

## SFHEC19

# Perform manual external defibrillation on an adult or older person



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### Overview

This standard covers preparing for and performing external defibrillation on an adult or older person in order to establish an effective cardiac rhythm.

Users of this standard will need to ensure that practice reflects up to date information and policies.

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### Performance criteria

*You must be able to:*

- P1 establish an open airway and adequate oxygenation of the adult or older person and ventilate the lungs with the highest possible concentration of oxygen given the skills and equipment available at the time
- P2 accurately establish the type of rhythm/arrhythmia at the earliest opportunity
- P3 initiate other means of establishing cardiac output prior to attempting defibrillation unless the adult or older person develops a shockable rhythm while being monitored, in line with:
  - P3.1 evidence based practice
  - P3.2 your own scope of practice
  - P3.3 legislation
- P4 evaluate for and eliminate or correct any specific potential causes or aggravating factors:
  - P4.1 for which additional treatments would be needed
  - P4.2 which would contraindicate the application of defibrillation
- P5 determine the interventions needed to deliver the optimum outcome for the individual depending on:
  - P5.1 the outcomes of your assessment of their condition
  - P5.2 the risks that need to be managed
  - P5.3 agreed goals
  - P5.4 the environment (hypothermia and immersion casualties)
- P6 prepare the adult or older person, equipment and others appropriately for the interventions to be carried out, maintaining their privacy and dignity as far as possible within the context
- P7 apply electrodes, pads and paddles for optimum effectiveness
- P8 apply the appropriate type and energy level of defibrillation for the adult or older person within the optimum time frame in line with:
  - P8.1 evidence based practice
  - P8.2 your own scope of practice
  - P8.3 legislation
- P9 evaluate the effectiveness of the defibrillation attempts, taking due account of the potential for myocardial stunning
- P10 apply basic life support appropriate to the adult's or older person's needs in the intervals between defibrillation attempts
- P11 reinstate equipment and materials to working status after use
- P12 ensure your safety and that of practitioners or others such as family members or carers as appropriate to the situation
- P13 secure the adult's or older person's airway and ventilate the lungs with the highest possible concentration of oxygen given the skills and equipment available at the time

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- P14 provide life support in a manner that is consistent with:
  - P14.1 evidence based practice
  - P14.2 your own scope of practice
  - P14.3 legislation
- P15 where necessary to achieve an optimum outcome for the adult or older person, establish and deliver an appropriate dose of a relevant drug through the most appropriate access route taking account of:
  - P15.1 evidence based practice
  - P15.2 the adult's or older person's condition
  - P15.3 the skills available
  - P15.4 the equipment available
- P16 administer drugs through the most appropriate access route taking account of:
  - P16.1 evidence based practice
  - P16.2 the adult's or older person's condition
  - P16.3 the skills available
  - P16.4 the equipment available
- P17 continue life support uninterrupted except during defibrillation attempts or pulse checks
- P18 monitor and evaluate the effectiveness of the interventions
- P19 continue, repeat or modify the interventions undertaken as appropriate to achieve the optimum outcome for the adult or older person in line with:
  - P19.1 evidence based practice
  - P19.2 your own competence and authority
  - P19.3 the adult's or older person's condition
  - P19.4 legislation
- P20 record the details of the interventions given accurately, clearly and in line with organisational protocols
- P21 reinstate equipment and materials to working status after use

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### Knowledge and understanding

*You need to know and understand:*

- K1 the policy and procedures for summoning assistance for prolonged/extended resuscitation
- K2 the policy and procedures for recording information on the provision of advanced life support and the details which should be recorded
- K3 the legislation regarding confidentiality and information sharing, the provision of services, the rights of the individual, protection issues, anti-discriminatory practice, informed consent, relevant mental health legislation and care programme approach
- K4 how to interpret and apply legislation to the work being undertaken
- K5 the ethics concerning consent and confidentiality, and the tensions which may exist between an individual's rights and the organisation's responsibility to individuals
- K6 the importance of gaining assent from an adult or older person who lacks capacity to consent.
- K7 the complexity of determining the adult's or older person's capacity for decision making and the variable nature of understanding and decision making in some adults or older people
- K8 the anatomy and physiology of the respiratory and circulatory systems in adults and older people, including the electrical conduction pathway of the heart
- K9 the clinical signs of causes and aggravating factors necessitating additional interventions alongside advanced life support
- K10 the priorities in life support
- K11 other means of resuscitation which may be applied while preparation is underway to use a defibrillator
- K12 the content of the Adult Advanced Life Support Guidelines as issued by the UK Resuscitation Council
- K13 the time frame within which assessment of the needs of the adult or older person should be carried out and the resuscitation response initiated
- K14 the universal algorithm for the management of cardiac arrest
- K15 what is happening when an adult or older person is in each of the following:
  - K15.1 ventricular fibrillation (VF)
  - K15.2 ventricular tachycardia (VT)
  - K15.3 peri-arrest arrhythmia
  - K15.4 asystole
  - K15.5 pulseless electrical activity (PEA)
- K16 the normal wave-form pattern of a healthy heart
- K17 the anatomy and physiology relevant to different external chest compression techniques
- K18 the measures to be taken to ensure health and safety, infection control

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- and the prevention of contamination
- K19 the impact that changes in the adult or older person associated with age will have on their condition and your response to it
- K20 the procedures needed for applying the electrodes and paddles of manual and automated defibrillators and for attaching cardiac monitors and the siting of these for optimum effectiveness
- K21 the implications of pacemakers for defibrillation and Advanced Life Support (ALS)
- K22 the energy levels (Joules) at which defibrillation shocks should be administered for adults and older people and the rationale underlying these levels
- K23 why it is important not to make a diagnosis of PEA immediately after defibrillation but to wait for a display of diagnostic quality to be established
- K24 why epinephrine should not be administered if a perfusing rhythm has been established
- K25 the techniques by which the adult's or older person's airways may be secured including:
  - K25.1 endotracheal intubation
  - K25.2 insertion of a laryngeal mask airway
  - K25.3 use of a Combitube
- K26 the differences in techniques needed for conducting cardio-pulmonary resuscitation
- K27 why different resuscitation techniques are needed depending on the adult's or older person's condition and other complicating factors such as hypothermia
- K28 the factors to be taken into account in determining the technique that will lead to the best possible outcome for the adult or older person
- K29 when and why adjustments to the techniques used in defibrillation and advanced life support may be needed to achieve the best outcome for the adult or older person
- K30 the different ventilation : compression ratios and rates that could be needed
- K31 the importance to outcome of the positioning of the adult or older person and the practitioner applying advanced life support
- K32 the observations to be carried out to identify adequate oxygenation
- K33 the pulse sites and rate norms for different types of individual
- K34 the procedure to establish the correct hand/finger placement for applying external chest compression
- K35 the procedures and state the equipment used for monitoring an adult's or older person's clinical signs during and post resuscitation
- K36 the upper and lower readings on equipment used in monitoring clinical signs
- K37 the potential for myocardial stunning

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#### Additional Information

##### External Links

This standard links with the following dimension within the NHS Knowledge and Skills Framework (October 2004):

Dimension: HWB7 Interventions and treatments

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