CARDIOPULMONARY RESUSCITATION HANDBOOK
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Welcome to your course and Premium Health. The aim of this handbook is to provide the essential knowledge and skills you require to perform cardiopulmonary resuscitation (CPR).

We select our Premium Health trainers and assessors carefully. All are either nurses or paramedics with appropriate qualifications, technical expertise and experience in both education and emergency first aid care.

Helping you to succeed in your course

We believe learning should be an enjoyable and challenging process and we understand that each learner is different. A variety of methods such as class participation, group discussion, scenarios, workbook exercises and opportunities for practice will help you to achieve competency.

Where there are any difficulties with reading, writing, understanding English or a physical disability, training approaches can be varied to support learning and assessment.

In teaching CPR competencies, the Premium Health method is used. This unique and innovative training technique uses a familiar song to help you recall and perform CPR correctly. The method helps the first aider know what the correct rhythm (rate) is and the rhyme is used to mark CPR’s cyclical stages. If you had to give CPR, it is intended the song would be sung silently, under your breath.

Research shows that the Premium Health method enables people to retain and recall their CPR skills over a longer period of time. For any first aider, managing a cardiac arrest is stressful, so an easily remembered method to achieve compression rhythm and to count the compression/breath cycles is invaluable.

Course learning outcomes

The performance criteria for all competency elements can be found at www.premiumhealth.com.au. This is important information to help you understand what you need to do to meet the assessment requirements for the course.

What you need to know about assessment

Assessment takes place during your course enabling you to demonstrate your competence in a comfortable and familiar environment with your trainer/assessor. All assessment tasks are discussed beforehand.

Assessment is never a pass or a fail process. At the end of a set period, you are judged to be Competent or Not Yet Competent.

If you are considered Not Yet Competent, your trainer/assessor will discuss areas of further work and advise training tasks or options to be undertaken in order to meet competency requirements. You may be asked to call Premium Health to make reassessment arrangements.

Statement of attainment and currency

A statement of attainment will be issued upon successful completion of your course. The Australian Resuscitation Council recommends, and industry requirements often specify, a CPR assessment be done at least annually to ensure current competency.

Evaluation of the course

Your feedback is vitally important to us as we use this as part of our continuous improvement cycle. We especially value any personal comments you would like to make. Please complete the feedback form at the end of your course.

Premium Health’s customer service

We offer you an on-going service in relation to first aid information and invite you to call our office on 1300 721 292 or email us on info@premiumhealth.com.au.

For more information about Premium Health products, services and policies, please access our website www.premiumhealth.com.au.
Introduction

Before considering the knowledge and skills required to perform CPR, anyone providing such assistance needs to understand some fundamental information that applies in these situations. This information concerns how we deal with people as human beings, “cultural awareness”; how the impact of emergency events such as giving CPR may be minimised, “stress management” and how we prevent and control the spread of infection, “infection control”.

Cultural awareness

When providing first aid in any context, (in the workplace, as part of caring for people in health, education and community services, or as a citizen responding in an emergency) it is essential you approach any person in a culturally aware, sensitive and respectful manner.

Cultural awareness requires recognition that all individuals are influenced by their own culture. Here “culture” means the patterns of behaviour and beliefs that characterise the particular group at a given moment in time. Our own cultural background influences how we interpret the world around us, perceive ourselves and interact with other people.

Information about specific cultural practices will help increase your cultural knowledge by providing an overview of cultural characteristics and issues, and you will find the website www.culturaldiversity.com.au offers some useful insights and links.

Stress management

It is important to understand that you may feel stressed following a first aid response. This is a perfectly normal occurrence. It is important for first aiders to realise that emergency events affect those involved physically and emotionally. The support of trained critical incident management professionals helps lessen the impact and enable people to deal with such events.

Critical incident stress management (CISM)

CISM is an intervention procedure primarily intended for people affected by a traumatic event in their life, such as giving first aid to casualties or managing such emergencies. Some of the Critical Incident Stress Management (CISM) interventions that may be used, depending on the situation, include:

- **Defusing** - this intervention is a relatively informal, short debriefing session lasting for around thirty to sixty minutes, although it may be longer. Defusing is best done within one to four hours after the incident.
- **Debriefing** - ideally debriefing is conducted within twenty-four to seventy-two hours after an incident.
- **Grief and loss counselling** - this may be individual or group sessions designed to assist people to understand their grief reactions following a death or loss.

These different forms of interventions may be used for individuals, workplace groups, families and community groups. First aiders and helpers (e.g. volunteers, bystanders, work and community members) may need to access the support from CISM interventions to enable them to deal with such experiences. In a workplace, the first aider should seek management support and request the initiation of a referral to professionals able to provide appropriate support.

<table>
<thead>
<tr>
<th>Signs &amp; symptoms of stress</th>
<th>Physical:</th>
<th>Nausea, fatigue, headache, insomnia, chills, dizziness, heart palpitations, chest pains, abdominal cramps.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mental/Cognitive:</td>
<td>Poor concentration/memory, indecisiveness, poor attention, confusion, uncertainty.</td>
</tr>
<tr>
<td></td>
<td>Emotional:</td>
<td>Anxiety, nervousness, depression, anger, frustration, worry, fear, irritability, impatience, short temper.</td>
</tr>
<tr>
<td></td>
<td>Behavioural:</td>
<td>Pacing, fidgeting, withdrawal, antisocial behaviour, increased alcohol consumption, loss or increase in appetite.</td>
</tr>
</tbody>
</table>
Infection control

An increased risk of infection exists when providing first aid due to the likelihood of exposure to blood and body fluids. This means when giving first aid, checking "D for DANGER" is a critical first step in any first aid emergency action plan. The actual risk of transmission in first aid is extremely low but you should always take steps to minimise the transfer of infectious diseases. Successful infection control in a first aid setting is straightforward. It is based on good hygiene and a range of practices set in place to reduce the transmission of infections.

Infectious diseases

An infectious disease is passed from one person to another with the routes of transmission varying from disease to disease.

A person with an infectious disease may be infectious:
• without ever becoming unwell
• before getting ill
• during the illness AND
• after recovery – acting as a carrier passing the infectious agent to others or shedding it into the environment

Some infectious diseases include:
• influenza (the flu)
• herpes
• measles
• meningococcal
• HIV/AIDS
• common cold
• glandular fever
• tuberculosis
• hepatitis

Infectious diseases can be spread by:
• coughing or sneezing
• touch
• an exchange of body fluids (blood, vomit, urine or saliva)
• cuts or abrasions caused by contaminated objects, such as razor blades

Infection control

Infection control is about taking steps to minimise the transmission of infectious agents from person to person or person to environment. You should always assume that all blood and bodily fluids are a potential source of infection.

Standard precautions

Standard precautions were introduced to reduce the risk of cross infection. They:
• are required to achieve a basic level of infection control
• include safe systems for handling blood (including dried blood), other body fluid secretions and excretions regardless of whether they contain visible blood (excluding sweat), non-intact skin and mucous membranes AND
• apply in a first aid setting for the care and treatment of all first aid casualties regardless of diagnosis or presumed infection status - everyone is treated in the same way
First aider responsibilities

Legal responsibilities and obligations of the first aider

Accidents or acute illness may occur in any setting - the workplace, at home, within the community, at social or public gatherings or sporting events, on the road etc. One concern to a first aider is whether they must provide first aid to a casualty at an accident or with an acute illness.

Duty of care

You have a legal duty of care to provide first aid:

• if you are the designated first aider in the workplace where an illness or incident occurs
• when you are employed to care for vulnerable groups such as children, the elderly or people with disability
• when you have been accepted and appointed as a first aider by a particular group such as a sports club or cricket team

This duty is completed or 'discharged' when:

• the casualty is considered to be in a satisfactory condition following first aid treatment, with or without a recommendation to seek medical attention
• the care of the casualty, including all details of the accident injury or illness, is handed over to medical personnel i.e. ambulance officers, doctors and nurses

In most other situations a legal duty of care to attend to a casualty does not exist, you have a choice whether or not to provide assistance. However, once you commit to action in providing first aid to a casualty, a legal duty is established. If the situation poses a significant danger to you in providing first aid, you may withhold your services until the danger is eliminated or contained. You are not expected to become a casualty in the provision of first aid in order to fulfil a duty of care.

Consent

Consent by the casualty is required before providing first aid. As a first aider you should not intervene if a casualty refuses assistance. Statements such as “I can see you’ve been hurt; I’m a trained first aider; can I help you?” declare your concern, qualifications and intent.

If first aid treatment is given to a conscious casualty against their wishes, a charge of assault and battery may be brought against you. Consent is implied where the casualty is unconscious.

Confidentiality

In any first aid situation, you must take steps to maintain both the casualty’s confidentiality and their personal privacy. Information about a worker’s health and all records relating to an employee’s treatment must remain confidential in accordance with the requirements of the Privacy Act 1988. If you have provided first aid to a casualty you are unable to talk about the incident to other people unless you have permission from the casualty involved. To assist in maintaining privacy you should aim to keep crowds away, put up a screen if necessary, and cover any exposed body parts with blankets, or sheets, if available.

Liability

As a first aider you are always responsible for your actions/omissions in administering first aid. To be found negligent, therefore liable, it must be proven in a court of law that your actions/omissions as a first aider were unreasonable, and the casualty suffered damage as a direct result of these actions/omissions.

It is important that you:

• act within the bounds of your training
• do not misrepresent your qualifications
• deliver first aid to the best of your ability in order to bring about the best outcome for the casualty

In the workplace the employer accepts vicarious liability for designated first aiders. In other words, employers are generally held responsible for the acts and omissions of their employees (see www.safeworkaustralia.gov.au).
Work Health and Safety in Australia (WH&S)

In 2008, Workplace Relations Ministers from around Australia agreed to nationally harmonise work health and safety laws. Governments from each state and territory and the Commonwealth formally committed to develop and adopt a Work Health and Safety Act supported by Regulations and Codes of Practice within their jurisdiction. The intention is to deliver the same work health and safety protections to all Australians.

In 2014 some State governments are yet to enact these laws. The Commonwealth, each State and Territory will continue to regulate the administration of laws in their jurisdiction (www.safeworkaustralia.gov.au).

Work Health and Safety principles are that:

- every worker has the right to a safe and healthy work environment
- employers have an obligation to provide a working environment that does not threaten their employees’ health, safety and welfare
- employers should make the workplace safe, rather than simply protecting the workers from an unhealthy or unsafe workplace
- workers should follow the company’s health and safety policies/procedures
- workers should participate with employers in making decisions about health and safety in the workplace

First aid in the workplace

Those States that have not enacted the change have differing regulatory requirements relating to first aid in workplaces. Codes of Practice provide practical guidance concerning the provision of first aid facilities and persons suitably trained to provide first aid. The Code is not law but should be followed unless there is another option which achieves the same result or a better solution. Whereas WH&S regulations provide an overview of how to set up a first aid system that assists with achieving compliance with first aid responsibilities outlined in their WH&S laws.

The websites below will assist you to access information regarding the WH&S information for each State and Territory.

Workcover NSW  www.workcover.nsw.gov.au
Worksafe WA  www.worksafe.wa.gov.au
Workplace Health & Safety QLD  www.worksafe.qld.gov.au
Workplace Standards Tasmania  www.worksafe.tas.gov.au
Worksafe Victoria  www.worksafe.vic.gov.au
Safe Work SA  www.safework.sa.gov.au
NT Worksafe  www.worksafe.nt.gov.au
Workcover ACT  www.worksafe.act.gov.au

It is suggested that you access the web links given above for your State or Territory and download the relevant first aid for your information.

About resuscitation

Resuscitation is a general term used to encompass first aid and medical treatments intended to restore a person to life where there are no signs of life and include measures such as rescue breathing, chest compressions and defibrillation.

The Australian Resuscitation Council (ARC) is a voluntary coordinating body which produces resuscitation guidelines regularly based on the consideration of scientific and published material. The purpose of these guidelines is to promote uniformity and simplicity in resuscitation techniques and terminology. As a result of the efforts of the International Liaison Committee on Resuscitation (ILCOR), of which the ARC is a member, there is now relative standardisation of resuscitation techniques around the world.

Sudden cardiac arrest and death

Cardiovascular disease is the greatest cause of death in the adult Australian population. A cardiac arrest is the complete cessation of heart action recognised by the absence of response (unconsciousness) and not breathing or not breathing normally. A cardiac arrest may occur within seconds of a heart attack before the person has time to get to a hospital or seek medical assistance. Importantly, death in these casualties will occur without immediate emergency first aid.

“Chain of survival”

The “chain of survival” concept was developed by the emergency medical community in the United States as a tool to describe the critical emergency actions necessary when an unresponsive, collapsed casualty is not breathing normally and shows no sign of circulation i.e. a cardiac arrest has occurred.

Protective devices

Using a CPR protective device which creates a barrier between the first aider and the casualty during rescue breathing is desirable but not essential.

The Australian Resuscitation Council Guidelines emphasises that contracting an infectious disease by rescue breathing is a rare event and resuscitation should not be delayed if such a device is unavailable.
Early access
Early access to the emergency medical support (EMS) is necessary for prompt arrival of emergency response personnel.
- Dial triple zero (000) for ambulance.
- Take the Automated External Defibrillator (AED) when called to an emergency.

Early CPR
Early CPR is a critical link because it buys time by supplying sufficient oxygen to keep the brain and heart alive until defibrillation and other advanced care can restore normal heart action. Ideally, CPR will be initiated by bystanders, workmates or the first aider in the vicinity prior to the arrival of the AED if it is not available at the scene.
- Begin CPR immediately if signs of cardiac arrest are present.
- Get AED machine to the location of emergency.

Early defibrillation
Early defibrillation is the crucial treatment in cardiac arrest Defibrillation as it often restores the normal heart rhythm and pumping action. If defibrillation is given within the first 5 minutes of cardiac arrest there is a 50% chance of survival, but with each subsequent minute the chance of success is reduced by a factor of 7-10%, with little chance of effective revival after 10 minutes.
- Heed any precautions, attach the AED, follow the prompts and defibrillate.
- Manage and defibrillate according to voice prompts until EMS arrives.

Early advanced care
Early advanced care is provided by highly trained emergency medical advanced support personnel such as paramedics (ambulance officers, MICA, care paramedic fire officers etc.) who are trained to provide CPR, defibrillation and more advanced care such as giving cardiac drugs and inserting endotracheal breathing tubes.
Cardiopulmonary resuscitation (CPR)

CPR is required when a person is unconscious, not breathing or not breathing normally.

Not breathing normally
A person may not be breathing normally as a result of:
• direct depression of, or damage to, the breathing control centre of the brain, for example following a head injury
• airway obstruction from choking, asthma, immersion (spasm of vocal chords), tongue (incorrect positioning), allergic reactions
• paralysis or impairment of the nerves and/or muscles of breathing e.g. venom, drug overdose

Not breathing normally in the first few minutes of a casualty suffering a sudden cardiac arrest is not uncommon and is known as agonal breathing. It occurs because there is a lack of oxygen to the brain.

Agonal breathing is an abnormal breathing pattern characterised by shallow, slow (3-4 per minute), irregular inspirations followed by irregular pauses. Sounds of gurgling, gasping, sighing or coughing may be present, as well as movements of the chest and stomach. Sometimes chest movements are mistaken for “breaths” but these movements are not effective and the person is not breathing normally.

The presence of agonal breathing in cardiac arrest indicates a more favourable prognosis than in cases of cardiac arrest without agonal breathing.

The purpose of CPR
Chest compressions combined with rescue breathing is known as cardiopulmonary resuscitation (CPR). The purpose of CPR is to temporarily maintain circulation sufficiently to preserve brain function until specialised treatment is available. As brain cells begin to die within 3 minutes of being deprived of oxygen, it is important chest compressions and rescue breathing are commenced as soon as possible.

Compressions only, can be given if the first aider is unable or unwilling to perform rescue breathing, but combined with rescue breathing there is a better chance of survival. If chest compressions only are given, they should be continuous at a rate of approximately 100 compressions per minute.

If a defibrillator becomes available activate, listen, apply pads quickly and follow the voice prompts.

When to cease CPR
CPR should be given without interruption until the casualty starts responding or breathing normally, or ambulance/paramedics arrive or until you are physically unable to continue.
Management of a **NON-BREATHING** casualty: first aid priority action plan

**DANGER**
- Check for dangers to yourself, bystanders and the casualty.
- Make the scene safe by removing the danger from the casualty or the casualty from the danger. Only continue when it is safe to do so.

**RESPONSE**
Is the casualty conscious? Assess for response to voice and touch:
- Give simple commands e.g. "Open your eyes, squeeze my hand". With an adult casualty, grasp the shoulders firmly to determine a response; for children and infants, assess their response by talking and firmly rubbing the breastbone (sternum). **Never shake an infant.**
- If the casualty is **unconscious** (or showing only a minor response eg: groaning), position the casualty on their back.

**SEND**
- Send/call for help (triple zero 000).

**AIRWAY (air passages)**
- Open the mouth and check for foreign material or obstructions. In an infant make sure the nose is also clear.
- If airway is not clear from food, vomit, blood or fluids (e.g. immersion incident) turn casualty into the recovery position, open mouth and drain matter downwards, remove loose dentures and remove visible material with rescuer’s fingers then position on back.
- Lift chin upwards (towards the ceiling) by placing fingers under chin or use a pistol grip; this lifts the tongue from the back wall of the throat and opens the airway.
- With upper hand on forehead, tilt an adult and child’s head fully back to further open the airway. Place an infant’s head in a neutral position (as tilting an infant’s head backwards or forwards may cause airway obstruction).

**BREATHING (lungs)**
Adults breathe approximately 12-15 breaths per minute; infants/children approximately 20 breaths.
- **Look** for the even movement of the rising and falling of the lower chest for 10 seconds.
- **Listen** for the sound of regular breathing.
- **Feel** air escaping from the mouth/nose with your cheek.
- For a casualty who is **not breathing** or **not breathing normally** begin CPR.

**CARDIOPULMONARY RESUSCITATION (CPR)**
- Deliver 30 compressions and 2 rescue breaths [rescuer takes about 1 second to deliver 1 breath] x 5 times in two minutes and repeat until ambulance arrives.
- Compressions only, can be given if the first aider is unable or unwilling to perform rescue breathing at approximately 100 compressions per minute.

**DEFIBRILLATION**
- Attach the defibrillator and follow voice prompts.
Chest compressions

Rescuers should start chest compressions if the casualty is unconscious and not breathing, or not breathing normally. Checking the carotid pulse is an inaccurate method of confirming the presence or absence of circulation and is not recommended for the first aider (ARC Guidelines).

If a casualty is found unconscious and not breathing in a chair, wheelchair, upright in bed etc, they should be moved and placed on their back on a firm surface, preferably the floor. ‘Victims requiring chest compressions should be placed supine on a firm surface [e.g. backboard or floor] before chest compressions to optimise the effectiveness of compressions.’ ARC Guideline 6, December 2010.

Rate of compressions

Chest compressions should be performed at a rate of approximately 100 compressions per minute. This does not mean however that 100 compressions will be delivered every minute. Only around 75 compressions will be delivered each minute due to the interruptions required for the rescue breaths.

Compression point

- Place the casualty onto a firm surface and kneel beside the casualty with your knees on either side of their shoulders.
- Position your hands on the LOWER HALF of the sternum (breastbone).
- The lower half can be found by visualising where the “centre of the chest” is. If you can see the sternum, locate the end and press above this point (toward head).

Compression applied too high is ineffective and too low may cause regurgitation and/or damage to internal organs.

Infants

- Locate the compression point, place only two fingers on the sternum.
- Press downwards to the correct depth (about a 1/3 of the depth of the chest) with your two fingers.
- Use smooth rhythmical compressions.

Note: Ribs may be broken due to incorrect hand position and/or pressing too forcefully or because the casualty has brittle or fragile bones. If you hear or feel a rib crack, stop, recheck hand position and continue compressing to the correct depth.

Children and adults

- Locate the compression point, place the heel of one hand on the sternum, with the fingers pointing away from your body.
- Keep fingers slightly raised to avoid pressure being placed on ribs.
- Place other hand on top of first.
- Interlock your fingers or lock the thumb around the wrist, keeping fingers off the chest.

Adult

Child

- Press downwards to the correct depth (about a 1/3 of the depth of the chest) through the heel of your lower hand.
- Keep your elbows straight to allow the weight of your upper body to control the depth.
- Use smooth rhythmical compressions.
**Rescue breathing**
Deliver 30 compressions and then 2 rescue breaths.

**Mouth to mouth rescue breathing**

**Infant** | **Child** | **Adult**
---|---|---

- Kneel beside the casualty’s head (for infant, place on table to avoid bending).
- For an adult or child, open the airway by tilting the casualty’s head fully back.
  For an infant, open the airway by placing the head in a neutral or ‘sniffing’ position.
- Lift the casualty’s jaw upwards using a pistol grip (adult, child or infant).

- Place your mouth over the casualty’s slightly open mouth (for an infant – both mouth and nose are covered) to produce an airtight seal.
- Seal the adult/child casualty’s nostrils e.g. using your cheek or fingers.
- Blow enough air into the casualty to produce a gentle rise of the upper abdomen or lower chest.
- Deliver your breath over one second (about 400-500mls for an adult, 200-400mls for a child and gentle puff for infants).

- After delivering the breath, lift your mouth from the casualty’s mouth and turn your head towards the casualty’s chest to breathe “fresh air” into your lungs then listen and feel for air being exhaled from the mouth and nose and finally look for abdomen or chest deflation.

- Deliver a second breath in the same manner as the first.

**Recovery checks**
There is no need to undertake an airway and breathing check during CPR. Evidence has demonstrated that interruption of chest compressions is associated with lower survival rates.

If the casualty begins to breathe normally they should be positioned on their side and managed as for the unconscious breathing casualty.

If the casualty vomits during CPR they should be turned into the side position to clear the airway and if still not breathing CPR should be continued.

**Transition between two single CPR operators**
Chest compressions during CPR are strenuous, tiring, and difficult to maintain over an extended period of time. The Australian Resuscitation Council adopts research which suggests that rescuer fatigue during CPR is a likely contributor to ineffective CPR during extended resuscitation efforts. Due to this, if another bystander is available and willing it is recommended that they relieve the first rescuer from performing CPR. Whilst the first rescuer completes two rescue breaths the second rescuer positions themselves with their hands on the casualty’s chest to commence compressions once the second breath is delivered. This improves the quality of chest compressions and gives the casualty the best chance for survival.
Mouth to nose rescue breathing

This technique may be used if the casualty’s jaws are clenched or there is a significant mouth injury. The technique remains the same as above except for sealing the airway. Close the casualty’s mouth with the hand supporting the jaw and push the lips together with the thumb. Take a breath then place your mouth over the casualty’s nose and blow to inflate the lungs.

Rescue breathing summary

<table>
<thead>
<tr>
<th>Age</th>
<th>Backward head tilt</th>
<th>Strength</th>
<th>Number of breaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult 8+ years</td>
<td>Full</td>
<td>Full breaths</td>
<td>2</td>
</tr>
<tr>
<td>Child 1-8 years</td>
<td>Full</td>
<td>Gentle breaths</td>
<td>2</td>
</tr>
<tr>
<td>Infant 0-1 year</td>
<td>Neutral (&quot;sniffing&quot;)</td>
<td>Puffs (mouth/nose)</td>
<td>2</td>
</tr>
</tbody>
</table>

Complications of rescue breathing

If there is no chest movement or if marked resistance to air entry is noted during rescue breaths, lung ventilation is inadequate. Possible causes are:

• Obstruction of the airways by a foreign object /material, or the tongue due to incorrect head tilt or jaw lift.

• Inadequate air seal:
  - nostrils not blocked (adult or child)
  - mouth not sealing casualty’s mouth

• Insufficient air being blown into the airway.

Distension of the casualty’s stomach may occur because:

• During rescue breathing, the rescuer blows too forcefully and/or

• There is too much air volume and/or

• The airway is not properly opened.

Resuscitation in late pregnancy

An obviously pregnant woman should be positioned on her back with shoulders flat. Sufficient padding needs be placed under the right buttock to provide an obvious pelvic tilt to the left. This position helps reduce pressure on the major abdominal organs and allows better blood supply to the heart.

<table>
<thead>
<tr>
<th>Age</th>
<th>Backward head tilt</th>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult</td>
<td>30 compressions and 2 breaths</td>
<td>Two hands</td>
</tr>
<tr>
<td></td>
<td>Approximately 5 times every two minutes</td>
<td>1/3 of depth of chest</td>
</tr>
<tr>
<td>Child</td>
<td>30 compressions and 2 breaths</td>
<td>Two hands</td>
</tr>
<tr>
<td></td>
<td>Approximately 5 times every two minutes</td>
<td>1/3 of depth of chest</td>
</tr>
<tr>
<td>Infant</td>
<td>30 compressions and 2 breaths</td>
<td>Two fingers</td>
</tr>
<tr>
<td></td>
<td>Approximately 5 times every two minutes</td>
<td>1/3 of depth of chest</td>
</tr>
</tbody>
</table>

The rates above will achieve a compression rate of 100 per minute, although actual compressions delivered will be 75.
The Premium Health method was developed and researched to assist CPR learners to achieve the correct rate and rhythm for chest compressions as the correct rate and rhythm is essential if CPR is to be effective. The Premium Health method uses rhythm and rhyme to assist in remembering and recalling how to do CPR and the method is particularly useful in an emergency as it helps rescuers slow the compression rate instead of allowing their adrenaline response to dictate a faster speed. This unique and innovative training technique uses a familiar song to help you recall and perform CPR correctly. The method helps the body know what the correct rhythm [rate] is and the rhyme is used to mark CPR’s cyclical stages. The time it takes to sing the 2 verses of the nursery rhyme used equals the time it should take to give 30 compressions and reaching the end of the second verse is a signal for the learner/rescuer to deliver 2 breaths. The song verses are repeated over and over accompanied by compressions and breaths for as long as CPR is required. If you had to give CPR, it is intended the song would be sung silently, under your breath.

Research shows that the Premium Health method enables people to retain and recall their CPR skills over a longer period of time. For any first aider, managing a cardiac arrest is stressful, so an easily remembered method to achieve compression rhythm and to count the compression/breath cycles is valuable.

Quick reference guide to the Premium Health CPR method©

The **bolded white** text below denotes the words to be sung.
The shaded boxes below indicate the actions to be performed.

**Verse 1**

<table>
<thead>
<tr>
<th>Baa</th>
<th>baa</th>
<th>black</th>
<th>sheep</th>
<th>have you</th>
<th>any</th>
<th>wool</th>
<th>“beat”</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>sir</td>
<td>yes</td>
<td>sir</td>
<td>one</td>
<td>bag</td>
<td>full</td>
<td></td>
</tr>
</tbody>
</table>

**Verse 2**

<table>
<thead>
<tr>
<th>Baa</th>
<th>baa</th>
<th>black</th>
<th>sheep</th>
<th>have you</th>
<th>any</th>
<th>wool</th>
<th>“beat”</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>sir</td>
<td>yes</td>
<td>sir</td>
<td>two</td>
<td>bags</td>
<td>full</td>
<td></td>
</tr>
</tbody>
</table>

Continue to deliver CPR - by repeating these 2 verses over and over until medical assistance arrives.

**Defibrillation**

An Automated External Defibrillator (AED) is applied to casualties who are unconscious, not breathing or not breathing normally; that is, they have had a cardiac arrest. An AED will analyse the heart to detect if the heart is contracting normally. If not, the AED will deliver a brief electric shock which may restore normal heart rhythm.

Of the people who collapse with sudden cardiac arrest, those in ventricular fibrillation (VF) or with pulseless ventricular tachycardia (VT) [around 85% of sudden cardiac arrest casualties] have the greatest chance of survival. Survival is dependent on early defibrillation using an AED.

The electric shock helps re-establish normal rhythms in a heart which has a dangerous rhythm or where the casualty is in cardiac arrest. In recent years many defibrillators have become available in workplaces. There are also defibrillators located in public places such as airports, train stations, shopping centres and sporting grounds. These are public access defibrillators and anybody can use them, they are simple and safe.

**The steps to follow are:**
- DRSABCD
- Send for the AED
- Continue with CPR whilst waiting
- Turn on/activate AED
- Attach the electrode pads to the chest
- Follow voice prompts of the AED
- No-one is to touch the casualty whilst the AED is analysing the rhythm.

If a shock is indicated:
- No-one is to touch the casualty
- Push a shock button if directed
- Continue to follow voice prompts.

If no shock is indicated resume CPR.
Be prepared to respond to a life-threatening situation. Call us for first aid training, first aid kits and defibrillators.

**FIRST AID ACTION PLAN**

1. **DANGER**
   - **Is there any danger?**
     - To yourself, bystanders and the casualty
     - Make the scene safe and remove the casualty from the danger or the danger from the casualty
     - Only continue when it is safe

2. **RESPONSE**
   - **Is the casualty conscious?**
     - **Yes** - Check A B C, call triple zero (000) as necessary, position appropriately, manage other injuries and keep warm.

3. **SEND FOR HELP**
   - **Call triple zero (000)**
     - Ambulance
     - Police
     - Fire

4. **CONSCIOUS? UNCONSCIOUS?**
   - **Airway**
     - **Is the casualty’s airway clear?**
       - Check mouth and nose
       - If fluid/vomit in mouth turn onto side, clear and reposition on back
       - Tilt head and lift chin

5. **BREATHING**
   - **Is the casualty breathing normally?**
     - **Yes** - Turn casualty onto their side
     - **No** - Not breathing, or not breathing normally, commence compressions

6. **COMPRESSIONS**
   - Give 30 chest compressions followed by 2 breaths and continue until qualified help arrives.
   - **Hand position for CPR**: Push down 1/3 of the casualty’s chest depth on the lower half of the breast bone.
   - **Adult 8+ years**: 2 hands, full head tilt, full breath
   - **Child 1-8 years**: 2 hands, full head tilt, small breath
   - **Infant 0-1 years**: 2 fingers, neutral head position, puff of air through mouth and nose
   - If unable or unwilling to perform rescue breathing, deliver 100 chest compressions a minute.

7. **DEFIBRILLATION**
   - If a defibrillator is available, turn on and follow voice prompts.