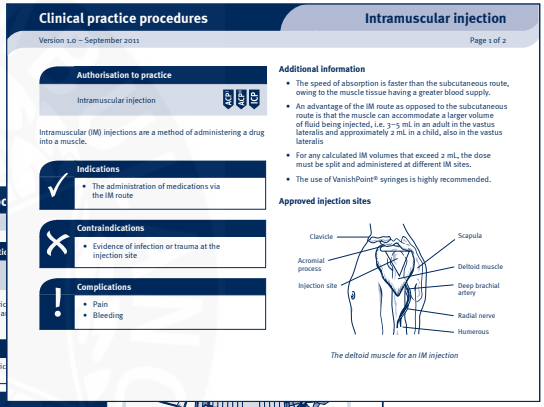
- Penetrating eye injury:
  - abnormally shaped or collapsed globe
  - obvious laceration or presence of prolapsed tissue
  - hyphema
- Blunt eye injury:
  - orbital injury
  - traumatic mydriasis
  - hyphema
  - occasionally retinal detachment
- Retinal detachment:
  - can occur spontaneously or months after an injury
  - history of light flashes
  - presence of floating black specks
  - curtain-like narrowing of peripheral vision
- Flash burns:

Additional information

- With most eye injuries the priority is initial stabilisation of the patient, protection of the eye and transport to an appropriate facility (preferably one with an ophthalmologist).
- If possible, patients with eye injuries should have a visual acuity test completed:
  - Test one eye at a time.
  - Initially test the patient's ability to count fingers (question patient on clarity of vision).
  - Should the patient be unable to complete this, test for hand motion, or light perception.
  - Do not delay initial treatment to perform visual acuity test.
- Administration of an antiemetic following penetrating or blunt eye injury is highly recommended. Vomiting significantly increases intraocular pressure and should be avoided.
  - It is recommended that ondansetron is used in these circumstances especially if opioid pain relief is given.
  - It is highly recommended that medications such as maxolon are avoided, due to the risk of dystonic reactions occurring and perpetuating the injury
- Routine padding of eyes is no longer recommended. If padding is used, it must not place pressure on the globe. **Do not** pad an eye with a penetrating injury.
- Reducing time for irrigation following chemical exposure is beneficial.
- Patients transported by air may have special requirements. Consult with receiving facility or QCC as to flight restrictions.
- When flushing eyes, place injured/damaged eye down and flush from medial aspect.
- Eye injuries associated with capsicum spray should be irrigated until pain subsides.
- Preferred positioning for patients with eye injuries is supine with head elevated.

Note: *Officers are only to perform procedures for which they have received specific training and authorisation by the QAS.*

Eye injuries – Page 2 of 4


Clinical practice procedures

Intramuscular injection

Version 1.0 – September 2011

Page 1 of 2

Authorisation to practice

Intramuscular injection

Intramuscular (IM) injections are a method of administering a drug into a muscle.

Indications

- The administration of medications via the IM route

Contraindications

- Evidence of infection or trauma at the injection site

Complications

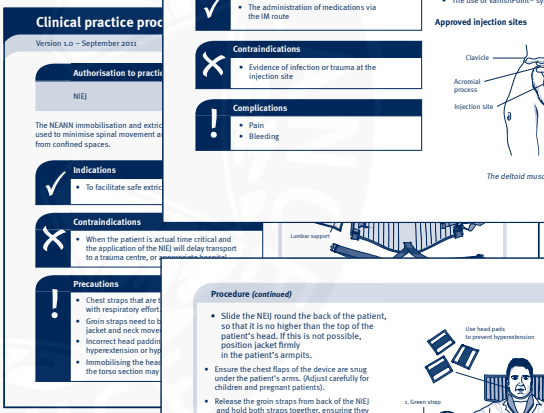
- Pain
- Bleeding

Additional information

- The speed of absorption is faster than the subcutaneous route, owing to the muscle tissue having a greater blood supply.
- An advantage of the IM route as opposed to the subcutaneous route is that the muscle can accommodate a larger volume of fluid being injected, i.e. 3–5 mL in an adult in the vastus lateralis and approximately 2 mL in a child, also in the vastus lateralis
- For any calculated IM volumes that exceed 2 mL, the dose must be split and administered at different IM sites.
- The use of VanishPoint® syringes is highly recommended.

Approved injection sites

The deltoid muscle for an IM injection


Clinical practice proc

Version 1.0 – September 2011

Authorisation to practic

NIEJ

The NEANN immobilisation and extric used to minimise spinal movement a from confined spaces.

Indications

- To facilitate safe extric

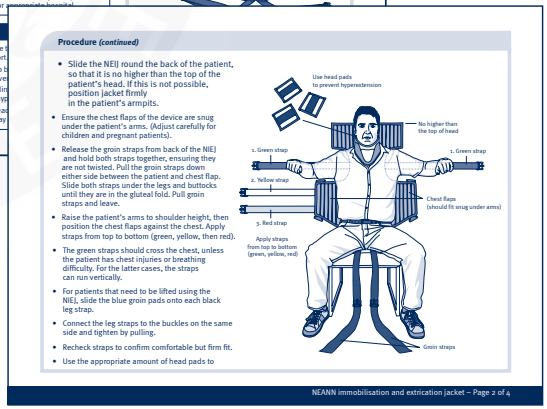
Contraindications

- When the patient is actual time critical and the application of the NIEJ will delay transport to a trauma centre, or

Precautions

- Chest straps that are t with respiratory effort
- Groin straps need to b jacket and neck move
- Incorrect head paddin hyperextension or hyp
- Immobilising the hea the torso section may

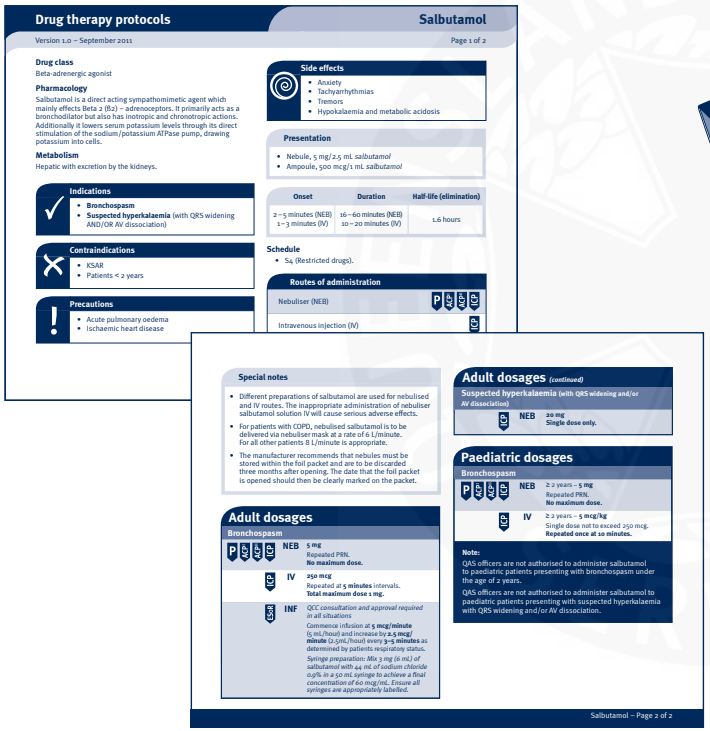
Lumbar support


Procedure *(continued)*

- Slide the NEIJ round the back of the patient, so that it is no higher than the top of the patient's head. If this is not possible, position jacket firmly in the patient's armpits.
- Ensure the chest flaps of the device are snug under the patient's arms. (Adjust carefully for children and pregnant patients).
- Release the groin straps from back of the NIEJ and hold both straps together, ensuring they are not twisted. Pull the groin straps down either side between the patient and chest flap. Slide both straps under the legs and buttocks until they are in the gluteal fold. Pull groin straps and leave.
- Raise the patient's arms to shoulder height, then position the chest flaps against the chest. Apply straps from top to bottom (green, yellow, then red).
- The green straps should cross the chest, unless the patient has chest injuries or breathing difficulty. For the latter cases, the straps can run vertically.
- For patients that need to be lifted using the NIEJ, slide the blue groin pads onto each black leg strap.
- Connect the leg straps to the buckles on the same side and tighten by pulling.
- Recheck straps to confirm comfortable but firm fit.
- Use the appropriate amount of head pads to

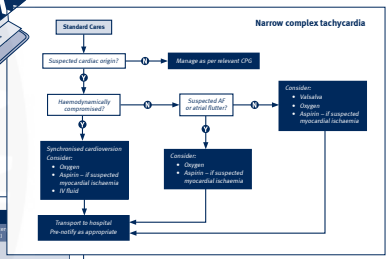
NEANN immobilisation and extrication jacket – Page 2 of 4

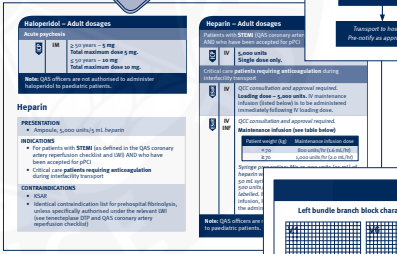
The **DTPs** provide directions for the use of pharmacological agents that have been authorised for use by QAS paramedics when performing duties for the QAS. A DTP exists for each pharmacological agent and provides parameters for its use in the pre-hospital environment.



To further assist QAS paramedics, a *Field Reference Guide* **(FRG)** has been created and issued to each paramedic. The FRG includes an algorithm for all CPGs as well as other reference material that may be helpful in the field. Paramedics are individually responsible for ensuring their personal FRG is updated to reflect periodic changes to the CPM.

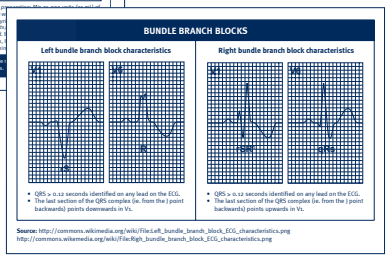
CPG Algorithm





Drug Therapy Protocols

Charts



POWERS OF AUTHORISED OFFICERS

The QAS Commissioner may authorise an officer or officers of a particular class or category, to exercise the powers that are set out in the *Ambulance Service Act 1991* (Qld) ('the Act').[1]

> The Act provides that an authorised officer, when providing ambulance services for the QAS, may take any reasonable measure to:
>
> - protect persons from any danger or potential danger associated with an emergency situation
> - protect persons trapped in a vehicle, receptacle or vessel, or otherwise endangered
> - protect themselves or other officers or persons from danger, potential danger or assault from other persons.

Measures that may be taken for a purpose of protecting persons from danger or potential danger, or those that are trapped may include, but are not limited to, the following:

- enter any premises, vehicle or vessel
- open any receptacle, using such force as is reasonably necessary
- bring any apparatus or equipment onto premises;
- remove from, or otherwise deal with, any article or material in the area
- destroy (wholly or partially) or damage any premises, vehicle, vessel or receptacle
- cause the gas or electricity supply or motor or any other source of energy to any premises, vehicle, vessel or receptacle to be shut off or disconnected
- request any person to take all reasonable measures to assist the authorised officer
- administer such basic life support and advanced life support procedures as are consistent with the training and qualifications of the authorised officer.

Measures that may be taken for the purpose of protecting themselves, other officers, and other persons from danger, potential danger or assault may include, but are not limited to, directing that a person not enter into, or remain within, a specified area around the patient or the site.

What constitutes 'reasonable' in any situation is that which a careful paramedic of a similar class or category would do in similar circumstances.

The content of the CPGs and CPPs, coupled with the education and training provided to QAS paramedics, will serve as a helpful guide as to what actions would be appropriate and reasonable in each circumstance.

Paramedics are also encouraged to consult with senior officers, clinicians and medical specialists if the circumstances warrant.

Forced entry

On occasion, officers may be left with no choice but to forcibly enter premises to locate a patient.

1. Officers on scene must advise that they are unable to rouse a response from any person at the premises or gain entry without force.
2. The communication centre will then follow standard procedures to ascertain the correct address has been given and will attempt to call-back the caller.
3. Once the communication centre has carried out standard procedures and verified the address by radio, the attending officers are to verify the address at the scene and notify the communication centre that they intend to make entry to the premise in accordance with the above directions. Every effort is to be made to cause the least damage as possible.

4. In these situations officers are to ensure the communication centre is notified of the measures taken to gain entry and if the building cannot be secured.
5. If the patient's condition requires urgent transport, the communication centre is to notify the QPS and/or a senior QAS officer of the situation.
6. Every effort must be made to notify the owners/residents of the premises of the damage.
7. The use of forcible entry to gain access to premises is to be recorded on the ARF, including actual damage caused to the premises to gain entry.

ROLE OF THE PARAMEDIC

The role of the paramedic lies within the Queensland Emergency Medical System (QEMS). Paramedics have three primary tasks:

1. the assessment and prioritisation of the patient's immediate and definitive needs
2. delivery of the appropriate immediate care, while concurrently
3. organising the provision of definitive care in the most time efficient manner.

The Paramedic must consider all resources available within the QEMS continuum when treating a patient, including QAS resources, community resources, other emergency services including aeromedical resources, ancillary medical facilities and receiving hospitals.

Obtaining the most appropriate care in the most efficient time-frame may encompass the following options:

- paramedic to administer care on-scene if trained and authorised
- rendevous with an Intensive Care Paramedic (ICP) or appropriately trained officer on-scene
- rendevous with an appropriate Doctor or ICP enroute
- utilise aeromedical services
- clinical consult with a doctor
- transport patient to the most appropriate definitive care specific to their needs.

The paramedic must make these decisions in conjunction with QAS Policy & Procedures, clinical training, experience and available advice.

BASIC PRINCIPLES OF MANAGEMENT

Basic Principles of Management are goals of care that apply to all cases:

- Review all communication centre dispatch information.
- Consider all environmental factors and approach a scene only when it is safe to do so.
- Identify potential and actual hazards and take the necessary precautions.
- Ensure the safety of yourself, other officers and emergency services personnel, your patients and the public.
- Ensure the scene is as safe as is practicable.
- Request assistance as required.

The basic principles of management also apply to all patients. Paramedics must:

- identify and manage life threatening conditions
- locate all patients first. If the number of patients is greater than resources, seek additional resources.
- assess the patient's condition appropriately
- prioritise and manage the most life threatening conditions first
- provide sit-rep to communications as soon as possible after arrival on scene
- provide adequate oxygenation and ventilation
- optimise tissue perfusion
- identify and manage other conditions
- provide appropriate pain relief
- posture the patient according to the presenting condition
- ensure the maintenance of normal body temperature
- provide psychological support at all times
- transport as necessary

Where the number of patients overwhelms the existing resources refer to the QAS Multi-casualty Management Plan.[2]

INFECTION CONTROL

This guideline describes QAS infection control procedures for prevention of infectious disease transmission in the ambulance environment. The full guideline is on the DES portal.[3] Effective infection control is based on good hygiene centred around practices that arise from identifying hazards and implementing risk management procedures. Strategies for infection control are based on current understanding of the aetiology of infections involved and the most effective ways to control them.

STAFF SUPPORT

Paramedic work sometimes exposes staff to circumstances they find very difficult to cope with.

Sudden Infant Death Syndrome (SIDS), is one such circumstance and the following is provided to assist in the management of SIDS outside the clinical scope:

- Attempt resuscitation if appropriate.
- Treat the baby as a baby, rather than a body. Use the baby's name if you can.
- Do not hurry the baby away from the house.
- Separation from the baby should occur when the parents are ready.
- Carry the baby to a place of comfort in the home and allow parents to remain with their baby if they wish.
- Other children need not be removed or separated.
- Explain that it could be SIDS but this will be confirmed after 'an autopsy' is completed. Explain that our laws require an autopsy to be carried out to ascertain the cause, if possible, of any sudden, unexpected death, whatever the age of the person.

- Reassure parents that an autopsy is a detailed operation carried out with gentleness and care by a pathologist. Tell the parents that the police will call and that this is normal. Tell the parents a formal inquest is not necessary if death is due to SIDS and that parents are not required to identify the baby at the Coronial Services Centre.
- Reassure the parents that, if it is SIDS, there is nothing known that they or anyone else could have done to prevent the death.
- Explain if the baby had blood, vomit, facial or body discolouration that these can occur after or during the dying process and are probably not the cause of the death of their child.
- Allow parents to express their shock and disbelief. Respect cultural mourning customs.
- Ask the parents if they would like you to telephone anyone for them or help them to do so in order that they can have support, e.g., relatives, doctor, workplace, SIDS.

If needed, call 1800 628 648 for SIDS 24-hour crisis service. SIDS counsellors are also available for ambulance staff.

Other traumatic events are managed by paramedics as per relevant guidelines and procedures. However outside the clinical requirements of these cases there may be difficulty in the management of personal emotions, thoughts and coping mechanisms.

All QAS staff should familiarise themselves with the Priority One counselling service through the DES Portal and the important service they provide.[4]

QAS CLINICAL SCOPE OF PRACTICE LEVELS

PARAMEDIC – ADVANCED CARE 1

Skills

- 12-Lead ECG acquisition (auto interpretation)
- Adult CPR
- Application of aseptic dressing
- Assess vital signs
- Breech delivery
- BVM ventilation
- Cardiac monitoring
- Glucometry
- Intramuscular injections
- Intranasal drug administration
- Laryngeal mask airway insertion
- Nasopharyngeal airway
- Nebulised medications
- Normal cephalic delivery
- Oropharyngeal airway
- Primary and secondary assessments
- Semi automatic defibrillation
- Use of cervical collar
- Use of pelvic binder
- Use of spinal movement restriction techniques
- Use of traction splints
- Use of vacuum splints

Pharmacology

Acetylsalicylic acid
Adrenaline
Box Jellyfish antivenom
Ceftriaxone
Fentanyl
Glucagon
Glucose gel
Glyceryl Trinitrate
Methoxyflurane
Midazolam
Morphine
Oxygen
Ondansetron
Paracetamol
Salbutamol
Water for injection

PARAMEDIC – ADVANCED CARE 2

Paramedic Advanced Care 1, plus:

Skills

- 12-Lead ECG acquisition (acquisitions/STEMI recognition)
- Capnography
- Intravenous access
- Intravenous drug administration
- Laryngoscopy with Magill forceps
- Manual coronary care
- Thoracic decompression (consultation)

Pharmacology

Glucose 10%
Hydrocortisone
Hydroxocobalamin
Ipratropium bromide
Magnesium sulfate (envenomation only)
Metoclopramide
Naloxone
Oseltamivir
Sodium chloride 0.9%

**** Includes QAS graduate induction program***

PARAMEDIC – INTENSIVE CARE

Paramedic Advanced Care 2, plus:

Skills

- 12-Lead interpretations
- Endotracheal intubation
- External jugular venous cannulation
- Gastric decompression
- Intraosseous access
- Intravenous infusions
- Procedural sedation
- Synchronised cardioversion
- Thrombolysis/cardiac reperfusion
- Transcutaneous cardiac pacing

Pharmacology

Amiodarone
Atropine
Benztropine
Calcium gluconate 10%
Clopidogrel
Enoxaparin
Haloperidol
Heparin
Ketamine
Lignocaine 2%
Magnesium sulfate
Promethazine
Sodium bicardonate 8.4%
Tenecteplase

*** ESoR**

Controlled mechanical ventilation
Insertion of an arterial line
Frusemide
Glucose 5%
Hypertonic saline 7.5%
Insulin (Actrapid®)
Isoprenaline
Metoprolol
Noradrenaline
Packed red blood cells
Phenytoin
Tirofiban