



Ambulance First Responder Field Guide



St John

Here for Life

Issue date 2019

Introduction

This field guide is for St John First Responders, Community Ambulance Workers (CAWs) and First Responders from agencies with a memorandum of understanding to respond on behalf of St John. It is a quick reference summary that provides guidance and instructions on providing treatment to patients.

Throughout this document the term 'First Responder' is used to describe all personnel using this field guide and 'ambulance' is used to describe a transporting emergency ambulance service vehicle crewed by personnel at EMT level or higher.

In certain areas of PNG, St John operates professional emergency ambulances staffed by trained EMTs, nurses or paramedics). First Responders should call for backup when the patient requires a higher level of care. In other areas, CAWs will make up the crewing of ambulances, and no advanced backup may be available to them.

The crew must manage the patient to the best of their ability and can seek clinical advice from the St John Clinical Support Officer (CSO).

Any persons using this field guide other than those described above do so at their own risk. St John will not be responsible for any loss, damage or injury suffered by any person as a result of, or arising out of, the use of this guide by persons other than those described above.

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1.1 General treatment principles

The role of the First Responder

First Responders have three predominant roles:

- Assessing scene safety, assessing the patient, treating immediately life threatening abnormalities and providing a sitrep prior to an ambulance locating at the scene.
- Supporting to treat and/or transport patients in an ambulance.
- Providing advanced first aid at events.

In addition to first aid interventions, First Responders may administer any of the following medicines and/or utilise any of the following skills without specific instructions to do so:

- Automated external defibrillation.
- Oxygen administration.
- Manual airway manipulation (oropharyngeal airway and use of suction).
- Ventilation via a bag and facemask.
- Arterial tourniquet (for example a CAT) application.
- Administration of adrenaline for anaphylaxis.
- Administration of a patient's prescribed medicines.
- Traction splint application.
- Aspirin for cardiac chest pain.
- Oral paracetamol.
- Oral ibuprofen.
- Oral glucose.

First Responders may only administer medicines and/or utilise skills other than those listed on page 1 when instructed to do so by the clinical support officer or by the following personnel at the scene: St John EMT or Paramedic, or a registered doctor. Most commonly these medicines and skills include:

- Inhaled methoxyflurane.
- Intramuscular adrenaline.
- Intramuscular midazolam.
- Limb realignment and joint relocation.
- Cervical collar application.
- Nebulised adrenaline.
- Nebulised salbutamol.

Other medicines may be administered and/or skills utilised when instructed to do so by personnel described above, provided the First Responder is trained and able to do so.

Informed consent

Informed consent is an interactive process involving communication between personnel and a patient, during which the patient gains an understanding of their condition and makes an informed choice regarding their treatment. Good communication is always the key factor in obtaining informed consent. It is important to take the time required to ensure the patient understands the issues as much as possible.

However, it is often not possible or appropriate for First Responders to gain informed consent prior to initiating treatment and the clinical setting must be taken into account. For example, detailed discussion

is inappropriate if a patient has an immediately life threatening problem or is in severe pain. In such settings it is appropriate to initiate treatment while explaining the treatment that is being provided.

Treatment and referral decisions

This section applies to areas where St John has professional ambulance services. In regional areas, CAWs may transport a patient direct to hospital.

- If First Responders have been dispatched to an incident by the 111 Coordination Centre, an ambulance must also be dispatched as soon as possible. If First Responders become aware that an ambulance has not been dispatched they should request that one is dispatched as soon as possible.
- First Responders must not make decisions regarding non-transport of a patient. Such decisions must be made by a Paramedic, a registered doctor, nurse or the CSO.
- If a competent patient refuses assessment or treatment and none is provided, First Responders may cancel the responding support, for example at a motor vehicle crash.
- First Responders should call the CSO for advice if there is going to be a significant delay in an ambulance locating at the scene.
- First Responders may transport a patient to hospital. First Responders must inform the 111 Coordination Centre which hospital the patient is being transport.

Patient positioning

- Patients who are alert should adopt their own position.
- Patients who are not alert should be lying down.
- Patients who are unconscious or only responding to pain should be placed on their side (supported) whenever this is feasible.
- Patients in cardiac arrest should be on their back.

Documentation

An ambulance case sheet or electronic ambulance case sheet is always required if First Responders are dispatched to an incident by the 111 Coordination Centre and a patient is assessed:

- This must include a history of the patient's presentation, any treatment or interventions provided, any vital signs recorded, any advice provided by other personnel and who provided that advice.
- Documentation could be on an eACSR if one is available.
- Documentation could be on paper that is scanned and sent to St John Headquarters after the case.
- If determined to transport to a health facility.

The chief complaint (or primary clinical impression)

If the primary survey is abnormal then this is the chief complaint. For example, if the patient has abdominal pain and shortness of breath the chief complaint is shortness of breath.

If the primary survey is normal then the chief complaint is the form of words that best describes the patient's problem. For example, if the patient clearly has an isolated ankle fracture this is the chief complaint, but if the patient has a sore ankle without signs of obvious fracture then the chief complaint is ankle pain.

Vital signs

- Vital signs should be recorded:
 - a) In all patients unless there is a specific reason not to (including RR, HR, BP and LOC).
 - b) When they are a pre-requisite to treatment. For example, a blood glucose level must be recorded before administering oral glucose.
 - c) Following a treatment that may alter vital signs. For example, a blood pressure must be recorded after assisting a patient to take their prescribed GTN.
- Vital signs should not be recorded if the patient has a time critical problem and the results will not change the treatment that is provided. For example, a blood glucose level should not be recorded prior to adrenaline administration if the patient has anaphylaxis.
- The frequency of vital signs:
 - a) Vital signs should be recorded every 10-15 minutes for patients that are status one or status two.
 - b) Vital signs should be recorded every 20-30 minutes for patients that are status three or status four.
 - c) Some vital signs are monitored continually (for example heart rate via ECG leads) but are recorded at intervals. These vital signs should be recorded if a significant change occurs or other vital signs are being recorded.

1.2 Taking a history

Taking a history involves communicating with the patient, family, caregivers or bystanders to gather information that may be relevant to the patient's current condition.

SAMPLE is a useful mnemonic to help ensure all relevant information is gathered when taking a history:

- S** **Signs and symptoms.** What signs (physical findings) and symptoms (things they are complaining of) do they have?
- A** **Allergies.** Do they have any known severe allergies?
- M** **Medications.** What medications are they currently prescribed and/or taking?
- P** **Past history.** Have they had this problem before and is there any other relevant past medical history?
- L** **Last healthcare contact.** When was the last time they were in contact with the healthcare system and what was this for?
- E** **Events prior.** What is the history preceding this illness or injury?

Additional information

Last oral intake has been removed from SAMPLE because this usually provides no additional useful information.

OPQRST is a useful mnemonic to help ensure all relevant information is gathered when a patient is in pain:

- O** **Onset.** What were they doing when the pain started?
- P** **Provoking.** Does anything make their pain better or worse?
- Q** **Quality.** What does their pain feel like? Ask them to use their own words to describe it, for example dull, heavy or sharp.
- R** **Region and radiation.** Where is the pain and does it go (radiate) anywhere else?
- S** **Severity.** How severe is the pain? Using the 0–10 scale may be helpful, but if they are clearly in severe pain it is appropriate to just record this as severe.
- T** **Timing.** What time did the pain start? Is the pain always there or does it come and go?



1.3 The primary and secondary survey

The primary survey

Airway

- Look and listen for signs of airway obstruction.
- Open the airway manually using head tilt/chin lift if required.
- Utilise an airway adjunct if required.

Breathing

- Look and feel for adequate chest rise and fall.
- Look for obvious signs of respiratory distress.
- Ventilate using a bag and facemask if required.

Circulation

- Look for and compress significant external bleeding.
- Start CPR if required.
- Feel the pulse rate and strength.
- Look and feel for abnormal (slow) peripheral perfusion/capillary refill time.

Disability

- Check the level of consciousness using the AVPU scale.

Exposure, examination and environmental control

- Appropriately expose and examine the patient, while keeping them warm.

The primary survey: additional information

- The primary survey is a rapid assessment of the patient, identifying immediate threats to life and providing immediate treatment as required.
- The primary survey should take approximately 30–60 seconds.
- Any significant deterioration in the patient's condition should prompt a reassessment of the primary survey looking for a cause.

The secondary survey

Central nervous system

- Check the patient can move their face and all limbs normally.
- Check the patient can feel soft touch on all limbs.

Head, neck and face

- Look and feel for abnormalities such as wounds, deformity, bleeding or signs of infection.
- Feel the cervical spine for tenderness if appropriate.
- Look for a medical information adjunct such as a necklace.

Chest

- Look and feel for abnormalities such as wounds, deformity or bleeding.
- Look and feel for symmetry of chest movement and/or abnormal chest wall movement.

Abdomen and pelvis

- Look and feel for abnormalities such as wounds, deformity or bleeding.
- Ask the patient if they have pain in their abdomen or pelvis/hips.

Extremities

- Look and feel for abnormalities such as wounds, deformity, bleeding or signs of infection.
- Look at colour, feel warmth and assess perfusion/capillary refill time.
- Look for a medical information adjunct such as a bracelet.

Back and spine

- Look and feel for abnormalities such as wounds, deformity or bleeding.
- Feel the spine for tenderness if appropriate.

The secondary survey: additional information

- The secondary survey follows the primary survey and is a 'top to toe' examination of the patient.
- Although primarily designed for patients suffering from trauma, the secondary survey is important for all patients and should be appropriately modified if the patient is not suffering from trauma.
- The secondary survey should take approximately 2–3 minutes.
- Do not conduct a detailed secondary survey if there are significant abnormalities in the primary survey.
- Looking at the pupils does not usually provide useful information.
- There is no value in feeling the spine for tenderness unless the patient is alert.



1.4 Status codes

Status	Condition	Triage tag colour
Status zero	Officer in danger	N/A
Status one	Immediate threat to life	Red
Status two	Serious threat to life	Red
Status three	Potential threat to life	Orange
Status four	Unlikely threat to life	Green
Status five	No threat to life	Green
Status six	Hospital transfer	N/A
Status seven	Deceased	Black/white

Status codes are:

- A numerical means of describing an estimate of the severity of a patient's clinical condition.
- Qualitative and require clinical judgement.
- Allocated to a patient after taking into account the nature of their illness or injuries, their vital signs and the potential threat to life.
- Not directly altered by the mechanism of injury, environment (for example trapped or not trapped) or the patient's age.

The following examples are indicative only.

Examples of status one

- Obstructed airway or airway needing intervention.

- Severe difficulty breathing, for example only able to speak a word or two between breaths.
- Severe shock or severe uncontrolled bleeding.
- Severe injuries to multiple areas of the body.
- Unconscious or responding only to pain.

Examples of status two

- Moderate difficulty breathing, for example able to only speak in short sentences between breaths.
- Severe bleeding that has been controlled.
- Fractures or dislocations associated with obvious signs of limb ischaemia (for example the limb is cold or pale).
- Cardiac chest pain.
- Stroke.
- Not alert but responding to voice.

Examples of status three

- Mild difficulty breathing, for example able to speak in full sentences between breaths.
- Isolated fracture of one long bone. This includes open fractures provided there are no obvious signs of limb ischaemia.
- Dislocations of joints without obvious distal limb ischaemia.
- Abdominal pain without signs of shock.

Examples of status four

- Isolated minor fractures or lacerations.
- Strains and sprains.
- Headache with normal vital signs.

1.5 Situation reports

A situation report (sitrep) should usually be provided to the 111 Coordination Centre within five minutes of locating at an incident.

Provide the following information if one patient is present:

- The patient's known or estimated age.
- The patient's status.
- The chief complaint.
- Any additional specific information, for example pain relief needed.

Provide the following information if more than one patient is present:

- The number of patients.
- An estimate of the patient's status codes.
- The number trapped.
- Any additional specific information, for example regarding safety.

Provide the sitrep in a few short sentences, for example:

- "45 year old. Status three with severe abdominal pain. Likely to require a Paramedic for pain relief".
- "Approximately 20 year old. Status one, unresponsive with airway obstruction. Require ICP for assistance with airway (if available)".
- "Four patients. One status two trapped and three status fours. The road is blocked by a rolled truck and the scene is best approached from the south".

1.6 Calling the Clinical Advice Line

I Identify yourself. My name is [name]. I am phoning for a clinical consult. I am an [FR/AO/EMT/Paramedic/HEO/RN] stationed at [location].

S Situation. I am currently [mm] minutes away to [hospital name] and have back up due to arrive on scene in approximately [mm] minutes or I have no backup available.

B Background. I have a [yy] year old who presents with [clinical details/signs/symptoms]. Treatment to this point has involved [treatment].

A Assessment. My assessment of the patient has indicated that he/she has [condition]. His/her vital signs are [P, SpO₂, BP, RR, other pertinent vitals].

R Recommend and review. I am of the opinion that the patient needs [treatment/procedure]. Are you happy to authorise this treatment? Can I please confirm you have authorised me to administer/perform the following [treatment/intervention].

If your call is not answered immediately

- Ensure you are using the designated phone number.
- Stay on the line and pass the phone to someone else if necessary. You will be connected to the CSO as soon as possible.
- Hang up and call the dispatcher by radio if urgent advice is required. Ask the CSO to phone you immediately and include the number to call.

To call the Clinical Advice Line:

7111 1234

1.7 Handover

Use the IMIST AMBO template:

- I** Identification of the patient.
- M** Mechanism of injury or medical complaint.
- I** Injuries identified or information related to the medical complaint.
- S** Signs and symptoms.
- T** Treatment provided and trends.
- A** Allergies.
- M** Medicines.
- B** Background, including previous medical history.
- O** Other, including information on family and social situation.



1.8 Requesting a helicopter

Helicopter request criteria:

- A** **Access** is difficult and a helicopter is the most appropriate means of extrication.
- N** The **number of patients** at the scene exceeds the capacity of road resources.
- T** The patient has a **time sensitive condition** and a helicopter will result in a clinically significant time saving in the patient arriving in hospital.
- S** The patient requires personnel with **specific skills** and a helicopter will result in a clinically significant time saving in appropriately skilled personnel reaching the patient.

Provide the following information to 111 Coordination Centre

- The reason the helicopter is required, including the main request criteria.
- A brief summary of the patient's clinical condition.
- The expected immediate treatment needs of the patient.
- The expected hospital destination.
- Whether or not there are any specific requirements, for example winching.

To contact the Air Desk:

7111 1234

Preparing for helicopter arrival

- Designate personnel to secure an appropriate landing site.
- As soon as possible update the helicopter crew with:
 - a) A description of the landing site and any obvious hazards.
 - b) The patient's age and vital signs.
 - c) Any significant changes in the patient's condition.

Additional information

- Transporting a patient by helicopter compromises the ability to provide treatment to the patient, in comparison to the same level of personnel treating the patient in a road ambulance. This is because helicopters:
 - a) Have significantly less space than a road ambulance.
 - b) Are noisy and this restricts communication, even with modern headsets.
 - c) Have reduced light at night in order to maintain night vision for the helicopter crew.
- Unless access is the indication, the restricted ability to treat a patient in a helicopter must be outweighed by the advantage of a clinically significant reduction in the time it takes for the patient to receive skilled personnel, or to be transported to hospital.
- Calling for a helicopter does not mean that one will necessarily be dispatched and 111 Coordination Centre personnel may call First Responders back to ask for more information before making a decision.

1.9 Major incident sitrep

In the event of a major incident provide a METHANE sitrep as soon as possible.

- M** Major incident declaration.
- E** Exact location of incident.
- T** Type of incident.
- H** Hazards (significant) identified.
- A** Access and egress.
- N** Number (estimated) of patients.
- E** Emergency services already present and extra resources required.



1.10 Oxygen administration

- Oxygen should usually only be administered if the patient has any of the following:
 - a) An abnormal airway or airway obstruction.
 - b) Severe difficulty breathing.
 - c) Severe shock.
 - d) Is unresponsive or responding only to pain.
 - e) Smoke or toxic gas inhalation.
 - f) SCUBA diving illness or injury.
 - g) A pulse oximeter saturation of less than 94% on air.
- The oxygen flow rates to be used are:
 - a) Nasal prongs 2 litres/minute.
 - b) Simple mask 8 litres/minute.
 - c) Nebuliser mask 8 litres/minute (do not use less than 6 L/min).
 - d) High flow reservoir mask 10 litres/minute.
 - e) Manual ventilation bag 10 litres/minute.

Pulse oximetry

- A pulse oximeter provides a reading of how much oxygen is contained within blood, as a percentage of maximum capacity. It does not provide information on how well a patient is breathing.
- Pulse oximeter readings can be unreliable if the patient is very vasoconstricted, shaking, moving, has very dirty fingers or has been exposed to carbon monoxide. In particular, the pulse oximeter reading may be invalid if the waveform is poor and/or if the pulse rate measured by the pulse oximeter is different from the heart rate measured by the ECG.

Patients at high risk

- A small number of patients are at risk of developing a raised carbon dioxide level when administered oxygen. These patients are considered at high risk and include patients with COPD, severe obesity and those that are on home oxygen or home CPAP/BIPAP.
- It is appropriate to administer oxygen to patients at high risk if they meet criteria as previously outlined, but seek early clinical advice from the CSO if there will be prolonged scene or transport time.

Choosing the oxygen delivery device and flow rate

- A pragmatic approach should be taken when choosing the oxygen delivery device and flow rate:
 - a) For most conscious patients a simple mask is appropriate.
 - b) For most unresponsive patients a reservoir mask is appropriate.
 - c) Only use a manual ventilation bag for those patients requiring assistance with their breathing.
 - d) If the patient is on home oxygen, use the same delivery device (usually nasal prongs) and the same flow rate that the patient usually uses.

Oxygen administration in confined spaces

- Use caution when administering oxygen in a confined space, for example in a tank, pipe or silo as this can create an explosive atmosphere.
- Only administer oxygen within a confined space if:
 - a) The clinical indication is very strong and
 - b) Fire personnel are monitoring the oxygen concentration of the ambient gas and/or are ventilating the confined space.

1.11 Pain relief

- Assess the severity and nature of the pain.
- Offer the patient paracetamol and ibuprofen if the pain is mild to moderate and:
 - a) Appears to be secondary to a minor problem such as minor injury or headache or
 - b) The patient will be transported by ambulance and an ambulance is going to be delayed in locating at the scene.
- Call the CSO for instructions if the pain is severe and an ambulance is going to be delayed in locating at the scene. Possible treatments include oral tramadol and/or inhaled methoxyflurane. Ensure the following information is available prior to calling:
 - a) The patient's age.
 - b) If the patient has a known personal history or family history of malignant hyperthermia.
 - c) If the patient has a known personal history or family history of life threatening reactions to anaesthetic medicines.
 - d) If the patient has known kidney impairment.
 - e) If the patient has received methoxyflurane within the last week.

Paracetamol

- Do not offer paracetamol to the patient if they:
 - a) Are allergic to paracetamol or
 - b) Have current paracetamol poisoning or
 - c) Have suspected cardiac chest pain or
 - d) Have taken paracetamol in the last four hours or
 - e) Are not alert or
 - f) Have abdominal pain or
 - g) Have known severe liver impairment.

- Paracetamol dosage:
 - a) 1 g (two tablets) for patients aged 14 years and over.
 - b) 500 mg (one tablet) for children aged 8-13 years.
 - c) Do not administer paracetamol to children aged less than 8 years without seeking clinical advice.

Ibuprofen

- Do not offer ibuprofen to the patient if they:
 - a) Are allergic to ibuprofen or
 - b) Have suspected cardiac chest pain or
 - c) Have taken ibuprofen in the last four hours or
 - d) Are not alert or
 - e) Have abdominal pain or
 - f) Appear to be very unwell or severely injured or
 - g) Are aged greater than or equal to 75 years or
 - h) Are pregnant or
 - i) Are taking warfarin or
 - j) Have a known bleeding disorder or
 - k) Have known kidney impairment.
- Ibuprofen dosage:
 - a) 400 mg (two tablets) for patients aged 14 years and over.
 - b) 200 mg (one tablet) for children aged 8-13 years.
 - c) Do not administer ibuprofen to children aged less than 8 years without seeking clinical advice.

Additional information

- Pain relief is usually best achieved through a combination of positioning, splinting, reassurance and medicines.
- First Responders cannot make a decision to administer pain relief to a patient, as this requires an EMT or Paramedic. However:
 - a) First Responders may offer a patient paracetamol and/or ibuprofen for the patient to self-administer the medicines.
 - b) First Responders may administer methoxyflurane when instructed to do so by an EMT or Paramedic, a registered doctor or CSO.
- Paracetamol and ibuprofen should usually be offered in combination, as this provides better pain relief than either medicine alone. However, one of the medicines may be offered alone if there is a clear reason for the patient not to be offered the other.
- If the patient is a child, permission from a parent or guardian should be obtained before pain relief is offered or administered, whenever it is feasible to do so. However, it is acceptable to offer or administer pain relief if the child is in significant pain and a parent or guardian cannot be contacted.
- Paracetamol and/or ibuprofen may be provided to patients at events that ask for them, provided the patient appears to have a minor problem such as minor injury or headache. In this setting no formal assessment is required before providing the medicines, however if the patient appears to be very unwell or severely injured the patient must be assessed before pain relief is offered.



2.1 Asthma

- Perform a primary survey.
- Administer oxygen via a nebuliser mask at 8 litres/minute and call the CSO urgently if the patient is only able to speak a few words (or less) per breath.
- Take a history and measure vital signs.
- Update 111 Coordination Centre with a sitrep.
- Assist the patient to administer their 'reliever' inhaler. This is usually blue in colour.
- Call the CSO for instructions on additional treatment if the patient is deteriorating or there will be prolonged scene or transport time. Additional treatments include nebulised salbutamol and/or IM adrenaline.

Additional information

- The easiest way to identify asthma is to ask the patient if they have asthma.
- If the patient is very short of breath it is appropriate to ask closed questions that enable them to nod or shake their head.
- Signs and symptoms of asthma include:
 - a) Wheeze.
 - b) Respiratory distress.
 - c) Accessory muscle usage.
 - d) Reduced words per breath.
- Use this section if the patient has wheeze or difficulty breathing as a result of smoke or toxic gas inhalation.

2.2 Chronic obstructive respiratory disease (CORD)

- Perform a primary survey.
- Take a history and measure vital signs.
- Update 111 Coordination Centre with a sitrep.
- Assist the patient to administer their 'reliever' inhaler. This is usually blue in colour.
- Call the CSO for instructions on additional treatment if the patient is only able to speak a few words (or less) per breath, is deteriorating or there will be prolonged scene or transport time. Additional treatments include nebulised salbutamol.

Additional information

- The easiest way to identify CORD is to ask the patient if they have CORD. They may use alternative words for CORD such as emphysema or chronic bronchitis.
- If the patient is very short of breath it is appropriate to ask closed questions that enable the patient to nod or shake their head.
- Other signs and symptoms of CORD include:
 - a) Wheeze.
 - b) Respiratory distress.
 - c) Accessory muscle usage.
 - d) Reduced words per breath.
 - e) Chronic cough that produces sputum.

- It can be difficult to determine whether the patient has asthma or CORD. Patients with asthma have normal breathing between attacks but patients with CORD do not. If you are uncertain if the patient has asthma or CORD, treat them as if they have asthma.
- If you suspect a patient has CORD, it is appropriate to briefly pause to understand how bad their breathing is compared to usual. Because patients with CORD are often short of breath even when well, it is easy to overestimate the severity of their CORD. If possible, ask how their shortness of breath compares with their usual state.
- Patients with CORD are at risk of developing a rising carbon dioxide level when administered oxygen. It is appropriate to commence administration of oxygen if indicated, but call the CSO for advice if there will be prolonged scene or transport time.



2.3 Foreign body airway obstruction

If the patient is **conscious and moving sufficient air**:

- Do not provide any specific intervention.
- Be prepared to treat full obstruction.

If the patient is **conscious and not moving sufficient air**:

- Perform up to five back blows. Move to subsequent steps below if the obstruction is not cleared.
- Perform up to five chest thrusts.
- Alternate between cycles of back blows and chest thrusts until the obstruction is cleared, or the patient becomes unconscious.

If the patient is **unconscious**:

- Try to remove the foreign body with a finger sweep.
- Commence CPR if the obstruction is not cleared.

Additional information

- A patient that is moving sufficient air and/or coughing does not require immediate intervention.
- Check the patient for signs of relief of the obstruction between back blows and between chest thrusts.
- Position the patient with their head below their shoulders when performing back blows, provided this is feasible.
- Abdominal thrusts (also known as the Heimlich manoeuvre) are no longer recommended because they are associated with a risk of intra-abdominal injury and do not appear to be associated with a higher chance of success than chest thrusts.

2.4 Stridor

- Perform a primary survey.
- Take a history and measure vital signs.
- Update 111 Coordination Centre with a sitrep.
- Call the CSO for instructions on additional treatment if the patient has severe difficulty breathing, is deteriorating or if there will be prolonged scene or transport time. Additional treatments include nebulised adrenaline.

Additional information

- Stridor is an abnormal high pitched noise created when air is moving through a narrowed airway.
- Stridor is commonly caused by an infection causing swelling of the upper airway, particularly in young children.
- In the absence of foreign body airway obstruction, the cause of stridor is not important and the initial treatment is the same regardless of the cause.
- It is important to keep children as calm as possible, because stridor will usually get worse if they become upset or cry. Young children are more likely to remain calm if they are kept in the arms of a parent, but they must be transported in an approved restraint and not in the arms of a parent.
- Do not treat stridor with nebulised water or nebulised saline as this increases coughing but does not improve stridor.



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3.1 Cardiac chest pain

- Perform a primary survey.
- Take a history and measure vital signs, including a 3 lead ECG if a suitable monitor is available.
- Update 111 Coordination Centre with a sitrep.
- Acquire a 12 lead ECG only if trained to do so and a suitable monitor is available.
- Administer 300 mg of soluble aspirin provided the patient is an adult, is not pregnant and has not taken aspirin following instructions from the 111 Call Handler.
- Assist the patient to administer one dose of their own GTN every ten minutes, provided the patient has:
 - a) Ongoing chest pain and has
 - b) Already been prescribed GTN and has
 - c) A systolic BP greater than 100 mmHg and has
 - d) A heart rate greater than 40/minute and less than 130/minute.
- Call the CSO for instructions on additional treatment if the patient has severe pain or if there will be prolonged scene or transport time. Additional treatments include GTN and inhaled analgesia.

Additional information

- Signs and symptoms of cardiac chest pain include any of the following symptoms that do not ease completely after 15 minutes of rest:
 - a) Pain or an uncomfortable pressure in the middle of the chest.
 - b) Pain that radiates into the neck, jaw or teeth.
 - c) Pain that radiates into the shoulders or down one or both arms.
 - d) Pain that feels like a heavy weight is resting on the chest or a

band is being tightened around the chest.

- e) In addition, the patient may have shortness of breath, nausea or a feeling of impending doom.
- GTN may cause a significant fall in blood flow/output from the heart, particularly if the patient is having an ST elevation myocardial infarction (STEMI or heart attack). GTN is not a priority and the patient should not be encouraged to self-administer GTN if their systolic BP is less than or equal to 100 mmHg or they have other signs of low blood flow such as feeling light headed or appearing very unwell.
- Aspirin reduces blood clotting and improves outcomes for patients with cardiac chest pain. However, aspirin administration is not a priority if First Responders are uncertain if the patient has cardiac chest pain.



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3.2 Cardiac arrest

- Perform a primary survey and confirm cardiac arrest.
- Start CPR.
- Attach an AED/defibrillator in automatic mode and follow the instructions/voice prompts if available.
- Update 111 Coordination Centre with a sitrep.

General principles of CPR

- If there is doubt that the patient is in cardiac arrest the balance of risk is in favour of performing CPR.
- Move the patient to a clear area and place on a firm surface whenever feasible.
- Chest compressions are the most important part of CPR in most patients. Focus on the chest compressions, compress at a rate of 100–120/minute, ensure adequate depth, ensure adequate recoil and minimise pauses. Use a metronome whenever possible.
- The default CPR compression to ventilation ratio is 30:2. When performing 30:2 CPR, the person performing the chest compressions must not stop if the person performing ventilation is not ready and must not stop for more than three seconds for ventilation. Chest compressions should be recommenced after a three second pause, even if two breaths have not been delivered.
- In some circumstances (for example young children) an alternative compression to ventilation ratio may be used if First Responders are instructed to do so by a St John EMT or Paramedic, a registered doctor or CSO.
- Do not perform CPR on a patient who is in a sitting position.

Cardiac arrest during pregnancy

- In pregnancy, the uterus may impair blood return to the heart in the supine position. If possible, tilt the patient to her left by placing a pillow or cushion under her right hip to alleviate this.

Cardiac arrest and implanted defibrillators/pacemakers

- Implanted defibrillators and pacemakers are usually in the soft tissue under the left clavicle (collar bone). Standard procedures should be followed with the defibrillation pads placed as far away from the implanted defibrillator or pacemaker as possible.



3.3 Post cardiac arrest care

- Be prepared to treat further cardiac arrests. If possible task one person to continually monitor the patient.
- Update 111 Coordination Centre with a sitrep.
- If the patient is not breathing adequately, ensure an adequate airway and assist breathing as required.
- If the patient is breathing adequately, administer oxygen via a reservoir mask at 10 litres/minute.
- Measure vital signs regularly.
- If the patient is alert, sit them up and continue to monitor.
- If the patient does not wake up but is breathing adequately, place them on their side (supported) and continue to monitor.
- If breathing becomes agonal (ineffective or gasping) or the patient no longer has a palpable pulse, recommence CPR. If there is any doubt whether or not the patient is in cardiac arrest, the balance of risk is in favour of performing CPR.
- Call the CSO for advice if there will be prolonged scene or transport time.



4.1 Anaphylaxis

- Perform a primary survey.
- If the patient is status one, status two or deteriorating:
 - a) Administer an adrenaline auto-injector into the side of their thigh if one is available.
 - b) Administer oxygen at 8 litres/minute via an acute mask.
 - c) Call the CSO immediately for advice on IM adrenaline administration if an ambulance has not already located at the scene.
- Take a history and measure vital signs.
- Update 111 Coordination Centre with a sitrep.

Additional information

- Anaphylaxis is a life threatening allergic reaction.
- The patient should be assumed to have anaphylaxis if they have skin changes such as rash, itch, flushing, swollen lips and/or a swollen tongue plus sudden onset of any of the following:
 - a) Difficulty breathing, chest or throat tightness, wheeze or stridor.
 - b) Low blood pressure, fainting or collapse.
 - c) Vomiting, abdominal pain or diarrhoea.
- The most important aspect of treatment is the early administration of IM adrenaline. If there is any doubt and the patient's condition appears life threatening, the balance of risk is always in favour of administering IM adrenaline.
- Most patients with known anaphylaxis will have an adrenaline auto-injector and this should be brought to them as soon as possible. If an auto-injector is not immediately available, call the CSO for advice.

4.2 Severe bleeding

- Perform a primary survey.
- Firmly compress external bleeding.
- Apply an arterial tourniquet (for example a CAT) if there is severe bleeding from a limb that is not controlled by direct pressure.
- Update 111 Coordination Centre with a sitrep.
- Cover sucking chest wounds with a standard dressing.
- Take a history and measure vital signs.
- Call the CSO for advice if the bleeding is severe, difficult to control or there will be prolonged scene or transport time.

Additional information

- Control external bleeding with firm and sustained pressure directly over the bleeding point using your hand/s and a dressing/cloth.
- Applying direct pressure has a higher priority than applying a dressing and/or a bandage.
- There is no benefit to raising a bleeding limb unless the bleeding is clearly venous and coming from near the foot or hand.
- If a penetrating object is present:
 - a) Remove the object provided it is small (for example a nail) and it is in the arm or leg.
 - b) Do not remove the object if it is large (for example a knife) or if it is in a proximal area (such as the neck, axilla, chest, abdomen or groin).
 - c) If the object is not removed apply pressure directly on either side of the object.
- Keep the patient as warm as possible.

4.3 Burns

- Perform a primary survey.
- Administer oxygen at 10 litres/minute via a reservoir mask if the patient has probable smoke inhalation.
- Commence cooling the burn.
- Update 111 Coordination Centre with a sitrep.
- Cool the burn for at least 20 minutes. This should be at the scene unless there are other immediately life threatening injuries.
- Estimate burn size only after cooling is complete.
- Cover burns with cling film only after cooling is complete.
- Take a history and measure vital signs.
- Call the CSO for advice if the patient is in severe pain, the burn is greater than 20% of body surface area, or there will be prolonged scene or transport time

Additional information

- If the burns are due to chemical exposure all clothing must be removed (down to underwear) and the patient decontaminated, preferably in a shower.
- Patients with suspected airway burns must be transported to a designated major trauma hospital without delay as airway swelling may require early intubation. Suspect airway burns if there is any of the following:
 - a) Burns around or involving the lips.
 - b) Loss of nasal hair.
 - c) Visible swelling or burns in the mouth.
 - d) Hoarse voice or stridor.
 - e) Black sputum.

- Patients put into a cold shower or bath can quickly develop hypothermia. Water should be a comfortable cool temperature and not cold.
- Burn gels provide analgesia but are not a substitute for 20 minutes of cool running water, provided this is available. If burn gels are used they should be applied after cooling is complete.
- Chemical burns to the eyes are vision-threatening. Irrigate chemical burns to the eyes for at least 30 minutes.
- Estimate burn size only after cooling is complete:
 - a) Do not include superficial (like sunburn) burns.
 - b) The preferred method is to use a piece of paper the same size as the patient's hand (including their fingers). This represents 1% of body surface area.
 - c) It is very easy to overestimate burn size. As a general guide, to have more than 20% burns requires the equivalent of more than the entire front of the patient's chest and abdomen to be burnt.



4.4 Traumatic brain injury

- Perform a primary survey.
- Take a history and measure vital signs, including a blood glucose level.
- Update 111 Coordination Centre with a sitrep.
- If the patient is unresponsive or only responding to pain:
 - a) Place the patient on their side (supported) with their spine in neutral alignment (straight) and ensure an open airway.
 - b) Administer oxygen at 10 litres/minute via a reservoir mask.
- Call the CSO for advice if the patient is very agitated or there will be prolonged scene or transport time.

Additional information

- The most important aspects of treating a patient with traumatic brain injury are to ensure an adequate airway, adequate breathing and to administer oxygen if indicated.
- All patients with an altered level of consciousness after trauma should be treated as if they have traumatic brain injury, even if alcohol or drug intoxication is suspected to be contributing to their altered level of consciousness.
- Cervical spine immobilisation is not a priority. The patient should be placed on their side if required (regardless of having a suspected spinal injury), minimising unnecessary movement.
- Hypoglycaemia (low blood glucose) can mimic traumatic brain injury and a blood glucose level should always be measured.

4.5 Joint dislocation and fracture management

- Perform a primary survey.
- Take a history and measure vital signs, including limb baselines in the injured limb/s.
- Update 111 Coordination Centre with a sitrep.
- Call the CSO for advice if the patient is in severe pain, there is significant limb compromise or there will be prolonged scene or transport time.

Additional information

- Splinting a fracture will usually provide some pain relief, but this is not a priority unless there will be prolonged scene or transport time. Take a photo (using eACSR if available) of the fracture before applying a splint if possible.
- There is no urgency to dress or splint an open fracture, but this may occur if there will be prolonged scene or transport time. Take a photo (using eACSR if available) of the open fracture before applying a dressing or splint if possible.



4.6 Cervical spine injury

- Perform a primary survey.
- Take a history and measure vital signs.
- Update 111 Coordination Centre with a sitrep.
- Minimise unnecessary movement of the patient and maintain their spine in neutral alignment (straight) when feasible.
- **If the patient is alert and cooperative:** instruct the patient to minimise movement of their spine until assessed by a St John EMT or Paramedic, or a registered doctor or nurse.
- **If the patient is only responding to voice or is uncooperative:**
 - a) Minimise patient movement by instructing them to remain still and/or providing manual stabilisation of their head and neck.
 - b) Stop attempts to provide manual stabilisation if this worsens their level of agitation.
- **If the patient is only responding to pain or is unresponsive:**
 - a) Place the patient on their side (supported) if feasible and
 - b) Ensure their airway is open using head tilt/chin lift and
 - c) Keep their spine in neutral alignment (straight) using manual stabilisation of the head and neck and
 - d) Administer oxygen at 10 litres/minute via a reservoir mask.
- Call the CSO for advice if the patient is unable to move their arms or legs, or there will be prolonged scene or transport time.

Additional information

- Maintaining adequate airway and breathing is far more important than spinal immobilisation.
- Cervical collars are not routinely recommended because they may cause harm and there is no useful evidence they reduce the risk of further spinal injury.
- First Responders are trained in how to apply a cervical collar, but should only do so if instructed by a St John EMT or Paramedic, or a registered doctor or CSO.
- Symptoms of spinal injury include pain in the spine, tingling/numbness or weakness in the limbs.
- Do not be concerned about spinal injury if the patient is alert, cooperative and does not have pain in their spine.
- If the patient needs to be moved, do so with their spine in neutral alignment whenever feasible, noting that even if the spine is injured, gentle movement will not cause further injury to the spine.
- If the patient's spine is not in neutral alignment (for example their spine is bent), place the patient in neutral alignment as soon as possible.
- If the patient needs to be carried or moved, manual stabilisation of the head and neck or head blocks/rolled towels placed at the side of the head are the preferred means of stabilising the patient's head and neck.
- Tape should not be applied to the patient's head as a means of stabilising the spine, but may be used during extrication on a stretcher. Once in an ambulance the tape must be removed.
- If the patient cannot move their arms or legs they may require transport to a specific hospital. Notify 111 Coordination Centre as this may change what transporting resources are sent to the scene.

5.1 The agitated patient

- Ensure the scene is safe. Leave the scene and request police if there is a significant threat to safety.
- Perform a primary survey.
- Take a history and measure vital signs, including a blood glucose level.
- Update 111 Coordination Centre with a sitrep.
- Attempt verbal de-escalation.
- Call the CSO for advice if the agitation is severe, physical restraint is required or there will be prolonged scene or transport time.

Additional information

- Agitation can be caused by drugs, traumatic brain injury, infection, mental illness, dementia and drug withdrawal (particularly alcohol).

Verbal de-escalation

- Provided there is no immediate danger to people, verbal de-escalation must be attempted before providing physical restraint.
- The key aspects to successful verbal de-escalation are:
 - a) Allow sufficient time. 15–20 minutes may be required.
 - b) Maintain approximately two metres between you and the patient.
 - c) Have only one person talk to the patient.
 - d) Use a calm reassuring voice. Sit if possible.
 - e) Use short sentences and keep messages simple.
 - f) Minimise the number of people in the immediate vicinity.
 - g) Limit unnecessary noise and distractions.

h) Offer choices if appropriate, for example offer a drink or cigarette.

Providing physical restraint

- Physical restraint should usually only be provided following advice from the CSO.
- Physical restraint must only be used if it is required to ensure safety of the patient and/or personnel.
- Use the minimum amount of physical restraint required to ensure safety.
- Never restrain the patient face down and never restrain the patient with weight on their neck, chest, back or abdomen, as these risk causing respiratory arrest.
- All forms of physical restraint must be documented.



5.2 Diabetic emergencies

- Perform a primary survey.
- Take a history and measure vital signs, including a blood glucose level.
- Update 111 Coordination Centre with a sitrep.
- If the blood glucose level is less than 3.5 mmol/L:
 - a) Administer oral glucose or food if the patient is awake and able to swallow.
 - b) Call the CSO for instructions on additional treatment if the patient is unresponsive or unable to swallow. Additional treatment options include IM glucagon.

Additional information

Hypoglycaemia (low blood glucose)

- Hypoglycaemia occurs most commonly in patients with diabetes who are taking insulin or medicines to lower their blood glucose.
- Signs and symptoms of hypoglycaemia include:
 - a) Confusion.
 - b) Loss of concentration or coordination.
 - c) Erratic or unusual behaviour. The patient may appear 'drunk'.
 - d) Loss of consciousness.
 - e) Seizures.
- Examples of suitable oral glucose or food include: 1–2 sachets of glucose gel, a cup of 'non-diet' fruit juice or soft drink, 1–2 tablespoons of sugar, 1–2 tablespoons of honey or six squares of chocolate. However, any form of food is better than no food.

- Once patient has regained full consciousness, give a proper meal like noodles or bread.

Hyperglycaemia (high blood glucose)

- Hyperglycaemia is usually only significant when the blood glucose concentration is greater than 20 mmol/L.
- Hyperglycaemia may cause acid build up within the body and/or dehydration.
- Signs and symptoms include:
 - a) An increased respiratory rate, increased heart rate and poor perfusion.
 - b) Vomiting and/or feeling very unwell.
- IV access and IV fluid may be required if the patient has hyperglycaemia and is very unwell. Notify 111 Coordination Centre as this may alter the choice of ambulance back-up.



5.3 Poisoning

- Perform a primary survey.
- Take a history and measure vital signs, including a blood glucose level.
- Update 111 Coordination Centre with a sitrep.
- If the patient is unresponsive or only responding to pain:
 - a) Place the patient on their side and ensure an open airway using head tilt/chin lift.
 - b) Administer oxygen at 10 litres/minute via a reservoir mask.
- Call the CSO for advice if the patient is very agitated or there will be prolonged scene or transport time.
- Identify the poison/s if possible but do not collect samples.

Additional information

- An altered level of consciousness following poisoning is usually caused by alcohol, anti-depressants, sedatives, recreational drugs, opiates or a combination of these.
- Identifying the poison/s is not a priority as the treatment of poisoning is rarely poison or drug specific, but is focused on supporting airway, breathing and circulation.
- Do not induce vomiting as this may cause oesophageal injury.
- If poisoning has occurred but the patient shows no adverse signs or symptoms, consider calling the CSO for advice.



5.4 Seizures

- Perform a primary survey.
- **If the patient is still seizing:**
 - a) Place on their side (if feasible) and protect from harm.
 - b) Administer oxygen at 8 litres/minute via an acute mask.
 - c) Measure a blood glucose level.
 - d) Administer any prescribed medicines for seizures via the rectal, nasal or buccal (mouth) route, providing they have been prescribed for that patient and the seizure continues for more than five minutes.
- **If the patient has stopped seizing:**
 - a) Place on their side and ensure an open airway using head tilt/chin lift.
 - b) Check normal breathing has resumed.
 - c) Administer oxygen at 8 litres/minute via an acute mask, if unresponsive or responding only to pain.
 - d) Take a history and measure vital signs, including a blood glucose level.
- Update 111 Coordination Centre with a sitrep.
- If the blood glucose level is less than 3.5 mmol/L, treat using the 'diabetic emergencies' section.
- Call the CSO for instructions on additional treatment if the patient does not stop seizing after five minutes, advice is required on administering the patient's own medicines or there will be prolonged scene or transport time. Additional treatments include IM midazolam.

Additional information

- Signs of seizures include jerking or twitching of the face and limbs, foaming at the mouth, loss of consciousness and loss of bowel and/or bladder control.
- Time the seizures whenever feasible.
- Most seizures last a few minutes and then stop. Following the seizure it is common for the patient to take 5–10 minutes to become responsive and then be drowsy or confused for up to several hours. This is called the postictal period.
- Sometimes children (usually aged less than six years of age) can have seizures as a result of a rapid temperature rise, commonly due to a viral illness. If the child feels very hot or has a temperature of more than 40 degrees, cool them slowly by uncovering them.
- Occasionally a seizure is the first sign of cardiac arrest and in this setting the seizure will stop within a few minutes. This is why it is important to check that normal breathing has resumed. If normal breathing has not resumed, treat as cardiac arrest and start CPR.



6.1 Pregnancy and labour

If a pregnant patient has a problem such as seizures or asthma, treat them as per the appropriate section.

Pregnancy and trauma

- All pregnant patients with possible abdominal or pelvic trauma occurring after 14 weeks of pregnancy must be assessed in a hospital, preferably one with maternity facilities, even if the trauma is minor.

Normal birth

- Allow the patient to adopt the position she prefers.
- Support the baby's head and shoulders as they appear without applying traction.
- Dry the baby and place skin to skin with the mother, provided neither is requiring resuscitation. Keep them warm.
- Observe the baby's activity and breathing.
- Clamp and cut the cord 5cm from the baby 2 - 3 minutes after birth, unless this is required earlier to facilitate resuscitation.
- Keep the baby warm. Encourage the baby to breast feed by putting baby on mother bare chest.
- Allow the placenta to deliver spontaneously without applying traction. This usually occurs within 60 minutes. Place the placenta in a plastic bag.
- Transport the mother and baby to hospital.

If the cord is wrapped around the neck

- This is quite common and is not an emergency.
- If the cord is loose and is easy to slip over the baby's head, then do so. If you cannot easily slip it over the head, allow birth to continue.

If the baby gets stuck

- If the baby's head appears, but the body does not after two contractions with pushing:
 - a) Obtain immediate help from a midwife or doctor if one is available.
 - b) Get the patient to grab her knees, pull them hard to her chest and push as hard as she can with the next two contractions.
 - c) If the above fails to result in birth, place the heel of your hand directly above the patient's pubic hair area and push slowly but firmly straight back toward the patient's lower back. This is designed to reposition the baby's shoulder, which is usually what is preventing birth.
 - d) Call the CSO urgently for advice.



6.2 Stroke

- Perform a primary survey.
- Take a history and measure vital signs, including a blood glucose level.
- Perform a FAST assessment.
- Update 111 Coordination Centre with a sitrep.
- Call the CSO for advice if there are clear signs or symptoms of a stroke and there will be prolonged scene or transport time.

Additional information

- A stroke occurs when blood supply is lost to part of the brain. The most common cause is a blood clot within a blood vessel. For some patients treatment within hospital can restore blood flow and the time to receiving treatment is very important.
- To perform a FAST assessment:
 - F Face:** ask the patient to smile. Look for a clear difference in movement between the two sides.
 - A Arm:** ask the patient to raise their arms. Look for a clear difference in movement between the two arms.
 - S Speech:** ask the patient to say a sentence. Look for clear difficulty saying words.
 - T Time:** note the time that the patient was last known to be normal (this is the time of onset).
- If there are any abnormalities in the FAST assessment, the patient must be presumed to be having a stroke until proven otherwise.

6.3 SCUBA diving emergencies

- Perform a primary survey.
- Take a history and measure vital signs.
- Position the patient flat.
- Place the patient on their side and ensure an open airway using head tilt/chin lift, if unresponsive or responding only to pain.
- Administer oxygen at 10 litres/minute via a reservoir mask.
- Update 111 Coordination Centre with a sitrep.
- Call the CSO for advice if the patient is in severe pain or there will be prolonged scene or transport time.

Additional information

- The most common SCUBA diving emergency is decompression sickness or 'the bends'. This occurs when gases (predominantly nitrogen) that are dissolved in body fluids expand to form bubbles, in the same way that occurs when a carbonated drink is opened.
- The patient may have any combination of the following:
 - a) Joint pain, particularly in large joints.
 - b) Headache.
 - c) Visual disturbance.
 - d) Itching skin, or a feeling of 'insects crawling on the skin'.
 - e) Altered sensation or movement in the limbs.
 - f) Reduced level of consciousness.
- Notify 111 Coordination Centre if the patient clearly has a SCUBA diving emergency as this may alter what hospital the patient is transported to and thus what transporting resources are sent to the scene.

6.4 Infectious disease precautions

Infectious disease	PPE required	Vehicle cleaning
Chicken pox	Droplet	Standard
Clostridium difficile diarrhoea	Contact	Standard
ESBL	Contact	Additional
Gastroenteritis, type not specified	Contact	Standard
Hepatitis A	Contact	Standard
Hepatitis B	Standard	Standard
Hepatitis C	Standard	Standard
HIV	Standard	Standard
Influenza	Droplet	Standard
Measles	Airborne	Standard
Meningitis, type not specified	Standard	Standard
Meningococcal disease	Droplet	Standard
MRSA	Contact	Additional
MRO, type not specified	Contact	Additional
Mumps	Droplet	Standard
Norovirus with vomiting	Airborne	Additional
Norovirus without vomiting	Contact	Additional

Infectious disease	PPE required	Vehicle cleaning
Pneumonia, type not specified	Standard	Standard
Rotavirus	Contact	Standard
Rubella	Airborne	Standard
Tuberculosis	Airborne	Standard
VRE	Contact	Additional
Whooping cough	Droplet	Standard

- ESBL – extended spectrum beta-lactamase producing organism.
- MRSA – methicillin resistant staphylococcus aureus.
- MRO – multi-resistant organism.
- VRE – vancomycin resistant enterococci.

PPE levels (minimum PPE and actions required)

Standard

- Gloves for anticipated contact with body fluids.
- Change contaminated gloves as soon as possible.
- Eye protection for anticipated body fluid splash.
- Consider overalls/gown and/or an apron for significant body fluid exposure.
- Hand washing and drying or alcohol hand rub, before and after patient contact.

Contact

- Standard level PPE plus gloves and overalls/gown for direct contact with the patient or their immediate surroundings.

Droplet

- Standard level PPE plus a surgical mask for the patient and personnel.
- Wear overalls/gown and/or an apron for direct contact if the patient has chicken pox.
- Consider overalls/gown if within two metres of the patient if the patient is coughing significantly and unable to wear a mask.
- N95 mask for personnel within two metres of the patient during procedures that may aerosolise droplets. For example when nebulising medicines.

Airborne

- Standard PPE plus a P2/N95 mask for the patient and personnel.
- Wear overalls/gown and/or an apron for direct contact if the patient has norovirus.



Vehicle cleaning and disinfection levels (minimum actions required)

Standard

- Open all vehicle doors for 10 minutes with nobody in the vehicle, if the infectious disease was airborne.
- Wear gloves.
- Decontaminate and disinfect surfaces contaminated with body fluid:
 - a) Remove all visible soiling using a cleaning solution.
 - b) Wipe with a disinfectant and allow to dry.
- Remove used linen.
- Wipe down the stretcher and all surfaces touched by the patient with disinfectant and allow to dry.
- Wipe down all surfaces in the back of the vehicle touched by personnel (such as the monitor) with an approved disinfectant wipe and allow to dry.
- Clean the floor if visibly dirty and replace linen.
- Wash and dry hands.
- Once disinfected surfaces are dry the vehicle may be used again.

Additional

- Standard level cleaning and disinfection plus:
 - a) Wear gloves and overalls/gown and/or an apron.
 - b) Wipe down all interior surfaces that the patient or personnel may have touched, with disinfectant and allow to dry.
 - c) Clean the floor.
- Once disinfected surfaces are dry the vehicle may be used again.

6.5 Assessing young children

The paediatric assessment triangle

- A child's general appearance is the most important consideration when determining how severe their illness or injury is, the need for treatment and the response to therapy.
- The paediatric assessment triangle (PAT) is a form of assessment that can be used to help determine the severity of illness or injury. The PAT involves an assessment of activity, breathing and circulation and is performed at the same time as the primary survey.
- The more abnormal the PAT is, the more severe the illness or injury is:
 - a) If the PAT is normal, the child is unlikely to have severe illness or injury.
 - b) If one segment of the PAT is abnormal, the child is showing signs of an important illness or injury.
 - c) If two segments of the PAT are abnormal, the child is seriously ill or injured and is likely to be status two.
 - d) If three segments of the PAT are abnormal, the child is severely ill or injured and is likely to be status one.



Activity

Movement, interaction, tone

Abnormal: Inactive, lethargic, abnormal or absent cry or speech, failure to interact with people or objects, floppy.

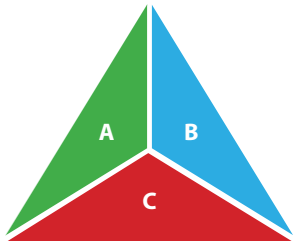
Normal: Active, normal cry or speech, interacts with people and objects, good muscle tone.

Breathing

Resp rate, work of breathing

Abnormal: Tachypnoea, nasal flaring, indrawing, use of accessory muscles, grunting.

Normal: Normal regular breathing without accessory muscle use or audible sounds.



Circulation

Heart rate, perfusion

Abnormal: Tachycardia, mottled skin, pale, cold, slow capillary refill time.

Normal: Normal heart rate, normal skin colour, warm, fast capillary refill time.

6.6 Immediate care for the newborn

Immediate care of the newborn must occur alongside continuing care of the mother.

After birth, babies must start breathing on their own. The longer the baby is without oxygen, the greater the risk of brain damage. The priority of neonatal resuscitation is effective ventilation.

Initial assessment

- In less than 30 seconds, assess the baby's:
 - a) breathing
 - b) heart rate
 - c) tone
 - d) colour
- Use a stethoscope to auscultate baby's breathing rate and heartbeat. The heart rate can also be measured using the umbilical cord.
- Calculate an APGAR score if trained to do so.

If baby is breathing normally:

- Dry baby.
- Wrap baby in a second dry and warm towel.
- Encourage skin to skin contact. Put baby on mother's bare chest and encourage breast feeding.
- Delay cutting the cord for 5 minutes post birth.
- Repeatedly reassess baby's breathing, heart rate, tone and colour.
- Transport baby and mother to hospital.

If baby is not breathing:

- Open the airway by putting the baby's head in the neutral position.
- Cut the cord according to your protocol to enable positioning for effective ventilation.
- Stimulate baby to breathe with 2-3 back rubs while drying.
- Call AECC for back up.

If baby is still not breathing or heart rate less than 100/minute:

- Open the airway with jaw thrust and give breaths using the neonatal bag and mask on room air. Give 1 breath every second.
- After 1 minute of assisted ventilation reassess breathing and heart rate.

If baby still not breathing or the heart rate is less than 60/minute:

- Start chest compressions. 3 compressions to 1 breath (3:1) at a rate of 90 compressions per minute.
- Connect 100% oxygen to the bag and mask at 10 litres/minute.
- Reassess breathing and heart rate after every minute of compressions.

When to stop resuscitation

- This is always a difficult decision, and if possible, should be made by an experienced clinician. After 20 minutes of resuscitation, the chance the baby will survive is low.
- It is appropriate to stop resuscitation after 20 minutes if the baby:
 - a) has not started breathing by itself, and
 - b) has no detectable heartbeat.

Additional information

- Make sure baby's airway is open. The baby cannot be resuscitated if the airway is blocked. Consider suction only if visible obstruction present.
- Giving too much oxygen can cause permanent blindness in newborns. Only use oxygen if initial attempts at resuscitation with bag and mask on room air have failed.
- Defibrillation is rarely indicated in neonatal resuscitation. The focus is on ventilation and compressions.
- Only use the neonatal resuscitation bag. Never use the adult or paediatric sized bag as these will cause lung injury (barotrauma).
- The preferred method for compressions is with two thumbs. The hands circle the chest to check depth.



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7.1 Vital signs

Respiratory rate (RR)

- Count the number of breaths over 30 seconds and multiply by two.
- A fast RR is an important sign that the patient may be very unwell or badly injured, for example the patient may have respiratory distress or shock.
- The trend of the respiratory rate is more important than a single recording.

Heart rate (HR)

- The HR can be obtained from an ECG monitor or can be estimated by feeling the pulse rate.
- When feeling a pulse rate:
 - a) The radial pulse is found near the radius bone on the inside of the arm, just above the wrist joint. The radial site is the preferred site unless the patient is very unwell or unconscious.
 - b) The carotid pulse is found to the side of the laryngeal prominence (the 'Adam's apple') of the neck. The carotid site is the preferred site if the patient is very unwell or unconscious.
 - c) The femoral site is found in the middle of the skin fold of the groin. The femoral site is the preferred site if the patient has severe shock or is in cardiac arrest.
 - d) Count the number of pulses over 30 seconds and multiply by two.
- An abnormal HR (for example fast or very slow) is an important sign that the patient may be very unwell or badly injured, for example the patient may have an abnormal heart rhythm or shock.

Blood pressure (BP)

- There are three methods for taking a BP, these are: using a monitor, palpated or auscultated.
- It is acceptable to use a monitor to measure a patient's blood pressure provided a suitable monitor is available and the appropriate sized cuff is used.
- In the absence of a suitable monitor a palpated BP is the preferred method in a noisy environment:
 - a) Apply the BP cuff to the patient's arm and feel for the radial pulse on the same arm.
 - b) Inflate the cuff until you can no longer feel the radial pulse.
 - c) Watching the pressure gauge, slowly deflate the cuff until you can first feel the radial pulse: this is the systolic BP.
 - d) Round this off to the nearest 5 mmHg and document as the palpated systolic BP.
- In the absence of a suitable monitor an auscultated BP is the preferred method in a quiet environment:
 - a) Apply the BP cuff to the patient's arm and place the stethoscope diaphragm over the brachial artery (the inside of the elbow).
 - b) Place the stethoscope in your ears and inflate the cuff until you can no longer hear the flow sounds (or Korotkoff sounds).
 - c) Watching the pressure gauge, slowly deflate the cuff until you can first hear the flow sounds: this is the systolic BP.
 - d) Continue to slowly deflate the cuff until you can no longer hear the flow sounds: this is the diastolic BP.
 - e) Round each off to the nearest 5 mmHg and document as the systolic/diastolic BP.

Level of consciousness (LOC)

- Utilise the mnemonic AVPU (alert, voice, pain, unresponsive).
- The patient is alert if they are awake and able to communicate with you.
- The patient is responsive to voice if they only respond when you talk to them. The response could be coherent words, confused words, a grunt or movement of a limb.
- The patient is responsive to pain if they only respond to you after you apply painful stimuli, for example a trapezius squeeze. The response could be coherent words, confused words, a grunt or movement of a limb.
- The patient is unresponsive if they do not respond or move with any stimuli.

Oxygen saturation (SpO₂)

- The SpO₂ is a reading of how much oxygen is in the blood, as a percentage of maximum capacity. It is measured using a pulse oximeter.
- Place the SpO₂ probe on the patient's digit and wait for the recording to display.
- Pulse oximeter readings can be unreliable if the patient is vasoconstricted (for example cold or pale), shaking, moving, has very dirty fingers or has been exposed to carbon monoxide. In particular, the pulse oximeter reading may be invalid if the waveform is poor and/or if the pulse rate measured by the pulse oximeter is different from the heart rate measured by the ECG.
- A normal SpO₂ is greater than or equal to 94% when the patient is breathing air.

Capillary refill time (CRT)

- CRT is the time taken for colour to return to the capillary bed in the skin, after pressure is applied and then released.
- To measure CRT: press on an area of skin until it blanches, then release and count the number of seconds for the skin colour to return to normal.
- CRT should be measured both peripherally (for example on a limb) and centrally (for example on the patient's sternum).
- A normal CRT is less than two seconds. A prolonged CRT is a sign that the patient may be very unwell or badly injured, for example the patient may have hypothermia or shock.
- The trend of the CRT is more important than a single recording.

Blood glucose level (BGL)

- The BGL is the concentration of glucose in blood and is measured in mmol/L. A BGL should be measured in all patients with known diabetes and in all patients that are not alert.
- Prepare the lancet and insert a test strip into the glucometer.
- Select a site to take blood from (usually the side of a fingertip). Swabbing the skin with an alcohol wipe is not routinely required, but should occur if the skin is visibly dirty.
- Push the lancet firmly against the skin and press the trigger button. Place the lancet immediately into a sharps container.
- Lightly squeeze the site to encourage blood to appear if required. Touch the end of the test strip onto the blood and after a few seconds the glucometer will display a BGL reading. Discard the test strip in a biohazard bag.
- The normal range for a BGL is 3.5-9 mmol/L.

Temperature

- Measuring a temperature is never a priority, but may occur if the patient feels hot or cold.
- The most common method for measuring temperature is using a tympanic thermometer:
 - a) Place a probe cover on the thermometer and ensure it is turned on.
 - b) Place the thermometer into the ear canal and push the start button.
 - c) The thermometer will display the temperature.
- A normal temperature range is 36.5–37.5 degrees Celsius.
- A temperature greater than 37.5 degrees Celsius may be a sign of infection. A temperature greater than 40 degrees Celsius is life threatening.
- A temperature lower than 35 degrees Celsius may be due to hypothermia or may be a sign of shock.

Vital sign normal ranges

Age	HR	RR	BP (systolic)
Newborn	120 – 180	30 – 60	60 – 90
1-12 months	100 – 160	30 – 50	90 – 105
1-4 years	80 – 110	24 – 40	95 – 105
5-12 years	65 – 100	18 – 30	100 – 110
>12 years	60 – 100	12 – 20	110 – 130

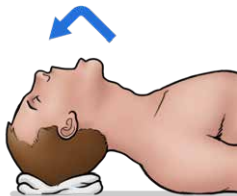


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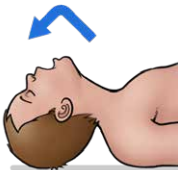
7.2 Airway management

Manual airway manipulation

Optimise the patient's head position to open the airway, regardless of concern about the cervical spine. Head tilt/chin lift is the preferred approach but jaw thrust is acceptable.



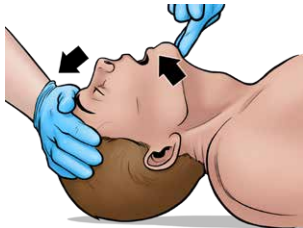
Adult



Child



Infant



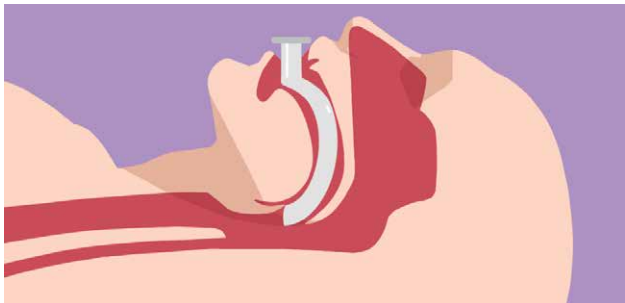
Head tilt/chin lift



Jaw thrust

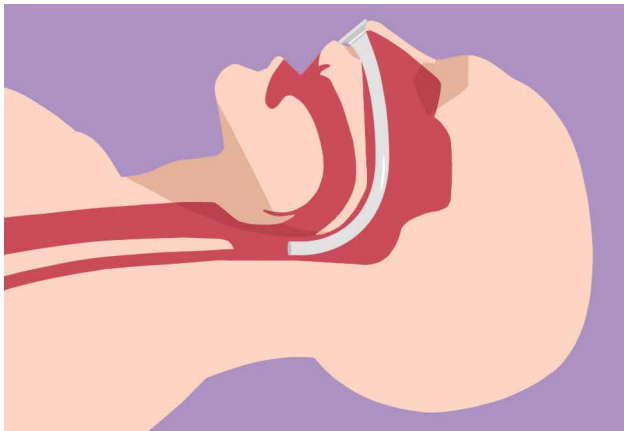
Oropharyngeal airway (OPA)

- An OPA should only be placed if the patient has signs of airway obstruction and is only responding to pain or is unresponsive.
- If the patient shows any signs of coughing or gagging on the OPA it must be removed.
- To insert an OPA:
 - a) Measure the OPA from the corner of the mouth to the angle of the jaw, noting this is not crucial. A green OPA is suitable for most short adults, an orange OPA is suitable for most adults and a red OPA is suitable for most tall adults.
 - b) **Adults and large children:** the OPA is usually inserted into the patient's mouth upside-down. Once the tip reaches the back of the tongue rotate it through 180 degrees.
 - c) **Small children and infants:** the OPA is usually inserted the right way up.
 - d) The flange should sit against the teeth/gums and inside the lips.



Nasopharyngeal airway (NPA)

- NPAs are most useful when the patient has airway obstruction with trismus (a clamped jaw).
- Measure the NPA from the nostril to the ear lobe, noting this is not crucial.
- Lubricate the NPA and insert it into the largest looking nostril, aiming straight back (toward the back of the head).
- If you encounter resistance rotate the NPA and continue to push, but do not use significant force.
- Try the other nostril if insertion is unsuccessful.
- A small amount of nasal bleeding is common and is of no concern.



Suctioning

- Suctioning the mouth is not a priority and is only indicated when there is a significant amount of vomit in the mouth.
- If the patient is vomiting and is not in cardiac arrest, placing the patient on their side has a higher priority than suctioning.
- If the patient is vomiting and is in cardiac arrest, suctioning has a higher priority than placing the patient on their side because this allows CPR to continue.
- Do not suction saliva or pulmonary oedema fluid. These fluids do not cause harm and suctioning increases hypoxia because the oxygen mask needs to be removed.
- If there is significant bleeding from the mouth, position the patient on their side and only suction if a significant amount of blood is impairing the airway.
- Principles of suctioning:
 - a) Put on gloves and safety glasses.
 - b) Attempt manual clearance with an OPA or your fingers if a significant amount of solid material is present.
 - c) Only suction as far as the back of the tongue.
 - d) Suction for a maximum of 10 seconds at a time.
 - e) Ensure that the suction unit remains upright.



7.3 Acquiring a 3 lead ECG

Indications

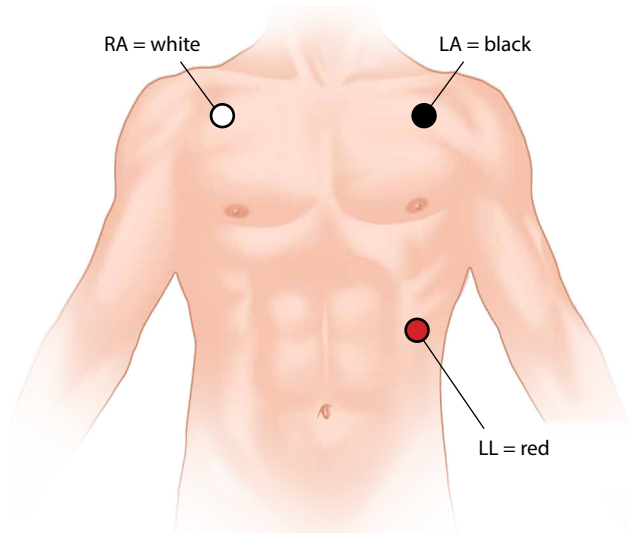
- Acquiring a 3 lead ECG is never a priority.
- First Responders are not required to routinely acquire a 3 lead ECG but may do so provided an appropriate monitor is available.
- Indications for acquiring a 3 lead ECG include:
 - a) Cardiac chest pain and non-traumatic chest pain.
 - b) Collapse or fainting.
 - c) The pulse rate is fast, slow or irregular.
 - d) Shock.
 - e) Post cardiac arrest.

3 lead ECG acquisition

- Turn on the monitor and apply ECG dots to the cables.
- Attach the ECG dots as shown in the image.
- Print a six second strip of the ECG if possible.

Additional information

- If there is artefact (electrical interference):
 - a) Switch off appliances that may cause electrical interference (for example electric blankets).
 - b) Ensure there is good connectivity between the electrodes and the skin. Sweat or excess hair may need to be removed.
 - c) Ensure the patient is as still as possible.
 - d) Ensure there is no tension on the ECG leads.



7.4 Intramuscular (IM) injection

- Draw up the medicine to be injected if required.
- The lateral (outside) thigh is the preferred site provided this is feasible. If this site is not feasible use the lateral upper arm.
- Cleaning the injection site is not routinely required. If the skin appears dirty wipe it clean (preferably with an alcohol wipe), but take no longer than a few seconds.
- Hold the syringe in your dominant hand like a dart and insert the needle rapidly into the muscle at a 90 degree angle to the skin. In most patients the needle can be inserted to its full length. The depth is not important as long as the needle is in muscle/tissue.
- Inject the medicine as a rapid push.
- Remove the needle and place in a sharps container.

Additional information

- Checking for blood by pulling back on the plunger is no longer required because the risk of inadvertent intravascular injection is extremely low.
- Massaging the injection site is no longer required because this provides no additional benefit.



7.5 Dressing wounds

- Dressing a wound is never a priority unless it is being packed for control of severe bleeding.
- Control significant bleeding prior to applying a dressing.
- Examine the wound for foreign material:
 - a) If this is present irrigate the wound before applying a dressing.
 - b) The best form of irrigation is a running tap or hose if this is available.
 - c) Alternatively use 0.9% sodium chloride, noting that the volume of irrigation is more important than the nature of the irrigation fluid.
 - d) If the wound is grossly contaminated it is going to be surgically debrided and/or irrigated under anaesthesia and irrigation at the scene is not a priority.
- If the wound is significant take a photo (using eACSR if available) before applying a dressing if possible.
- Dry the skin edges and oppose them as much as possible before applying a dressing appropriate for the size of the wound. The nature of the dressing is not important provided the wound is covered and the dressing is comfortable for the patient.
- **Do not** use iodine to clean a wound, it is unnecessary and is shown to delay wound healing.



7.6 CT-6 traction splint

Indications for application

- A traction splint is the splint of choice and is to be used only for a painful, swollen, deformed mid-thigh injury with **no** lower leg injury.

Note

- The information included below is designed to be used as a guide for an “Ischial” type traction splint. There are several different types of commercially made traction splints available. This information may differ for the device that you use.
- As with all equipment, you must follow the manufacturer's guidelines and instructions for proper application of the device you use.

Contraindications

- Injury is close to the knee.
- Injury to the knee.
- Injury to the hip.
- Injury to the pelvis.
- Partial amputation or avulsion with bone separation, distal limb is connected only by marginal tissue.
- Lower leg or ankle injury.

How to apply a traction splint

- Apply manual stabilisation.
- Explain the procedure to the patient.
- Remove clothing from the area.
- Assess pulse, motor and sensory.
- Adjust length of splint.
- **Attach:**
 - a) Ischial strap around leg.
 - b) Ankle hitch.
- **Traction:**
 - a) Pull line to apply moderate tension.
 - b) Lock traction line into V-jam.
- **Secure:**
 - a) Wrap leg straps – two above knee and two below.
- **Final steps:**
 - a) Tuck excess line under leg strap.
- Reassess distal pulses, motor and sensory.
- Prepare the patient for transport.



7.7 Arterial tourniquet

Indications for application

- Severe bleeding from a limb that is uncontrolled despite firm, direct and sustained pressure.
- Bleeding from a limb that is immediately life threatening.
- Severe bleeding from a limb when the bleeding site cannot be reached. For example, the bleeding is from a lower limb and the patient is trapped in a vehicle.

How to apply a tourniquet

- Remove clothing from the limb if possible.
- Apply as distally as possible, usually approximately 5 cm above the wound. Do not apply over a joint.
- Place the tourniquet around the limb. Pull the free end through the buckle until the tourniquet is firm around the limb and then stick the Velcro strap down along its entire length.
- Turn the windlass rod until bleeding is controlled and then lock it in place within the clip.
- Ensure significant bleeding has stopped. Tighten the tourniquet further if required.
- Leave the wound exposed so that it can be observed for bleeding.
- Record the time of application.

7.8 Cervical collar application

- Significant abnormalities within the primary survey always take priority over application of a cervical collar.
- Advise the patient not to move their head or neck.
- Remove anything that may impede cervical collar placement.
- Ensure the patient's cervical spine is in neutral alignment. Have an assistant provide manual stabilisation of the head and neck from above the patient, by supporting both sides of the patient's head and face with their hands, if necessary.
- Size the cervical collar:
 - a) Count the number of fingers from where the trapezius muscle joins the shoulder to the jaw line.
 - b) Place your fingers on the side of the cervical collar, with your small finger to the bottom edge of the plastic and the correct number of fingers to the closest marker pin.
 - c) Clip the collar into place at the appropriate marker pin.
- Pre-form the collar by squeezing it into a round shape.
- Fit the collar:
 - a) Slide the flat end of the collar behind the patient's neck.
 - b) Position the chin cup of the collar under the patient's chin. Bring the end of the collar around and join the Velcro edges together.
 - c) Ensure the collar is well positioned and firm, but not tight.
- Ensure the spine is in neutral alignment. This will usually require a folded towel or flat pillow to be placed under the patient's head.
- In some circumstances a cervical collar will be placed while the patient is sitting, for example in a vehicle. Following extrication reassess the fit of the collar.

8.1 Checklists and crew resource management

Introduction

- Crew resource management (CRM) is a set of principles focusing on the non-technical skills of communication, leadership, decision making and teamwork.
- Using checklists is a part of good CRM.
- Good CRM and the use of checklists reduces the likelihood that human factors and/or human error will result in harm.
- Checklists should be utilised in a challenge and response manner, whenever appropriate. First Responders have an important role in assisting personnel EMTs and Paramedics to utilise them.
- It is the responsibility of all personnel to utilise checklists and the principles within CRM, irrespective of hierarchy, position, experience or interpersonal challenges.
- The principles of CRM are summarised under five broad headings:
 - a) Call for help if required.
 - b) Establish a team leader.
 - c) Communicate effectively.
 - d) Utilise resources appropriately.
 - e) Step back and reassess.

Call for help if required

- Do not delay calling for help if it is needed.
- Have a low threshold for seeking clinical advice.

Establish a team leader

- The team leader is responsible for directing the actions of the team and keeping the team updated on the 'big picture'.
- The team leader should avoid performing 'hands on' tasks unless absolutely necessary.

Communicate effectively

- Use clear and concise language.
- The team leader should do most of the talking.
- All team members must raise concerns via the team leader.

Utilise resources appropriately

- Utilise all members of the team.
- Utilise bystanders and other healthcare providers as appropriate.
- Allocate a team member to record key interventions and times whenever feasible
- Utilise checklists as appropriate.

Step back and reassess

- Reassess the patient frequently.
- Ensure all team members can contribute ideas on how to resolve a problem.

8.2 Asthma non-transport checklist

- ✔ Personnel at EMT level must firmly recommend that the patient is transported to a medical facility by ambulance, if the patient is administered any bronchodilator (including their own MDI).
- ✔ Personnel at Paramedic and ICP level may recommend that a patient aged 10 years or older, with mild or moderate asthma remain at home, provided the patient:
 - a) Has known asthma and
 - b) Has only received bronchodilators via MDI, or has received a maximum of one administration of nebulised bronchodilators and
 - c) Is talking in full sentences and
 - d) Has an SpO₂ on air greater than or equal to 94% and
 - e) Is observed for a minimum of 20 minutes following the completion of the last bronchodilator administration and
 - f) Is observed to mobilise normally and
 - g) Has a peak expiry flow rate (PEFR) greater than 70% of their normal PEFR (do not use this criteria if the patient does not normally use a PEFR meter) and
 - h) Is able to see a doctor within two days and
 - i) Is provided with a prednisone pack (if appropriate), an information sheet and the information within it is explained to them and to any carers.
- ✔ If the patient has signs of a chest infection, the patient should be seen by a doctor within 12 hours. This could be a GP if all of the other criteria to remain at home are met.

8.3 CORD non-transport checklist

- ✔ Personnel at EMT level must firmly recommend that the patient is transported to a medical facility by ambulance, if the patient is administered any bronchodilators (including their own).
- ✔ Personnel at Paramedic and ICP level may recommend that a patient with mild to moderate CORD remain at home, provided the patient:
 - a) Has known CORD and
 - b) Has only received bronchodilators via MDI, or has received a maximum of one administration of nebulised bronchodilators and
 - c) Rapidly improves to their usual respiratory state and
 - d) Has an SpO₂ on air greater than or equal to 88% and
 - e) Is observed for a minimum of 20 minutes following the completion of the last bronchodilator administration and
 - f) Is observed to mobilise in a way that is normal for them and
 - g) Is able to see a doctor within two days and
 - h) Is provided with a prednisone pack (if appropriate), an information sheet and the information within it is explained to them and to any carers.
- ✔ If the patient has signs of a chest infection, they should be seen by a doctor within 12 hours. This could be a GP if all of the other criteria to remain at home are met.

8.4 Hypoglycaemia non-transport checklist

- ✔ The patient may receive treatment for hypoglycaemia and be given a firm recommendation that transport by ambulance to a medical facility is not required, provided all of the following criteria are met:
 - a) It is an isolated single episode and
 - b) It is not due to overdose (including accidental) of insulin or oral hypoglycaemics and
 - c) It is not complicated by seizure or significant injury and
 - d) The patient recovers fully and can mobilise normally and
 - e) The blood glucose is >3.5 mmol/L, 10 (or more) minutes after glucagon or the last glucose administration and
 - f) An adult can stay with the patient for the next four hours and
 - g) The patient eats a meal (preferably containing complex carbohydrate) and
 - h) The patient is given the hypoglycaemia information sheet which is explained to them and the accompanying adult.

- ✔ The patient must be given a firm recommendation to have their treatment reviewed (for example by their GP or diabetes service personnel). If the patient is aged less than or equal to 18 years or has been recently diagnosed with diabetes, this review must occur within the same day.

8.5 Seizures non-transport checklist

- ✔ A patient may be given a firm recommendation not to be transported to a medical facility by ambulance, even if midazolam has been administered, provided the patient:
 - a) Has known epilepsy and
 - b) Has not been injured and
 - c) Has recovered to their usual postictal state and
 - d) Can be left in the care of a competent adult and
 - e) Has received a maximum of one dose of midazolam and
 - f) Is instructed to see their GP for a review of their treatment.

- ✔ Transport (if required) should usually be to an ED, but could be to a GP if the patient is rapidly improving and is well known to the GP.



8.6 Cardioversion checklist

- ✔ Place pads in either the apex/sternum (recommended) or anterior/posterior position, in addition to ECG electrodes.
- ✔ Ensure the defibrillator is in manual mode.
- ✔ Select a lead with a visible R wave and ensure that artefact is minimised.
- ✔ Select synchronised mode.
- ✔ Confirm there is a detection symbol above every QRS complex.
- ✔ Ensure the patient has received adequate sedation if indicated.
- ✔ Select the joules, charge the defibrillator and confirm everyone is clear.
- ✔ Press and hold the shock button until the shock is delivered.
- ✔ Determine the rhythm and the level of cardiovascular compromise.
- ✔ If administering a second cardioversion, confirm the defibrillator is still in synchronised mode.


8.7 Transcutaneous pacing checklist

- ✔ Place the pads in either the anterior/posterior (recommended) or apex/sternum position in addition to ECG electrodes.
- ✔ Select a lead with a visible R wave and minimise artefact.
- ✔ Select pacing.
- ✔ Confirm there is a detection symbol above every QRS complex.
- ✔ Confirm pacing is in demand mode (not applicable to all models).
- ✔ Set the pacing rate to 70/minute.
- ✔ Select current and increase this until pacing capture occurs. Confirm there is a pacing spike before each QRS complex.
- ✔ Increase the current 10 mA above the capture threshold.
- ✔ Administer fentanyl if there is significant pain from pacing. Add low doses of ketamine if required.
- ✔ Confirm there is mechanical capture with a palpable pulse or other signs of increased cardiac output.
- ✔ Increase the pacing rate to 80/minute if there is electrical capture without signs of increased cardiac output.
- ✔ Change to fixed or non-demand mode (not applicable to all models) if pacing is ineffective due to artefact.

8.8 Fibrinolytic therapy/PCI checklist

- ✔ Does the patient have any of the following absolute contraindications to fibrinolytic therapy?
 - Suspected aortic dissection.
 - Major surgery, major trauma or severe brain injury within the last six weeks.
 - Intracranial surgery within the last six months.
 - Ischaemic stroke within the last six months.
 - Previous intracerebral haemorrhage.
 - Known cerebral aneurysm, arterio-venous malformation or tumour.

- ✔ Does the patient have any of the following cautions to fibrinolytic therapy?
 - More than 10 minutes of CPR.
 - Non-compressible vascular puncture (including organ biopsy) within the last 24 hours.
 - Internal bleeding within the last six weeks.
 - Lumbar puncture or epidural insertion within the last six weeks.
 - TIA within the last three months.
 - Known bleeding disorder.
 - Taking warfarin or dabigatran. Note: if the patient is taking warfarin document their last known INR result if possible.
 - Systolic BP greater than 180 mmHg or diastolic BP greater than 110 mmHg.
 - Known to be pregnant or less than two weeks postpartum.

 Are any of the following present?

- The time of onset of symptoms was greater than 12 hours ago.
- The patient is dependent on others for their activities of daily living.
- The patient has comorbidities that severely limit their functioning.
- The patient has another disease, for example metastatic malignancy, that significantly shortens their life expectancy.
- The patient is very frail.



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8.7 Defibrillator failure checklist

- ✔ Task specific personnel to focus on resuscitating the patient.
- ✔ Task specific personnel to focus on troubleshooting the defibrillator.
- ✔ Call 111 Coordination Centre and ensure another vehicle is responding.
- ✔ Ensure the pads are attached and connected.
- ✔ Ensure the ECG leads are attached.
- ✔ Change the lead shown on the screen so that the rhythm is visible.
- ✔ Turn the defibrillator off for 30 seconds and turn it back on again.
- ✔ Remove and replace the batteries, utilising spare batteries if possible.
- ✔ Attach and connect a new set of pads.
- ✔ Switch to automatic mode if in manual mode.
- ✔ Turn the defibrillator off for 30 seconds and turn it back on again.

Log a reportable event if you reach the point of turning the defibrillator off for 30 seconds.



8.8 Preparation for RSI checklist

This checklist is to be used by personnel to aid preparing a patient for RSI, when waiting for an appropriate ICP to arrive.

- ✔ Attach nasal prongs without oxygen.
- ✔ Pre-oxygenate using a reservoir mask at 10 litres/minute, or a manual ventilation bag at 10-15 litres/minute with PEEP set at a minimum of 5 cmH₂O.
- ✔ Attach ECG, NIBP and SpO₂.
- ✔ Prepare capnography if this is available.
- ✔ Position the monitor so that it can be seen, leaving space to the right side of the patient's head for intubation equipment.
- ✔ Gain IV access, preferably in two sites.
- ✔ Prepare a running line of 0.9% sodium chloride.
- ✔ Position the patient for optimal airway control. For example, consider placing a folded towel under the head.
- ✔ Place an ETT holder with the strap undone under the patient's head.
- ✔ Ensure suction is working and turn it off.

- ✔ Prepare a manual ventilation bag with PEEP valve attached (if not already in use).
- ✔ Obtain a set of vital signs.
- ✔ If possible, update the responding ICP with the patient's condition and vital signs.
- ✔ Prepare the area:
 - If the patient is not in an ambulance, clear the area so that there is access to both sides of the patient if possible.
 - If the patient is in an ambulance, clear away as much unnecessary equipment as possible and consider travelling toward backup.



8.9 RSI checklist

- ✔ Roles assigned and team briefed:
 - a) Airway.
 - b) Airway assistant.
 - c) Drugs.

- ✔ Patient prepared:
 - a) Pre-oxygenation. Nasal prongs in place.
 - b) Position optimised.
 - c) IV access patent. Running line attached.
 - d) 0.9% NaCl IV bolus if indicated.

- ✔ Monitoring attached and visible:
 - a) Baseline vital signs including ECG and NIBP.
 - b) Pulse oximetry and capnography.

- ✔ Equipment checked and ready:
 - a) Manual ventilation bag with PEEP valve set to minimum 5 cmH₂O.
 - b) Oropharyngeal airway.
 - c) Laryngoscope checked.
 - d) ETT. Cuff checked. Syringe containing 5 ml of air.
 - e) ETT holder in place.
 - f) Suction checked and in position.
 - g) Bougie.
 - h) LMA and cricothyroidotomy equipment out.

- ✔ Drugs drawn up and doses confirmed:
 - a) Atropine if the patient is bradycardic.
 - b) Fentanyl.
 - c) Ketamine.
 - d) Suxamethonium.
 - e) Morphine and midazolam.
 - f) Rocuronium.

- ✔ Failed intubation plan communicated, including the SpO₂ level at which it will be implemented.



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8.10 Post intubation checklist

This checklist must be used as soon as possible following intubation.

- ✔ Confirm placement with capnography. Note the ETCO₂ level and waveform.
- ✔ Examine the chest for signs of bronchial intubation and adjust the ETT depth if required.
- ✔ Secure the ETT and note the length at lips.
- ✔ Replace the cervical collar (if appropriate).
- ✔ Measure vital signs.
- ✔ Consider administering sedation and neuromuscular blockade.
- ✔ Check the oxygen supply.
- ✔ Check the ETT cuff, ensuring the cuff contains only the minimum amount of air required to provide a seal.
- ✔ Ensure a manual ventilation bag is immediately available if a mechanical ventilator is being used.

8.11 Non-transport pause and checklist

If a patient is being given a recommendation by an EMT or Paramedic that transport to a medical facility by ambulance is not required, the crew must pause briefly (preferably away from the patient) to go through the non-transport checklist (below) and agree that non-transport is the right decision. If consensus is unable to be easily achieved, personnel should have a low threshold for seeking clinical advice or transporting the patient.

- ✔ The patient has been fully assessed including a set of vital signs and appropriate investigations and
- ✔ None of the vital signs are significantly abnormal and
- ✔ Serious illness or injury has been reasonably excluded and
- ✔ No red flags are present if the clinical condition is one that is contained within the red flag section and
- ✔ The patient is seen to mobilise (when able to normally do so), noting that if the patient is unable to mobilise there must be a clearly minor or long-standing condition preventing this and
- ✔ The patient and/or caregivers have been given an explanation of when to seek further help and
- ✔ A PRF has been completed and a copy is being left with the patient or the patient is given instructions on how to access a copy of their PRF.



A series of 15 horizontal dotted lines spanning the width of the page, providing a guide for handwriting practice.

Clinical Advice

- I** Identify yourself.
- S** Situation.
- B** Background.
- A** Assessment.
- R** Recommend and review.

Handover

- I** Identification of the patient.
- M** Mechanism of injury or medical complaint.
- I** Injuries identified or information related.
- S** Signs and symptoms.
- T** Treatment provided and trends.
- A** Allergies.
- M** Medicines.
- B** Background, including previous medical history.
- O** Other, including information on family and social situation.

Major incident

- M** Major incident declaration.
- E** Exact location of incident.
- T** Type of incident.
- H** Hazards (significant) identified.
- A** Access and egress.
- N** Number (estimated) of patients.
- E** Emergency services already present and extra resources req.



St John

Here for Life

To call the Clinical Advice Line:

7111 1234

Name:

Employee number:

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Adapted for St John Papua New Guinea