Resuscitation
Adult
Level 2 - Adult Basic Life Support
Core Skills Reader
Introduction to the Core Skills

The Core Skills standardises the training for 10 subjects commonly delivered as part of statutory and mandatory training requirements for health and social care organisations.

For each subject a set of learning outcomes has been agreed nationally and is set out in the UK Core Skills and Training Framework (a copy of the framework is available on the Skills for Health website: www.skillsforhealth.org.uk/).

The learning outcomes specify what needs to be covered in the training for each Core Skills subject. This ensures a quality standard is set and provides clear guidance for organisations to deliver against these requirements as well as recognise the equivalent training delivered externally. This allows for Core Skills training to be portable between organisations and prevents the needless waste and duplication of statutory and mandatory training where is not required.

To aid organisations in the delivery of the Core Skills subjects, these education resources have been developed to be aligned to the learning outcomes in the UK training framework. Organisations have the flexibility to deliver these resources in a variety of formats as well as adapting them to add localised content alongside the Core Skills Materials.

If you require any further information about the Core Skills, in the first instance please contact the Learning and Development Lead in your organisation.

In the North West the implementation and management of the Core Skills is overseen by the North West Core Skills Programme on behalf of Health Education North West. The programme can be contacted on: CoreSkills.Programme@nhs.net
Introduction to Resuscitation Adult

This reader covers the learning outcomes in the UK Core Skills Training Framework for Level 2 – Adult Basic Life Support.

In the UK Core Skills Training Framework there are 3 levels of training for resuscitation and separate outcomes for Adult, Paediatric and New born for levels 2 and 3. Skills for Health have developed the learning outcomes for the 3 levels of resuscitation training in consultation with and supported by the Resuscitation Council (UK).

This reader can be used either as a standalone document or as supporting material alongside the Core Skills Resuscitation Adult presentation or eLearning package (the relevant slide numbers and eLearning pages are given with each sub-heading). Whichever way the reader is used, it is recommended that the Core Skills Resuscitation Adult Assessment is completed afterwards to allow the learner to demonstrate they have retained the knowledge and learning required.

In line with best practice, organisations will likely include practical elements to the training and learners will be expected to undergo a practical assessment demonstrating their ability to perform recognised resuscitation elements and techniques such as chest compressions and rescue breaths.

The content covered here is likely to be a minimum requirement for all staff with direct clinical care responsibilities including all qualified healthcare professionals. Specific staff members or groups may require additional and further advanced resuscitation training dependent upon their role.

Current national guidelines recommend that training for Level 2 – Adult Basic Life Support is refreshed at least once a year.
What you will learn in this session
(Slide No 2 / E-learning Page 1)

The objectives shown below covered by this reader are aligned to the Learning Outcomes for Level 2 – Adult Basic Life Support in the Core Skills and Training Framework.

1. Current legislation, guidelines, local policies & procedures
2. Recognise & respond to patients with clinical deterioration
3. Initiate an appropriate emergency response
4. Initiate and maintain effective chest compressions
5. Provide basic airway management
6. Initiate and maintain effective lung ventilations
7. Be able to operate an Automated External Defibrillator (AED)
8. Role & responsibilities in emergency situations
9. Role & responsibilities in reporting & recording
10. Undertaking interventions within limits of capabilities
11. Apply local Do Not Attempt Cardiopulmonary Resuscitation Policy
**Why is this important?**
(Slide No 3 / E-learning Page 2)

A cardiac arrest is the ultimate medical emergency and correct treatment must be given immediately if the person is going to have any chance of survival.

As a healthcare worker it is important that if you are present at the scene of a cardiac arrest you know the appropriate evidence based resuscitation skills and are able to put them into practice. This will increase the chances of the person who has suffered a cardiac arrest of being resuscitated successfully and making a full neurological recovery.

**Some facts and figures to consider are:**

- There are approximately **700,000** cardiac arrests per year in Europe
- Bystander Cardiopulmonary resuscitation (CPR) is a vital intervention before the arrival of the emergency services
  - it can **double** or **triple** survival from sudden cardiac arrest
- Early resuscitation and prompt defibrillation (within 1-2 minutes) can result in **survival rates of more than 60%**.

**Specific Findings from the Ambulance Clinical Outcomes October 2013:**

- For patients who had an **out-of-hospital cardiac arrest**, where ambulance staff commenced/continued resuscitation, **25.8%** had a return of spontaneous circulation (ROSC) on arrival at hospital.
- For patients who had an **out-of-hospital cardiac arrest** and where the outcome is known, the proportion of patients who were subsequently **discharged from hospital alive** was **8.7%**.

Sources of information about Adult Resuscitation
(Slide No 4 / E-learning Page 3)

There are no statute requirements set out in UK law for resuscitation. National guidelines are set by the Resuscitation Council (UK), who the recognised authority for resuscitation in this country. They aim to achieve the following across the UK:

- To encourage research into methods of resuscitation
- To study resuscitation teaching techniques
- To establish appropriate guidelines for resuscitation procedures
- To promote the teaching of resuscitation as established in the guidelines
- To establish and maintain standards for resuscitation
- To foster good working relations between all organisations involved in resuscitation and to produce and publish training aids and other literature concerned with the organisation of resuscitation and its teaching.

The Resuscitation Council (UK) is a member of the European Resuscitation Council (ERC). The overall objective of the ERC is to: “To preserve human life by making high quality resuscitation available to all.” One of the ways it achieves this is by promoting and strengthening the network of National Resuscitation Councils across Europe. Along with the national guidance, it is important you are aware of specific policies in your organisation, which will apply the resuscitation guidelines in a localised context based on the needs, requirements and risks locally.

Recognised resuscitation techniques and the training underpinning their delivery are shaped and driven by evidence based practice. This means it is continually being developed and updated. Therefore it is important you refresh your resuscitation training on a regular basis to ensure you are aware the latest guidelines and accepted best practice in light of any recent changes.

- Resuscitation Council (UK): www.resus.org.uk
- European Resuscitation Council: www.erc.edu
The chain of survival is used by many organisations including the Resuscitation Council (UK) & European Resuscitation Council to conceptualise how CPR interventions can contribute to a successful outcome after sudden cardiac arrest.

It refers to a series of actions that, when put into motion, reduce the mortality associated with cardiac arrest. Like any chain, the chain of survival is only as strong as its weakest link. The four interdependent links in the chain are:

- Early Recognition
- Early CPR
- Early Defibrillation
- Early Advanced Care

**Early Recognition**

Ideally, someone must recognise an impending cardiac arrest or otherwise witness the cardiac arrest and activate an appropriate emergency response as early as possible. For example, an immediate call to the emergency services.

Unfortunately, many people experiencing symptoms (for example, angina) that may lead to a cardiac arrest ignore these warning symptoms or, recognising these warning symptoms correctly, fail to activate an emergency response, preferring to
contact relatives instead (the elderly often contact their adult offspring rather than contact emergency services).

**Early CPR**
In order to be most effective, bystander CPR should be provided immediately after the collapse of the patient. Properly performed CPR can keep the heart in a shockable ventricular fibrillation for 10–12 minutes longer.

**Early Defibrillation**
Most adults who can be saved from cardiac arrest are in ventricular fibrillation or pulseless ventricular tachycardia. Early defibrillation is the link in the chain most likely to improve survival. Public access to defibrillation may be the key to improving survival rates in out-of-hospital cardiac arrest, but is of the greatest value when the other links in the chain do not fail.

**Early Advanced Care**
Early advanced cardiac life support by paramedics is another critical link in the chain of survival. In communities with survival rates greater than 20%, a minimum of two of the rescuers are trained to the advanced level. This can be by ambulance officers, paramedics, nurses, or doctors.
The National Early Warning Score (NEWS) System provides national guidance in standardisation of critical signs for patients in the acute setting. It provides a simple guide that can be used by hospital nursing & medical staff as well as emergency medical services to quickly determine the degree of illness of a patient.

For an acutely unwell patient, a fast, efficient and consistent response is essential to optimise clinical outcomes. A number of national reports have highlighted the importance of early warning scores. The underlying rationale for NEWS is to encourage the adoption of a standardised approach across the NHS. This rationale anticipates delivery of healthcare to acutely ill patients will be substantially improved by the routine embedding of simple and consistent systems based on: A systematic method of measuring physiological parameters to allow early recognition of those with acute illness and; The definition of the appropriate speed and scale of clinical response required, tailored to the level of acute illness severity.

Following the NEWSDIG "Standardising the Assessment of Acute Illness Severity in the NHS" report in February 2011, a working group was established in collaboration with NHS Training for Innovation (TFI), the National Outreach Forum (NOrF), the Royal College of Nursing and the Royal College of Physicians, London. The working group was able to utilise their skills and experience to create the practical, user friendly material and training tools necessary for the introduction and rapid national uptake of this much improved, standardised early warning system. The group developed generic early warning observation, scores and response guidance charts together with the web-based e-learning tools.

Further Reading:

National Early Warning Score (NEWS) - Standardising the assessment of acute-illness severity in the NHS

National Early Warning Score (NEWS) System
(Slide No 7 / E-learning Page 6)

The NEWS system is based on a simple scoring system in which a score is allocated to physiological measurements already undertaken when patients present to, or are being monitored in hospital. The following seven parameters form the basis of the scoring system:

- Respiratory Rate
- Oxygen Saturations
- Supplemental Oxygen
- Temperature
- Systolic Blood Pressure
- Heart Rate
- Level of Consciousness

A score is allocated to each as they are measured, with the magnitude reflecting how extreme the parameter varies from the norm. The score is then aggregated. The score is uplifted for people requiring oxygen. It is important to emphasise that these parameters are already measured in hospitals and recorded on clinical charts.

NEWS should be used to standardise the assessment of acute-illness severity when patients present acutely to hospital and also in the pre-hospital assessment, ie by primary care and the ambulance services. It is also recommended that NEWS is used as a surveillance system for all patients in hospitals, tracking their clinical condition, alerting to clinical deterioration and triggering a timely clinical response.

NEWS Standardised Resources

To facilitate standardisation and a national unified approach, a number of resources have been developed, such as a colour-coded clinical chart. These are to be used across the NHS to record routine clinical data and track a patient’s clinical condition. This tracking system will alert to any untoward clinical deterioration and also clinical recovery. This in turn will determine the urgency and scale of the clinical response.
NEWS Observation Chart:
https://tfinews.ocbmedia.com/media/newsObs.pdf

NEWS Scoring System:
https://tfinews.ocbmedia.com/media/newsScore.pdf

Clinical Response to NEWS Triggers:
https://tfinews.ocbmedia.com/media/newsTarget.pdf

**Approach safely**
(Slide No 8 / E-learning Page 7)

If you come across someone who is suffering a cardiac arrest or has collapsed, even though your first instinct may be to go to their immediate assistance. You must first consider whether they can be approached safely, taking into account your own and their safety. Take notice of the wider environment and be aware of any potential dangers. For example this may include broken glass, slippery floors, traffic, live electricity, risk of infection etc. Some things to consider before you approach with care are listed below:

- Check out the scene
- Is it safe for you to approach?
- Is the victim safe?
- Are all bystanders safe?
- Assess the Infection risk
- Is there blood or other fluids present?
- Should you use Personal Protective Equipment (PPE)?
Adult Basic Life Support
(Slide No 9 / E-learning Page 8)

The algorithm shown below is taken from the latest Resuscitation Council (UK) guidelines. It shows the logical process to follow to try and achieve the best outcome following a sudden cardiac arrest.

- Person is unresponsive and not breathing normally
- Call 999 and ask for an ambulance
- 30 chest compressions
- 2 rescue breaths
- Continue CPR 30:2
- As soon as AED arrives switch it on and follow instructions
Check response

(Slide No 10 / E-learning Page 9)

If you come across a person who is collapsed, the first thing you should do is check if they are responsive. This can be done by giving the person a gentle shake in case they are injured. Be aware of other factors that hamper communication and perceived responsiveness. Things to consider include, the person may be hard of hearing, they may have learning difficulties or there may be a language barrier.

If the person responds, you should do the following:

- Leave them as you find them
- Find out what is wrong
- Reassess regularly

If the person is unresponsive it is important you take action and raise the alarm by first **Shouting for Help**. At this stage it is only general assistance that’s required.

However, in some situations it will already be obvious that the outcome of further assessment will serve only to reinforce that emergency assistance will be required in some shape or form.
Open the airway using head tilt and chin lift
(Slide No 11 & 12 / E-learning Page 10 & 11)

With an unresponsive person, the focus needs to be on the importance of positioning them in order to open their airway and assess them properly. There may be other injuries present that you may be concerned about, particularly those involving the head, neck and back that may risk causing further damage to the spinal cord.

The general principle is not to move someone if you suspect they may have a head or neck injury. However, in this situation, failure to move them onto their back may present a threat to their life from sudden cardiac arrest.

Head tilt and chin lift
The head tilt and chin lift technique is the primary method practiced to open a person’s airway:
- Turn victim onto their back
- Open the airway
- Head tilt / Chin lift
- Ensure airway is open

Other options to open the airway
The jaw thrust technique is an alternative method to the Head tilt and chin lift for opening the airway, particularly in a victim with a suspected spinal injury.

The jaw-thrust technique moves the casualty's tongue forward (away from the airway) without extending the patients neck. Opening the airway using the jaw thrust can be difficult to do, because of this it is not recommended to be used by lay rescuers, although health care professionals still maintain the technique for specific applications. Lay rescuers should open the airway using the head tilt, chin lift manoeuvre for both injured and non-injured victims.
To perform the Jaw Thrust technique:

- With the victim on their back, the head should be in the neutral position (not tilted forward or back)
- Grasp the angles of the lower jaw and lift with both hands, one on each side, moving the jaw forward
- If the victim’s lips are closed, open the lower lip with your thumb

You can also use Airway Adjuncts (OPA NPA) to open a person’s airway. The tongue is the most common cause of airway obstruction in an unconscious person. Keeping the tongue from blocking the air passage is a high priority. Oropharyngeal (oral) airways (OPAs) and nasopharyngeal (nasal) airways (NPAs) can help you accomplish this.

- OPAs are inserted into the mouth and are used only on unconscious, unresponsive victims with no gag reflex
- NPAs are inserted into the nose and may be used on a conscious, responsive victim or an unconscious victim
Check breathing
(Slide No 13 / E-learning Page 12)

Once you have opened and maintained the airway you need to check if the person is breathing normal.

- **Look** for chest movement
- **Listen** for breath sound
- **Feel** for air on your cheek

- **Take no more than 10 seconds to check**

- If you have any doubt whether the breathing is normal, act as if it is **NOT** normal

In the first few minutes after a sudden cardiac arrest, victims may be barely breathing, or taking infrequent, noisy gasps. This is termed as **agonal breathing** and must not be confused with normal breathing. Agonal breathing / gasps are present in up to 40% of cardiac arrest victims, they are an indication for starting CPR immediately. The absence of normal breathing continues to be the main sign of cardiac arrest in a non-responsive victim.

**If the person is breathing normally:**

- Place them in the recovery position (covered in further detail later on)
- Summon help, leave the victim only if there is no other option
- Continue to assess that breathing remains normal. If in doubt start CPR

**If the person is not breathing normally:**

- Summon help, leave the victim only if there is no other option
- Start CPR with chest compressions (covered in further detail later on)
Calling for help and what to say
(Slide No 14 & 15 / E-learning Page 13 & 14)

If a person is not breathing normally it is important you get the appropriate help and support they need as soon as possible.

- You can summon help at the scene using a mobile phone
- If it is not possible to telephone for help, send a bystander to fetch help
- If possible, the victim **should not be left alone** at any stage. Only leave them if there is no other way of obtaining help
- If available, ask for an Automated External Defibrillator (AED)
- Make sure you know the local procedures and any specific emergency numbers to dial in your organisation
- 2222 is the standard number in NHS acute trusts in England and Wales to summon the emergency crash team following a cardiac arrest in hospital
- Otherwise, dial 999 for an ambulance

When summoning or calling for help you need to be able to give as much accurate information as possible. You will not be expected to make a full diagnosis and if unsure of the full details or what has happened, give as much detail as you can:

- Be clear about the help required, ie “**suspected cardiac arrest**”
- State who / what you want
- Be clear about your the location
- Do you require any other help?
  - Paramedics?
  - Other emergency services?
  - Surgeon?
Start chest compressions  
(Slide No 16 / E-learning Page 15)

Studies have shown that compression-only CPR may be as effective as combined ventilation and compression in the first few minutes after non-asphyxial arrest. At this early stage, blood oxygen content remains high. Therefore, ventilation is less important than chest compression at this time. To emphasise this, it is recommended that, in adults, CPR should start with chest compressions rather than initial ventilations.

Compression only CPR has potential advantages over chest compression and ventilation, particularly when the rescuer is an untrained layperson. However, there are situations where combining chest compressions with ventilation is better, for example in children, asphyxial arrests, and prolonged arrests. Therefore, chest compression combined with rescue breaths should remain the standard choice for CPR for trained lay rescuers and healthcare professionals.

- Start chest compression as follows:
- Kneel by the side of the victim
- Place the heel of one hand in the centre of the victim's chest; (which is the lower half of the victim’s breastbone (sternum))
- Place the heel of your other hand on top of the first hand
- Interlock the fingers of your hands and ensure that pressure is not applied over the victim’s ribs
- Keep your arms straight
- Do not apply any pressure over the upper abdomen or the bottom end of the bony sternum (breastbone)
- Position your shoulders vertically above the victim's chest and press down on the sternum to a depth of 5–6 cm
After each compression, release all the pressure on the chest without losing contact between your hands and the sternum;

Repeat at a rate of 100–120 min-1

When commencing chest compressions, also remember that:

- It is not always necessary to remove the victim’s clothes
- Appropriate positioning of the rescuer and good hand positioning is key
- Periodically recheck correct hand positioning if resuming chest compressions
- If more than one rescuer is present, change over every 1-2 mins
- **Don't stop unless the victim shows signs of life.**

**Start rescue breaths and continue CPR**
(Slide No 17 & 18 / E-learning Page 16 & 17)

After 30 chest compressions, give 2 rescue breaths:

- Pinch the soft part of the person’s nose with your index finger and thumb of the hand that’s also tilting the forehead
- Ensure your other hand maintains the chin lift
- Take a normal breath
- Place your lips over the person’s mouth to get a good seal
- Steadily blow for 1 second to make their chest rise. Watch the chest rise out of the corner of your eye
- Turn your mouth away from the person and watch their chest fall
- **The 2 rescue breaths should take no more than 5 seconds in total**
- Continue with chest compressions and rescue breaths in a ratio of 30:2
If the chest doesn’t rise and fall with the first rescue breath:

- Check the person’s mouth and remove any obstructions
- Check head tilt chin lift positioning
- Do not attempt more than 2 breaths if the chest doesn’t rise, but continue with chest compressions as ventilation is less important than chest compressions, particularly in the early stages of sudden cardiac arrest.

Mouth-to-nose ventilation is an effective alternative to mouth-to-mouth ventilation. It may be considered if the victim’s mouth is seriously injured or cannot be opened, if the rescuer is assisting a victim in the water, or if a mouth-to-mouth seal is difficult to achieve.

There is a low risk of infection transmission during mouth-to-mouth ventilation. There have been few incidents of rescuers suffering adverse effects from undertaking CPR, with only isolated reports of infections such as tuberculosis (TB) and severe acute respiratory distress syndrome (SARS). Transmission of HIV during CPR has never been reported.

Dependent on your organisation’s policy, you may want to consider using a barrier device such as a pocket mask. Studies have shown that certain filters, or barrier devices with one-way valves, prevent transmission of oral bacteria from the victim to the rescuer during mouth-to-mouth ventilation. Rescuers should take appropriate safety precautions where feasible, especially if the victim is known to have a serious infection such as TB or SARS. During an outbreak of a highly infectious condition (such as SARS), full protective precautions for the rescuer are essential.
If an AED arrives
(Slide No 19 / E-learning Page 18)

- Switch on the AED
  - Follow the spoken/visual directions
- If a shock is indicated, deliver shock
  - Push shock button as directed
- Immediately restart CPR at a ratio of 30:2
- Continue as directed by the voice/visual prompts
- If no shock is indicated, continue
  CPR Immediately resume CPR
- Continue as directed by the voice/visual prompt

Continue CPR
(Slide No 20 / E-learning Page 19)

- Do not interrupt resuscitation until:
  - A health professional tells you to stop
  - You become exhausted
  - The victim is definitely waking up, moving, opening eyes and breathing normally

It is rare for CPR alone to restart the heart. Unless you are certain the person has recovered continue CPR
Only stop CPR if
(Slide No 21 / E-learning Page 20)

Once you have started CPR it is important you maintain chest compressions without interruptions. You should only stop if:

- Qualified help arrives and takes over
- The victim starts to show signs of regaining consciousness, such as:
  - Coughing
  - Opening their eyes
  - Speaking
  - Moving purposefully
- AND starts to breathe normally

If there is more than one rescuer:

- Change rescuer / resuscitator every 1 – 2 mins to prevent tiredness
- Avoid any delay during change over
- Don’t interrupt chest compressions
The recovery position
(Slide No 22 / E-learning Page 21)

The recovery position has several variations with no single position perfect for everyone. The position should be stable, near a true lateral position with the head dependent, and with no pressure on the chest to impair breathing. The Resuscitation Council (UK) recommends the following sequence:

- Remove the victim’s glasses, if present
- Kneel beside the victim and make sure that both legs are straight
- Place the arm nearest to you out at right angles to the body with elbow bent and the hand palm-up
- Bring the far arm across the chest, and hold the back of the hand against the victim’s cheek nearest to you
- With your other hand, grasp the far leg just above the knee and pull it up, keeping the foot on the ground
- Keeping the hand pressed against their cheek, pull on the far leg to roll the victim towards you on to the side
- Adjust the upper leg so that both the hip and knee are bent at right angles.
- Tilt the head back to make sure that the airway remains open
- If necessary, adjust the hand under the cheek to keep the head tilted and facing downwards to allow liquid material to drain from the mouth
- Check breathing regularly

If someone has been in the recovery position for more than 30 mins they should be turned to the opposite side to relieve the pressure on the lower arm.
Automated External Defibrillators (AEDs)
(Slide No 23 / E-learning Page 22)

AEDs are sophisticated, reliable and safe computerised devices that deliver electric shocks to victims of cardiac arrest when the ECG rhythm is one that is likely to respond to a shock. Simplicity of operation is a key feature: controls are kept to a minimum, voice and visual prompts guide rescuers. Modern AEDs are suitable for use by both lay rescuers and healthcare professionals.

All AEDs analyse the victim’s ECG rhythm and determine the need for a shock. The semi-automatic AED indicates the need for a shock, which is delivered by the operator, while the fully automatic AED administers the shock without the need for intervention by the operator.

The scientific evidence to support early defibrillation is overwhelming; the delay from collapse to delivery of the first shock is the single most important determinant of survival. If defibrillation is delivered promptly, survival rates as high as 75% have been reported. The chances of successful defibrillation decline at a rate of about 10% with each minute of delay. Basic life support will help to maintain a shockable rhythm but is not a definitive treatment.

An AED can be used safely and effectively without previous training. Therefore, the use of an AED should not be restricted to trained rescuers. However, training should be encouraged to help improve the time to shock delivery and correct pad placement.

The Resuscitation Council (UK) provides up to date guidance on using AEDs:
Automated External Defibrillator (AED) Algorithm
(Slide No 24 / E-learning Page 23)

The following sequence applies to the use of both semi-automatic and automatic AEDs in a victim who is found to be unconscious and not breathing normally:

1. **Follow the adult BLS sequence, do not delay starting CPR unless the AED is available immediately**

2. **As soon as the AED arrives:**
   a. If more than one rescuer is present, continue CPR while the AED is switched on. If you are alone, stop CPR and switch on the AED
   b. Follow the voice / visual prompts
   c. Attach the electrode pads to the patient’s bare chest
   d. Ensure nobody touches the victim while AED is analysing the rhythm

3. **If a shock is indicated:**
   a. Ensure that nobody touches the victim
   b. Push the shock button as directed (fully-automatic AEDs will deliver the shock automatically)
   c. Continue as directed by the voice / visual prompts
   d. Minimise, as far as possible, interruptions in chest compression

4. **If no shock is indicated:**
   a. Resume CPR using a ratio of 30 compressions to 2 rescue breaths
   b. Continue as directed by the voice / visual prompts

5. **Continue to follow the AED prompts until:**
   a. Qualified help arrives and takes over OR
   b. The victim starts to show signs of regaining consciousness, such as coughing, opening his eyes, speaking, or moving purposefully AND starts to breathe normally OR
   c. You become exhausted

Please see the AED algorithm sequence on the next page
Unresponsive?

- Call for help

Open airway
Not breathing normally

Send or go for AED
Call 999

**CPR 30:2**
Until AED is attached

AED assesses rhythm

- Shock advised
  - 1 Shock
    - Immediately resume CPR 30:2 for 2 min
    - Continue until the victim starts to wake up, i.e. moves, opens eyes and breathes normally

- No Shock advised
  - Immediately resume CPR 30:2 for 2 min
Choking – Airway obstruction by a foreign body
(Slide No 25 / E-learning Page 24)

The algorithm shown above is for the treatment of adults who are choking. Back blows; chest thrusts and abdominal thrusts all increase intra-thoracic pressure and can expel foreign bodies from the airway. Using more than one technique is often necessary to relieve the obstruction. If one technique doesn’t work, try another. The sequence is also suitable for use in children that appear to be older than 12 months.

If the victim shows signs of mild airway obstruction:

- Encourage them to continue coughing, but do nothing else.

If the victim shows signs of severe airway obstruction and is conscious:

- Give up to 5 back blows.
- Stand to the side and slightly behind the victim.
- Support the chest with one hand and lean the victim well forwards so that when the obstructing object is dislodged it comes out of the mouth rather than goes further down the airway.
- Give up to 5 sharp blows between the shoulder blades with the heel of your other hand
- Check to see if each back blow has relieved the airway obstruction. The aim is to relieve the obstruction with each blow rather than necessarily to give all five.
- If 5 back blows fail to relieve the airway obstruction give up to five abdominal thrusts.
- Stand behind the victim and put both arms round the upper part of their abdomen.
- Lean the victim forwards.
- Clench your fist and place it between the umbilicus (navel) and the bottom end of the sternum (breastbone).
- Grasp this hand with your other hand and pull sharply inwards and upwards.
- Repeat up to five times.
- If the obstruction is still not relieved, continue alternating 5 back blows with 5 abdominal thrusts.

*If the victim becomes unconscious:*

- Support the victim carefully to the ground.
- Call an ambulance immediately.
- Begin full CPR with rescue breaths following the Adult Basic Life Support sequence.

Even with successful treatment for choking, some foreign material may still be present in the upper or lower respiratory tract and cause complications later. Victims with a persistent cough, difficulty swallowing, or with the sensation of an object being still stuck in the throat should therefore be referred for an immediate medical opinion.
Modifications to Adult BLS for children
(Slide No 26 / E-learning Page 25)

The Resuscitation Council (UK) suggests that many children do not receive resuscitation because potential rescuers fear causing harm but this fear is unfounded.

- Bystander CPR intervention before arrival of emergency services significantly improves outcome in children
- Many children receive no bystander resuscitation because rescuers are frightened of doing harm
- A child’s more likely to be harmed if bystanders do nothing at all
- Technique is often poor, again because bystanders fear doing harm

When faced with a child victim, if you are not familiar with paediatric resuscitation techniques you should follow the full adult BLS sequence. You can make the following modifications:

- Give 5 initial rescue breaths before starting chest compression
- If you are on your own, perform CPR for 1 min before going for help
- Compress the chest by at least 1/3 of its depth
- Use two fingers for an infant under 1 year
- Use one or two hands for a child over 1 year
  (as required to achieve an adequate depth of compression)

For further information on up to date guidance on Paediatric Resuscitation, refer to the Resuscitation Council (UK) Guidelines:

http://www.resus.org.uk
Your role and responsibilities

(Slide No 27 / E-learning Page 26)

Working within the health sector, you will have a number of responsibilities dependent on your role and position. As a minimum though you need to:

- Know and comply with your organisation’s policies and procedures for emergency situations.
- Ensure your knowledge and training is up-to-date
- Attend refresher and training updates when due
- Undertake interventions and work within the limits of your knowledge and capabilities
- Comply with your professional Code of Conduct. This may be used as a measure for compliance
- Maintain an accurate record of events and actions, for example in relation to a patient collapsing, requiring resuscitation, organisation audit etc.

It is also important to understand the role of the Resuscitation Council (UK) who’s guidelines are endorsed by National Institute of Clinical Excellence (NICE).

Localised Delivery

(Slide No 28 / E-learning Page 27)

Within your organisation it is important to be aware of any specific issues relating to Resuscitation procedures. These will be captured in local policies and procedures. Things to consider include:

- Type of Equipment available and the training required to use it
- Different approaches to take in different areas of the organisation, for example in restricted areas
- How to summon help and support, who can provide this assistance and where
- Systems in place to report and document
Apply local Do Not Attempt Resuscitation Policy
(Slide No 29 / E-learning Page 28)

Do Not Attempt Resuscitation (DNAR) orders are frequently found in patients’ notes within a hospital setting, and occasionally in the community. They are used when it is thought that performing cardiopulmonary resuscitation (CPR) on a patient who has a cardiorespiratory arrest would not restart the heart and maintain breathing, or when the patient themselves has expressed a wish not to have CPR.

The decision as to when a DNAR order is appropriate is usually made by the most senior clinician involved in that patient’s care. DNAR decisions apply only to CPR and not to any other aspects of treatment. The decision must be recorded and captured on a recognised form (The Resuscitation Council (UK) provide sample / model forms). This should travel with the patient whenever possible and appropriate and should be recognised and accepted by all healthcare services.

If a patient has the mental capacity the doctor should discuss the benefits and burdens of CPR with the patient. The doctor should discuss in non-medical terms what CPR involves, the associated risks and possible consequences / complications even if CPR is successful. When a patient lacks the mental capacity it is essential to establish:

- If the patient has appointed a legal deputy (Personal Welfare Power of Attorney) who has the authority to make such a decision.
- If there is a valid and applicable Advance Directive.

For further information please see:

- Resuscitation Council (UK) Guidance:
  www.resus.org.uk/pages/DNARrstd.htm
- Mental Capacity Act:
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