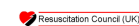


Basic Life Support

1

2



Quality standards for
cardiopulmonary
resuscitation
practice and training

Primary dental care

Resuscitation Council (UK)
5th Floor
Tavistock House North
Tavistock Square
London
WC1H 9HE
Tel: 020 7288 4678
Fax: 020 7288 5173
Website: www.resus.org.uk
email: enquiries@resus.org.uk
Registered Charity No. 286366

Published by the Resuscitation Council (UK)
Copyright © Resuscitation Council (UK)
No part of this publication may be reproduced
without the written permission of the Resuscitation
Council (UK)

References to other documents, sections or external
publications are shown in blue

November 2013

A patient could collapse on any premises at any time, whether they have received treatment or not. It is therefore essential that ALL registrants are trained in dealing with medical emergencies, **including resuscitation**, and possess up to date evidence of capability

General Dental Council 'Scope of Practice' 2013

A patient could collapse on any premises at any time, whether they have received treatment or not. It is therefore essential that ALL registrants are trained in dealing with medical emergencies, **including resuscitation**, and possess up to date evidence of capability

General Dental Council 'Scope of Practice' 2013

- Cardiorespiratory arrest is rare in primary dental practice.
- ➔ There is a public expectation that dental practitioners and all other dental care professionals should be competent in treating cardiorespiratory arrest.
- All primary care dental facilities should have a process for medical risk-assessment of their patients.
- Specific resuscitation equipment should be available immediately in all primary care dental premises. This equipment list should be standardised throughout the UK.
- ➔ All clinical areas should have immediate access to an automated external defibrillator (AED).
- ➔ Primary dental care providers, general dental practitioners and all other dental healthcare professionals should undergo training in cardiopulmonary resuscitation (CPR) including basic airway management and the use of an AED.
- Each primary dental care facility should have a plan for summoning assistance in the event of a cardiorespiratory arrest. For most practices this will mean calling 999 immediately.
- There should be regular practice and teaching using simulation-based cardiorespiratory arrest scenarios.
- ➔ Dental staff's knowledge and skills in resuscitation should be updated at least annually.

3

4

Resuscitation Council (UK)

QUALITY STANDARDS
PRIMARY DENTAL CARE

4 Training of staff

Standards

Accurate documentation of any patient's medical history should allow most people at risk of certain medical emergencies and subsequent cardiorespiratory arrest to be identified in advance of any proposed treatment.

1. Dental practitioners and other dental care professionals must be trained in cardiopulmonary resuscitation (CPR) so that in the event of cardiorespiratory arrest occurring they can:

Resuscitation Council (UK)

QUALITY STANDARDS
PRIMARY DENTAL CARE

4 Training of staff

Standards

Accurate documentation of any patient's medical history should allow most people at risk of certain medical emergencies and subsequent cardiorespiratory arrest to be identified in advance of any proposed treatment.

1. Dental practitioners and other dental care professionals must be trained in cardiopulmonary resuscitation (CPR) so that in the event of cardiorespiratory arrest occurring they can:

- recognise cardiorespiratory arrest;

5

6

Resuscitation Council (UK)

QUALITY STANDARDS
PRIMARY DENTAL CARE**4 Training of staff****Standards**

Accurate documentation of any patient's medical history should allow most people at risk of certain medical emergencies and subsequent cardiorespiratory arrest to be identified in advance of any proposed treatment.

1. Dental practitioners and other dental care professionals must be trained in cardiopulmonary resuscitation (CPR) so that in the event of cardiorespiratory arrest occurring they can:
 - recognise cardiorespiratory arrest;
 - summon help immediately (dial 999);

7

Resuscitation Council (UK)

QUALITY STANDARDS
PRIMARY DENTAL CARE**4 Training of staff****Standards**

Accurate documentation of any patient's medical history should allow most people at risk of certain medical emergencies and subsequent cardiorespiratory arrest to be identified in advance of any proposed treatment.

1. Dental practitioners and other dental care professionals must be trained in cardiopulmonary resuscitation (CPR) so that in the event of cardiorespiratory arrest occurring they can:
 - recognise cardiorespiratory arrest;
 - summon help immediately (dial 999);
 - start CPR, using chest compressions and providing ventilation with a pocket mask or bag-mask device and supplemental oxygen. (Evidence suggests that chest compressions can be performed effectively in a fully reclined dental chair);

8

Resuscitation Council (UK)

QUALITY STANDARDS
PRIMARY DENTAL CARE**4 Training of staff****Standards**

Accurate documentation of any patient's medical history should allow most people at risk of certain medical emergencies and subsequent cardiorespiratory arrest to be identified in advance of any proposed treatment.

1. Dental practitioners and other dental care professionals must be trained in cardiopulmonary resuscitation (CPR) so that in the event of cardiorespiratory arrest occurring they can:
 - recognise cardiorespiratory arrest;
 - summon help immediately (dial 999);
 - start CPR, using chest compressions and providing ventilation with a pocket mask or bag-mask device and supplemental oxygen. (Evidence suggests that chest compressions can be performed effectively in a fully reclined dental chair);

9

Resuscitation Council (UK)

QUALITY STANDARDS
PRIMARY DENTAL CARE**4 Training of staff****Standards**

Accurate documentation of any patient's medical history should allow most people at risk of certain medical emergencies and subsequent cardiorespiratory arrest to be identified in advance of any proposed treatment.

1. Dental practitioners and other dental care professionals must be trained in cardiopulmonary resuscitation (CPR) so that in the event of cardiorespiratory arrest occurring they can:
 - recognise cardiorespiratory arrest;
 - summon help immediately (dial 999);
 - start CPR, using chest compressions and providing ventilation with a pocket mask or bag-mask device and supplemental oxygen. (Evidence suggests that chest compressions can be performed effectively in a fully reclined dental chair);
 - attempt defibrillation (if appropriate) within 3 minutes of collapse, using an AED;

10

Resuscitation Council (UK)

QUALITY STANDARDS
PRIMARY DENTAL CARE**4 Training of staff****Standards**

Accurate documentation of any patient's medical history should allow most people at risk of certain medical emergencies and subsequent cardiorespiratory arrest to be identified in advance of any proposed treatment.

1. Dental practitioners and other dental care professionals must be trained in cardiopulmonary resuscitation (CPR) so that in the event of cardiorespiratory arrest occurring they can:
 - recognise cardiorespiratory arrest;
 - summon help immediately (dial 999);
 - start CPR, using chest compressions and providing ventilation with a pocket mask or bag-mask device and supplemental oxygen. (Evidence suggests that chest compressions can be performed effectively in a fully reclined dental chair);
 - attempt defibrillation (if appropriate) within 3 minutes of collapse, using an AED;
 - provide other advanced life support skills if appropriate and if trained to do so.

11

Table 2 Emergencies reported in the 12-month study period

	No of dentists who experienced emergency	Incidence of emergency
Vasovagal syncope	358	1238
Hypertensive crisis	41	72
Seizure	42	46
Hypoglycaemia	22	33
Asthma	24	26
Acute coronary syndrome	22	24
Anaphylaxis	7	9
Airway obstruction	5	5
Stroke	4	4
Cardiac arrest	2	2
Other emergencies	18	26

620 dentists

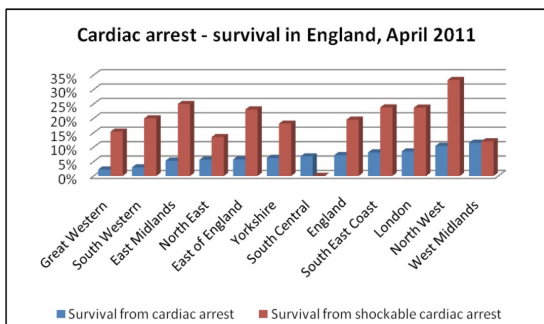
57% - 3 emergencies

36% - dealt with up to 10 emergencies

Emergency Medicine Journal 2008;25(5):296-300

13

In the UK approximately 30,000 people sustain cardiac arrest outside hospital



14

UNRESPONSIVE ?

16

UNRESPONSIVE ?

Shout for help

17

UNRESPONSIVE ?

Shout for help

Open airway

18

UNRESPONSIVE ?

Shout for help

Open airway

NOT BREATHING NORMALLY ?

19

UNRESPONSIVE ?

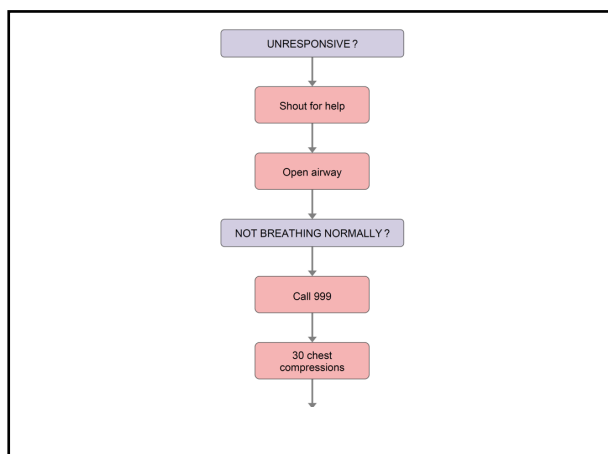
Shout for help

Open airway

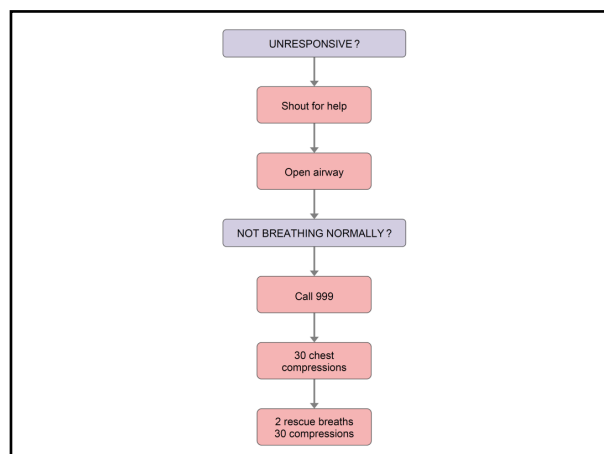
NOT BREATHING NORMALLY ?

Call 999

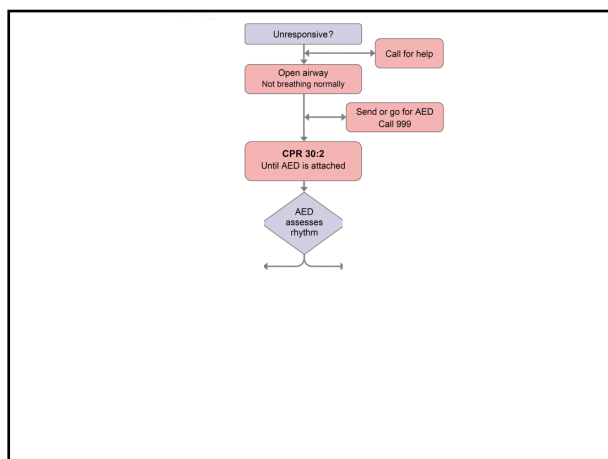
20



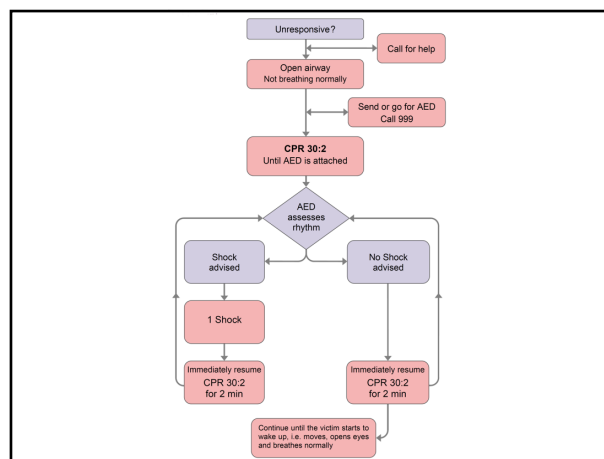
21



22



30



31

Automated External Defibrillation

- Electrical defibrillation is the only effective therapy for cardiac arrest caused by ventricular fibrillation (VF) or pulseless ventricular tachycardia (VT)
- delay from collapse to delivery of first shock is single most important determinant of survival.
- If defibrillation is delivered promptly, survival rates as high as 75% have been reported.
- 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

32

- AEDs - sophisticated, reliable, safe, computerised devices that deliver electric shocks to victims of cardiac arrest when ECG rhythm is one that is likely to respond to a shock.
- Simplicity of operation
controls kept to a minimum
voice and visual prompts guide rescuers.
- Modern AEDs suitable for use by both lay rescuers and healthcare professionals.
- All AEDs analyse victim's ECG rhythm and determine need for a shock.
- 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.

33

1. Follow the adult BLS sequence as described in the basic life support chapter. Do not delay starting CPR unless the AED is available immediately.

35

2. As soon as the AED arrives:
- 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.
 - Follow the voice / visual prompts.
 - Attach the electrode pads to the patient's bare chest.
 - Ensure that nobody touches the victim while the AED is analysing the rhythm.

36

Sinus Rhythm



37

Ventricular tachycardia



38

Ventricular fibrillation

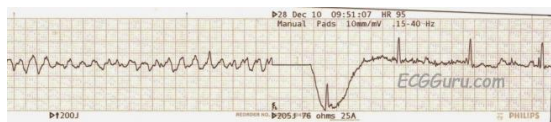


39

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

40

Successful defibrillation

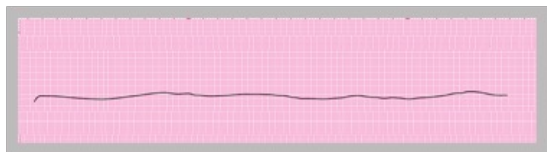


41

3B. If no shock is indicated:

- Resume CPR immediately using a ratio of 30 compressions to 2 rescue breaths.
- Continue as directed by the voice / visual prompts.

42



43



44

4. Continue to follow the AED prompts until:
- qualified help arrives and takes over OR
 - 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
 - you become exhausted.

45

3. Suggested minimum equipment list

Primary Dental Care		
AIRWAY AND BREATHING		
Item	Suggested availability	Comments
Protective equipment – gloves, apron, eye protection	Immediate	
Pocket mask with oxygen port	Immediate	
Portable suction e.g. Yankauer	Immediate	Airway suction equipment NPISA Signal Reference number 1305: February 2011
Oropharyngeal airways sizes 0,1,2,3,4	Immediate	
Self-inflating bag with reservoir (adult)	Immediate	
Self-inflating bag with reservoir (child)	Immediate	
Clear face masks for self-inflating bag (sizes 0,1,2,3,4)	Immediate	
Oxygen cylinder (D size)	Immediate	
Oxygen masks with reservoir	Immediate	
Oxygen tubing	Immediate	

Primary Dental Care		
CIRCULATION		
Item	Suggested availability	Comments
Automated external defibrillator (AED)	Immediate	Type of AED and location determined by a local risk assessment. Consider facilities for paediatric use, especially for practices that treat children.
Adhesive defibrillator pads	Immediate	Spare set of pads also recommended
Razor	Immediate	
Scissors	Immediate	

46

Summary

- Need to recognise cardiac arrest
- Basic life support will not revert cardiac arrest
- Role of BLS is to maintain perfusion to vital organs until definitive treatment arrives
- Time critical
- Familiar with use of AED