

Clinical Practice Guidelines



October 2014 Edition

Emergency First Responder - Basic Tactical Emergency Care

CLINICAL PRACTICE GUIDELINES

- 2014 Edition

Responder

Emergency First Responder – Basic Tactical Emergency Care

CLINICAL PRACTICE GUIDELINES - 2014 Edition

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CLINICAL PRACTICE GUIDELINES - 2014 Edition

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FOREWORD



The role of the Pre-Hospital Emergency Care Council (PHECC) is to protect the public by independently specifying, reviewing, maintaining and monitoring standards of excellence for the delivery of quality pre-hospital emergency care for people in Ireland. The contents of this clinical publication are fundamental to how we achieve this goal.

Clinical Practice Guidelines have been developed for responders and practitioners to aid them in providing world-class pre-hospital emergency care to people in Ireland.

I would like to thank the members of the Medical Advisory Committee, chaired by Dr Mick Molloy for their efforts and expertise in developing these guidelines. The council acknowledge the work of the PHECC Executive in researching and compiling these Guidelines, in particular Mr Brian Power,

Programme Development Officer. I also commend the many responders and practitioners whose ongoing feedback has led to the improvement and creation of many of the Guidelines herein.

The publication of these Guidelines builds on the legacy of previous publications and marks yet another important milestone in the development of care delivered by responders and practitioners throughout Ireland. Despite the difficulties faced by responders and licensed service providers, I am proud that they continue to develop their skills and knowledge to provide safer and more effective patient care.



Mr Tom Mooney, Chair, Pre-Hospital Emergency Care Council

ACCEPTED ABBREVIATIONS

Accepted abbreviations

Advanced Paramedic	AP
Advanced Life Support	ALS
Airway, Breathing & Circulation	ABC
All Terrain Vehicle	ATV
Altered Level of Consciousness	ALoC
Automated External Defibrillator	AED
Bag Valve Mask	BVM
Basic Life Support	BLS
Blood Glucose	BG
Blood Pressure	BP
Basic Tactical Emergency Care	BTEC
Carbon Dioxide	CO ₂
Cardiopulmonary Resuscitation	CPR
Cervical Spine	C-spine
Chronic Obstructive Pulmonary Disease	COPD
Clinical Practice Guideline	CPG
Degree	°
Degrees Centigrade	°C
Dextrose 10% in water	D ₁₀ W
Drop (gutta)	gtt
Electrocardiogram	ECG
Emergency Department	ED
Emergency Medical Technician	EMT
Endotracheal Tube	ETT
Foreign Body Airway Obstruction	FBAO
Fracture	#
General Practitioner	GP
Glasgow Coma Scale	GCS
Gram	g
Milligram	mg
Millilitre	mL

ACCEPTED ABBREVIATIONS

(contd)

Millimole	mmol
Minute	min
Modified Early Warning Score	MEWS
Motor Vehicle Collision	MVC
Myocardial Infarction	MI
Nasopharyngeal airway	NPA
Milliequivalent	mEq
Millimetres of mercury	mmHg
Nebulised	NEB
Negative decadic logarithm of the H ⁺ ion concentration	pH
Orally (per os)	PO
Oropharyngeal airway	OPA
Oxygen	O ₂
Paramedic	P
Peak Expiratory Flow	PEF
Per rectum	PR
Percutaneous Coronary Intervention	PCI
Personal Protective Equipment	PPE
Pulseless Electrical Activity	PEA
Respiration rate	RR
Return of Spontaneous Circulation	ROSC
Revised Trauma Score	RTS
Saturation of arterial oxygen	SpO ₂
ST Elevation Myocardial Infarction	STEMI
Subcutaneous	SC
Sublingual	SL
Systolic Blood Pressure	SBP
Therefore	∴
Total body surface area	TBSA
Ventricular Fibrillation	VF
Ventricular Tachycardia	VT
When necessary (pro re nata)	prn

ACKNOWLEDGEMENTS

The process of developing CPGs has been long and detailed. The quality of the finished product is due to the painstaking work of many people, who through their expertise and review of the literature, ensured a world-class publication.

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SPECIAL THANKS

HSE National Clinical Programme for Acute Coronary Syndrome

HSE National Asthma Programme

HSE National Diabetes Programme

HSE National Clinical Programme for Emergency Medicine

HSE National Clinical Programme for Epilepsy

HSE National Clinical Programme for Paediatrics and Neonatology

A special thanks to all the PHECC team who were involved in this project. In particular Ms Deirdre Borland for her dedication in bringing this project to fruition.

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INTRODUCTION

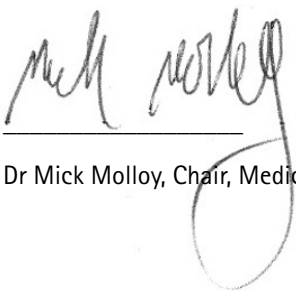


Clinical Practice Guidelines for pre-hospital care are under constant review as practices change, new therapies and medications are introduced, and as more pre-hospital clinical pathways are introduced such as Code STEMI and code stroke which are both leading to significant improved outcomes for patients. A measure of how far the process has developed can be gained from comparing the 29 Standard Operating Procedures for pre-hospital care in existence prior to the inception of the Pre-Hospital Emergency Care Council and the now more than 319 guidelines and growing.

The 2014 guidelines include such new developments as the use of intranasal fentanyl for advanced paramedics and harness induced suspension trauma for both practitioners and responders.

Clinical Practice Guidelines recognise that practitioners and responders provide care to the same patients but to different skill levels and utilising additional pharmaceutical interventions depending on the practitioner level.

This edition of the guidelines has introduced some new concepts such as the basic tactical emergency care standard at EFR and EMT level for appropriately employed individuals. As ever feedback on the guidelines from end users or interested parties is always welcomed and may be directed to the Director of PHECC or the Medical Advisory Committee who review each and every one of the guidelines before they are approved by the Council.



Dr Mick Molloy, Chair, Medical Advisory Committee.

IMPLEMENTATION

Clinical Practice Guidelines (CPGs) and the responder

CPGs are guidelines for best practice and are not intended as a substitute for good clinical judgment. Unusual patient presentations make it impossible to develop a CPG to match every possible clinical situation. The responder decides if a CPG should be applied based on patient assessment and the clinical impression. The responder must work in the best interest of the patient within the scope of practice for his/her clinical level. Consultation with fellow responders and/or practitioners in challenging clinical situations is strongly advised.

The CPGs herein may be implemented provided:

- 1 The responder maintains current certification as outlined in PHECC's Education & Training Standard.
- 2 The responder is authorised, by the organisation on whose behalf he/she is acting, to implement the specific CPG.
- 3 The responder has received training on, and is competent in, the skills and medications specified in the CPG being utilised.

The medication dose specified on the relevant CPG shall be the definitive dose in relation to responder administration of medications. The onus rests on the responder to ensure that he/she is using the latest version of CPGs which are available on the PHECC website www.phecc.ie

Definitions

Adult	A patient of 16 years or greater, unless specified on the CPG.
Child	A patient between 1 and less than or equal to (\leq) 15 years old, unless specified on the CPG
Infant	A patient between 4 weeks and less than 1 year old, unless specified on the CPG
Neonate	A patient less than 4 weeks old, unless specified on the CPG
Paediatric patient	Any child, infant or neonate

Care principles are goals of care that apply to all patients. The PHECC care principles for responders are outlined in Section 1.

Completing an ACR/CFRR for each patient is paramount in the risk management process and users of the CPGs must commit to this process.

Minor injuries

Responders must adhere to their individual organisational protocols for treat and discharge/referral of patients with minor injuries.

IMPLEMENTATION

CPGs and the pre-hospital emergency care team

The aim of pre-hospital emergency care is to provide a comprehensive and coordinated approach to patient care management, thus providing each patient with the most appropriate care in the most efficient time frame.

In Ireland today, the provision of emergency care comes from a range of disciplines and includes Responders (Cardiac First Responders, First Aid Responders and Emergency First Responders) and practitioners (Emergency Medical Technicians, Paramedics, Advanced Paramedics, Nurses and Doctors) from the statutory, private, auxiliary and voluntary services.

CPGs set a consistent standard of clinical practice within the field of pre-hospital emergency care. By reinforcing the role of the responder, in the continuum of patient care, the chain of survival and the golden hour are supported in medical and traumatic emergencies respectively.

CPGs guide the responder in presenting to a practitioner a patient who has been supported in the very early phase of injury/illness and in whom the danger of deterioration has lessened by early appropriate clinical care interventions.

The CPGs presume no intervention has been applied, nor medication administered, prior to the arrival of the responder. In the event of another practitioner or responder initiating care during an acute episode, the responder must be cognisant of interventions applied and medication doses already administered and act accordingly.

In this care continuum, the duty of care is shared among all responders/practitioners of whom each is accountable for his/her own actions. The most qualified responder/practitioner on the scene shall take the role of clinical leader. Explicit handover between responders/practitioners is essential and will eliminate confusion regarding the responsibility for care.

Emergency First Response- Basic Tactical Emergency Care (EFR-BTEC)

EFR-BTEC is a new education and training standard published in 2014. Persons certified at EFR-BTEC learn EFR and the additional knowledge and skill set for providing pre-hospital emergency care in hostile or austere environments. Entry to this course is restricted to people who have the potential to provide emergency first response in hostile or austere environments and who are working or volunteering on behalf of a Licensed CPG Provider with specific approval for BTEC provision.

First Aid Response

First Aid Response (FAR) is a new education and training standard published in 2014. This standard offers training and certification to individuals and groups who require a first aid skill set including cardiac first response. This standard is designed to meet basic first aid and basic life support (BLS) requirements that a certified person, known as a "First Aid Responder", may encounter in their normal daily activities.

Defibrillation Policy

The Medical Advisory Committee has recommended the following pre-hospital defibrillation policy;

- Advanced Paramedics should use manual defibrillation for all age groups.
- Paramedics may consider use of manual defibrillation for all age groups.
- EMTs and responders shall use AED mode for all age groups.

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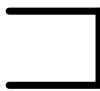




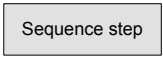

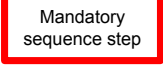

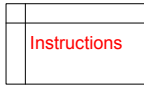


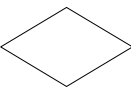
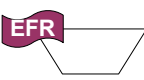
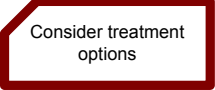


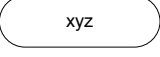
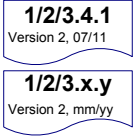
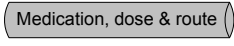
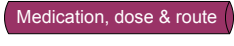


EMERGENCY FIRST RESPONDER – BTEC CPGs

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CLINICAL PRACTICE

GUIDELINES for EMERGENCY FIRST RESPONDER – BTEC

(CODES EXPLANATION)

	Cardiac First Responder (Level 1) for which the CPG pertains		A parallel process Which may be carried out in parallel with other sequence steps
	First Aid Responder (Level 2) for which the CPG pertains		A cyclical process in which a number of sequence steps are completed
	Emergency First Responder (Level 3) for which the CPG pertains		An EFR who has completed Basic Tactical Emergency Care training and has been privileged to operate in adverse conditions
	A sequence (skill) to be performed		First Aid Responder or lower clinical levels not permitted this route
	A mandatory sequence (skill) to be performed		
	Ring ambulance control		An instruction box for information
	Request an AED from local area		Special instructions Which the Responder must follow
	A decision process The Responder must follow one route		A skill or sequence that only pertains to EFR or higher clinical levels
	Given the clinical presentation consider the treatment option specified		Special authorisation This authorises the Responder to perform an intervention under specified conditions
	Reassess the patient following intervention		Finding following clinical assessment, leading to treatment modalities
	CPG numbering system 1/2/3 = clinical levels to which the CPG pertains x = section in CPG manual, y = CPG number in sequence mm/yy = month/year CPG published		
	A medication which may be administered by a CFR or higher clinical level The medication name, dose and route is specified		
	A medication which may be administered by an EFR or higher clinical level The medication name, dose and route is specified		
	A direction to go to a specific CPG following a decision process Note: only go to the CPGs that pertain to your clinical level		
	A clinical condition that may precipitate entry into the specific CPG		

SECTION 1

CARE PRINCIPLES

Care principles and responders

Care principles are goals of care that apply to all patients. Scene safety, standard precautions, patient assessment, primary and secondary surveys and the recording of interventions and medications on the Ambulatory Care Report (ACR) or the Cardiac First Response Report (CFRR) are consistent principles throughout the guidelines and reflect the practice of responders. Care principles are the foundations for risk management and the avoidance of error.

PHECC Care Principles

1 Ensure the safety of yourself, other emergency service personnel, your patients and the public:

- Review all pre-arrival information.
- Consider all environmental factors and approach a scene only when it is safe to do so.
- Identify potential and actual hazards and take the necessary precautions.
- Liaise with other emergency services on scene.
- Request assistance as required in a timely fashion, particularly for higher clinical levels.
- Ensure the scene is as safe as is practicable.
- Take standard infection control precautions.

2 Call for help early:

- Ring 999/112 using the RED card process, or
- Obtain practitioner help on scene through pre-determined processes.

3 Seek consent prior to initiating care:

- Patients have the right to determine what happens to them and their bodies.
- For patients presenting as P or U on the AVPU scale implied consent applies.
- Patients may refuse assessment, care and/or transport.

4 Identify and manage life-threatening conditions:

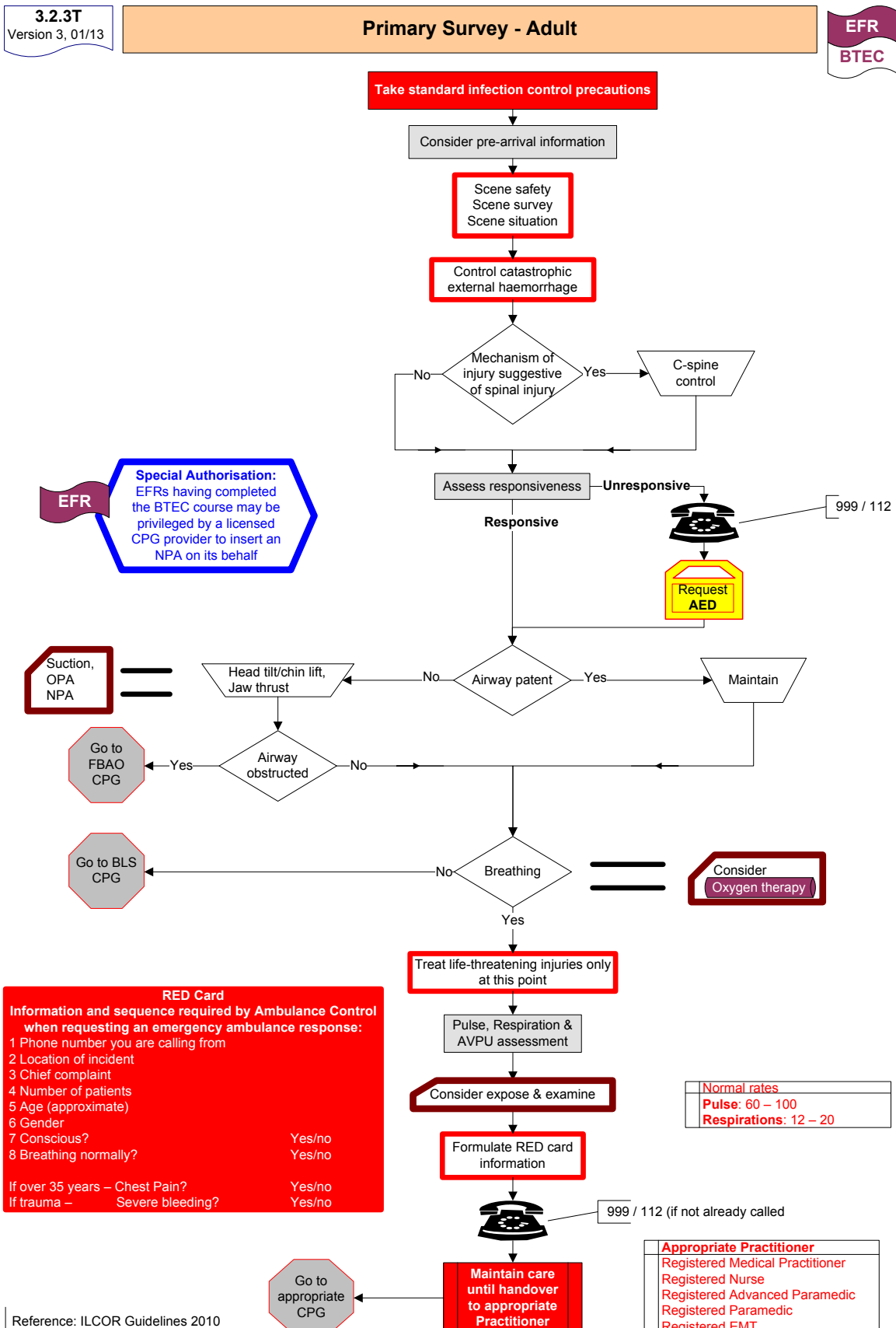
- Locate all patients. If the number of patients is greater than resources, ensure additional resources are sought.
- Assess the patient's condition appropriately.
- Prioritise and manage the most life-threatening conditions first.
- Provide a situation report to Ambulance Control Centre (112/999) using the RED card process as soon as possible after arrival on the scene.

SECTION 1 CARE PRINCIPLES

- 5 Ensure adequate Airway, Breathing and Circulation:
 - Ensure airway is open.
 - Commence CPR if breathing is not present.
 - If the patient has abnormal work of breathing ensure 999/112 is called early.
- 6 Control all external haemorrhage.
- 7 Identify and manage other conditions.
- 8 Place the patient in the appropriate posture according to the presenting condition.
- 9 Ensure the maintenance of normal body temperature (unless a CPG indicates otherwise).
- 10 Provide reassurance at all times.
- 11 Monitor and record patient's vital observations.
- 12 Maintain responsibility for patient care until handover to an appropriate responder/practitioner.
- 13 Complete patient care records following an interaction with a patient.
- 14 Identify the clinical leader on scene.

SECTION 2

PATIENT ASSESSMENT



SECTION 2

PATIENT ASSESSMENT

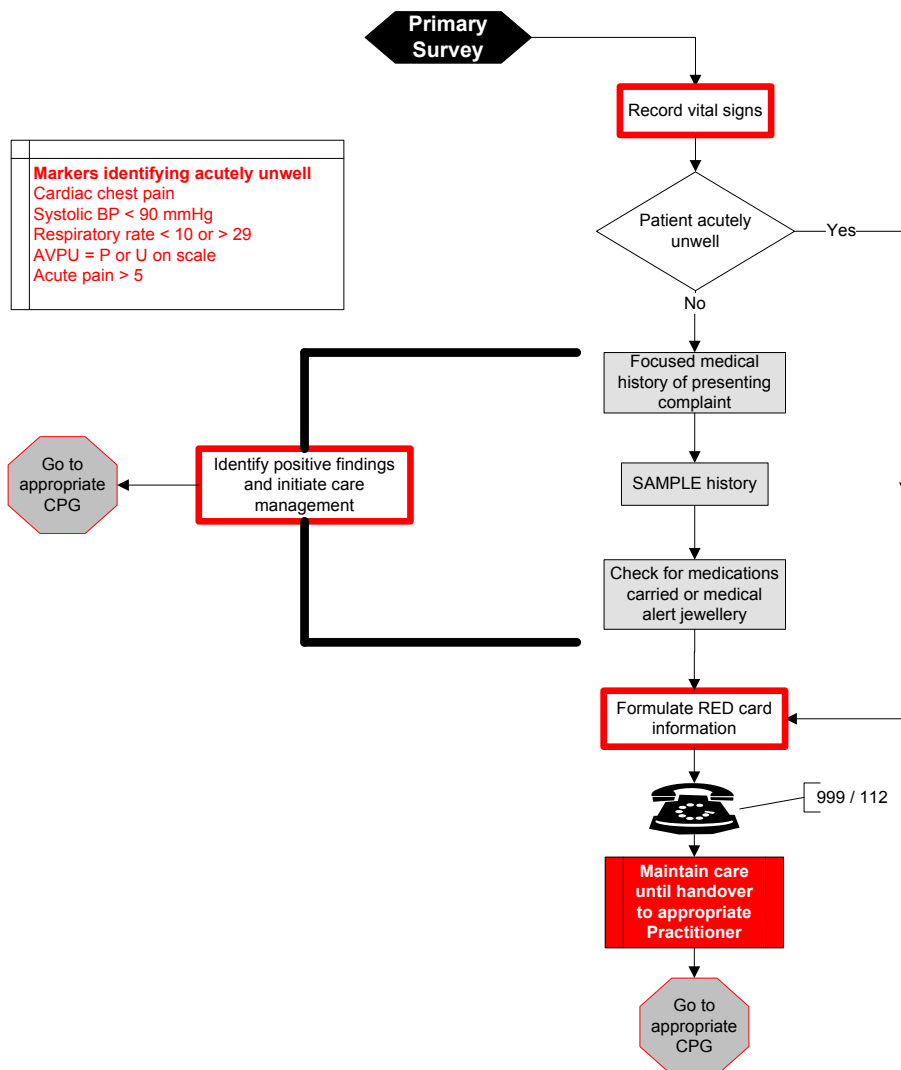
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Secondary Survey Medical – Adult

FAR

EFR

OFA



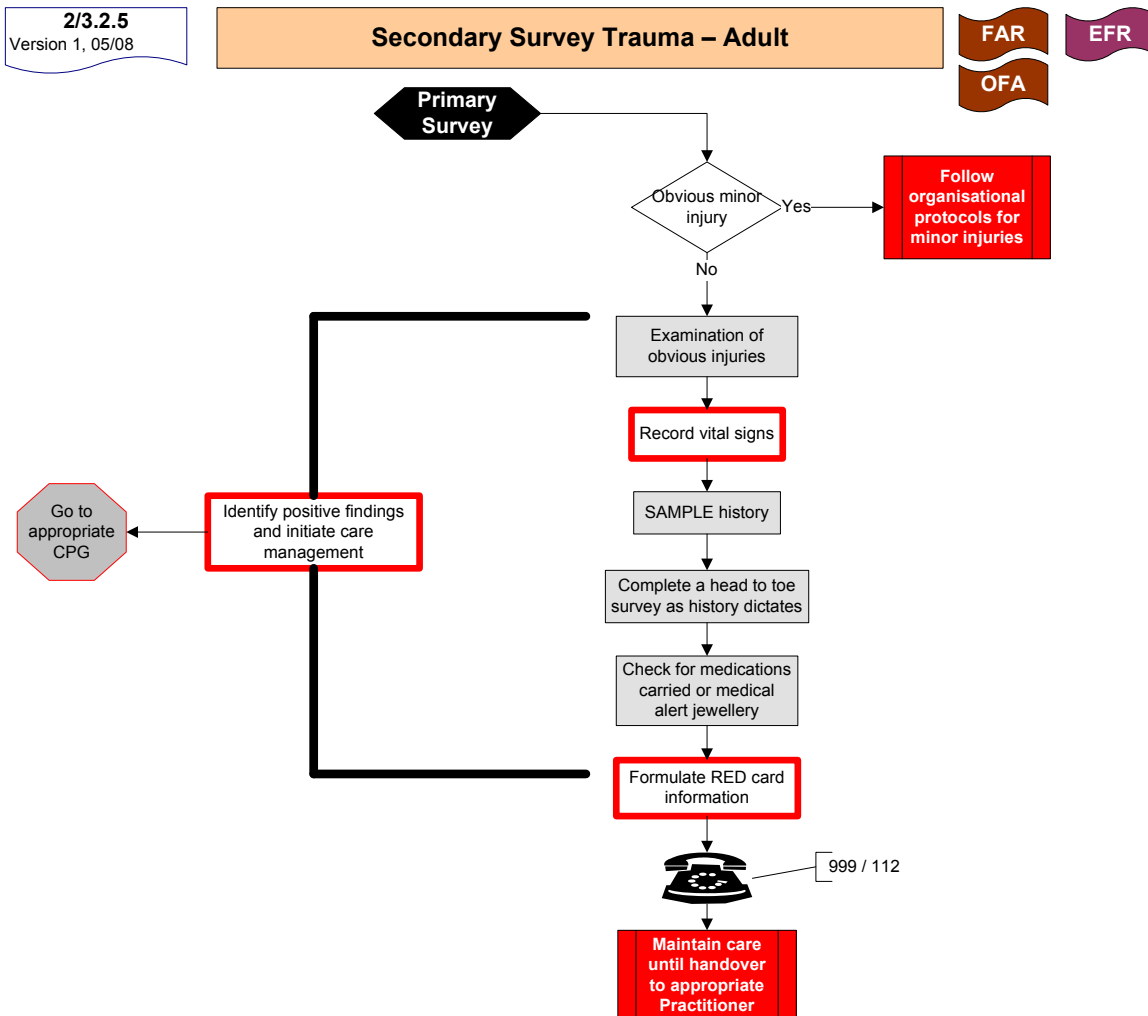
RED Card	
Information and sequence required by Ambulance Control when requesting an emergency ambulance response:	
1 Phone number you are calling from	
2 Location of incident	
3 Chief complaint	
4 Number of patients	
5 Age (approximate)	
6 Gender	
7 Conscious?	Yes/no
8 Breathing normally?	Yes/no
If over 35 years – Chest Pain?	Yes/no
If trauma – Severe bleeding?	Yes/no

Analogue Pain Scale	
0 = no pain.....10 = unbearable	

Appropriate Practitioner	
Registered Medical Practitioner	
Registered Nurse	
Registered Advanced Paramedic	
Registered Paramedic	
Registered EMT	

SECTION 2

PATIENT ASSESSMENT



RED Card	
Information and sequence required by Ambulance Control when requesting an emergency ambulance response:	
1 Phone number you are calling from	
2 Location of incident	
3 Chief complaint	
4 Number of patients	
5 Age (approximate)	
6 Gender	
7 Conscious?	Yes/no
8 Breathing normally?	Yes/no
If over 35 years – Chest Pain?	Yes/no
If trauma – Severe bleeding?	Yes/no

Appropriate Practitioner
Registered Medical Practitioner
Registered Nurse
Registered Advanced Paramedic
Registered Paramedic
Registered EMT

Reference: Bergeron, D, et al, 2001, First Responder 6th Edition, Brady
Mohun J, 2003, First Aid Manual 8th Edition, Irish Red Cross & Order of Malta Ambulance Corps

SECTION 3

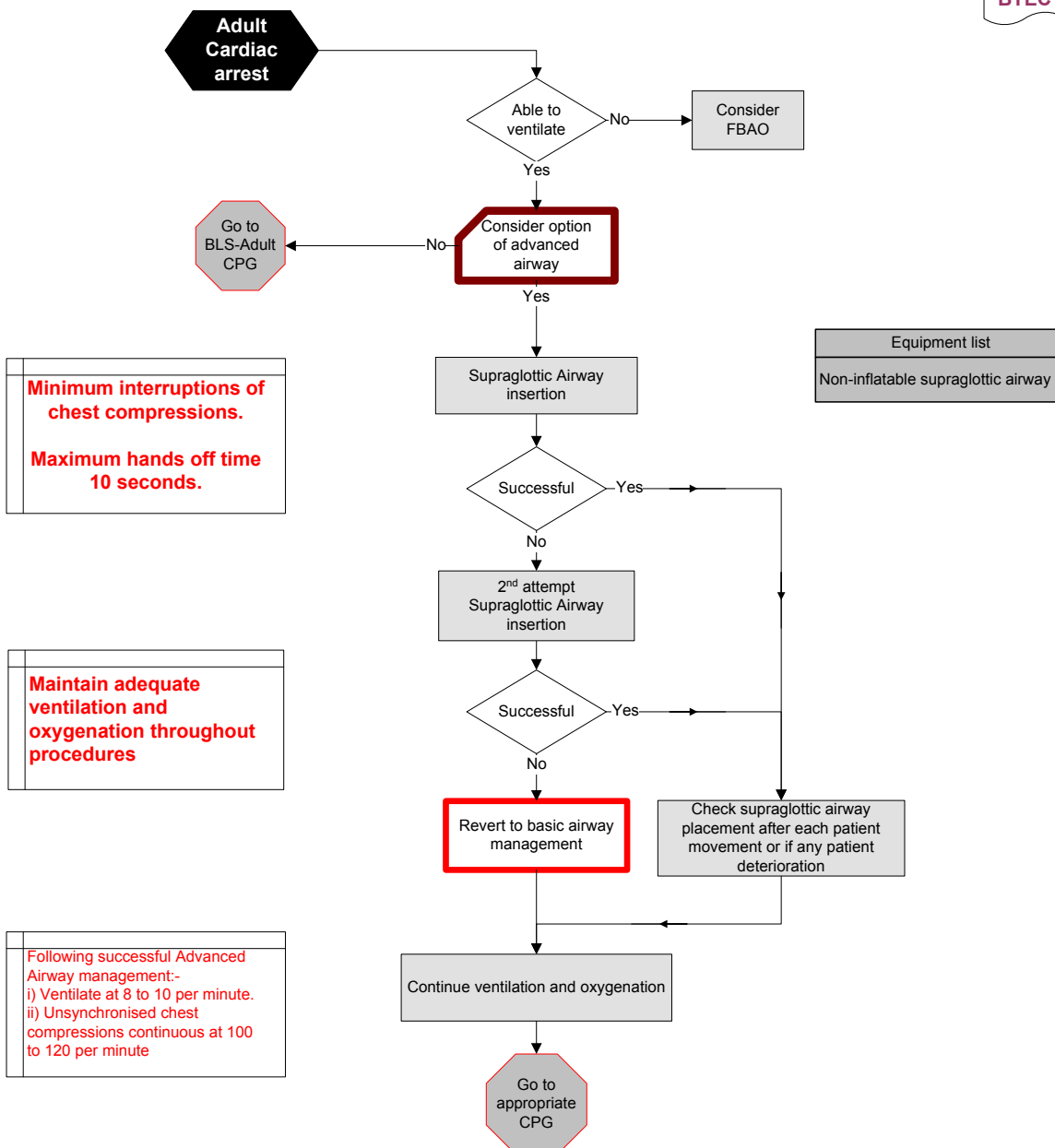
RESPIRATORY EMERGENCIES

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Advanced Airway Management – Adult

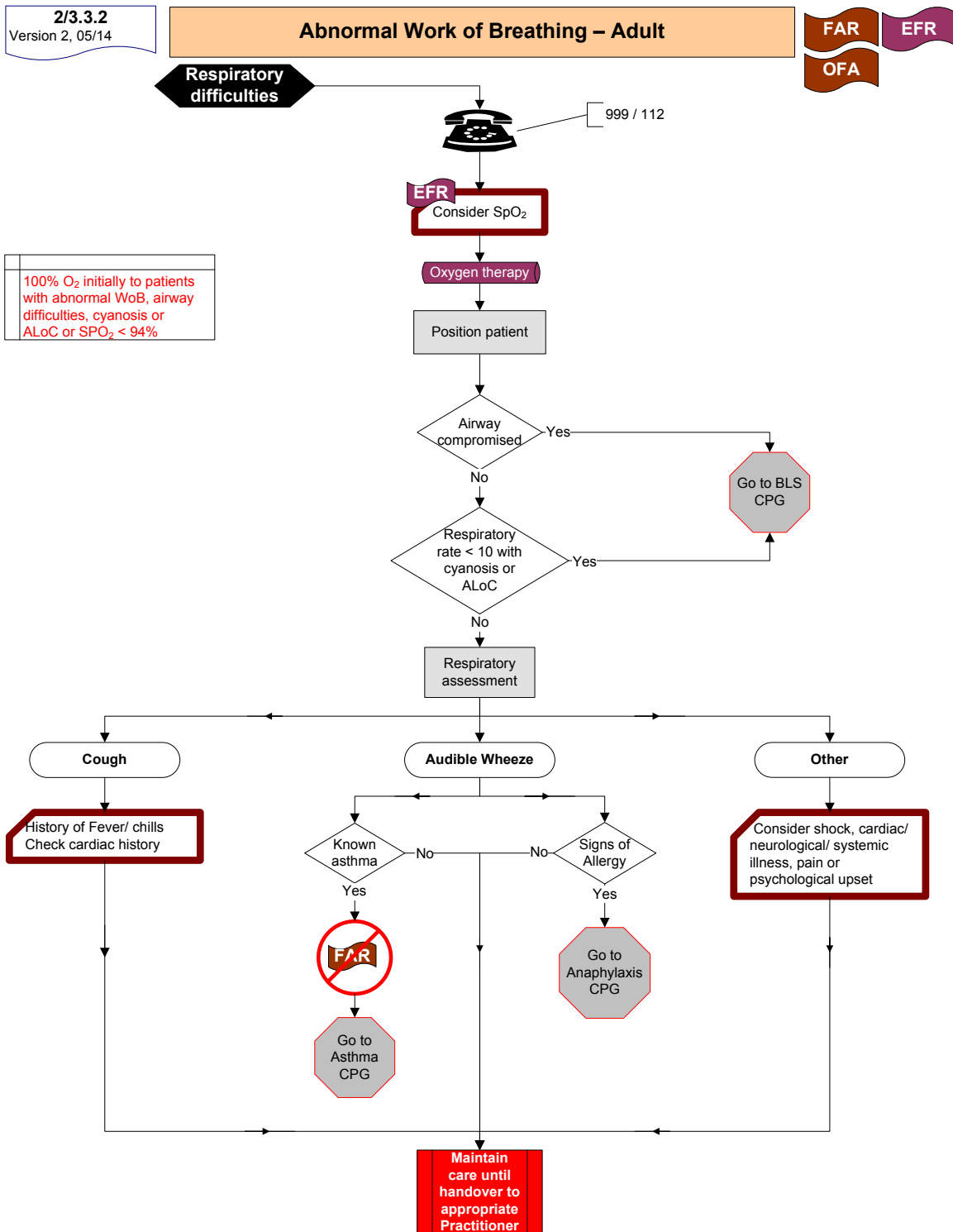
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SECTION 3

RESPIRATORY EMERGENCIES



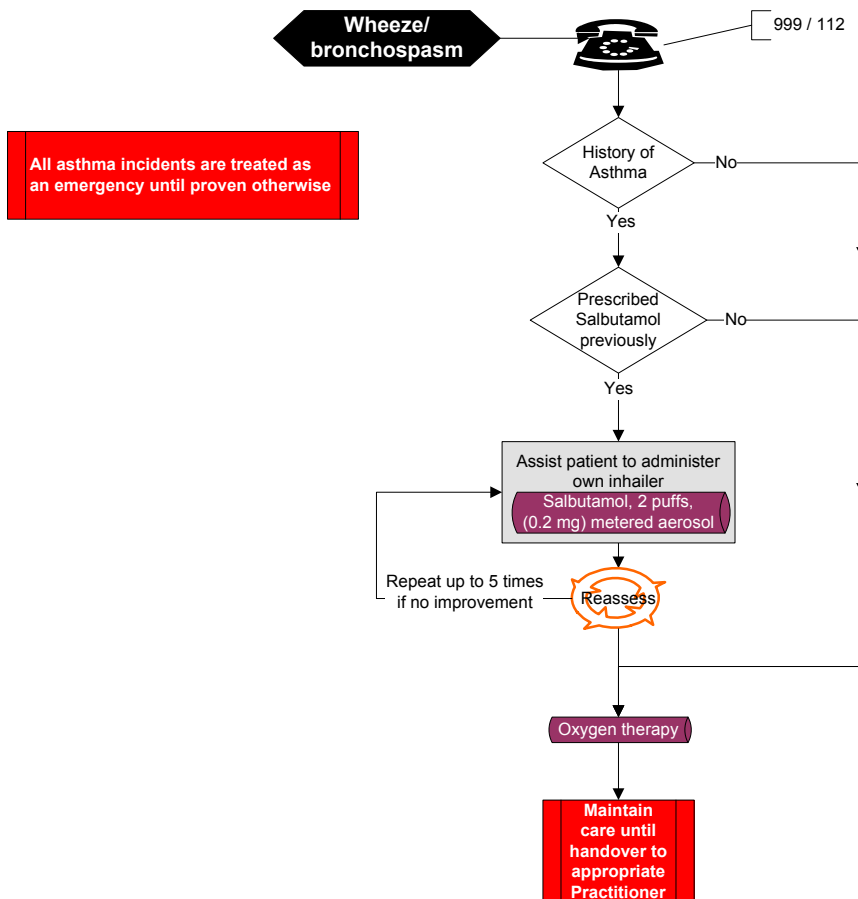
SECTION 3

RESPIRATORY EMERGENCIES

3.3.4
Version 1, 11/13

Asthma – Adult

EFR



Reference: HSE National Asthma Programme 2012, Emergency Asthma Guidelines, British Thoracic Society, 2008, British Guidelines on the Management of Asthma, a national clinical guideline

SECTION 4

MEDICAL EMERGENCIES

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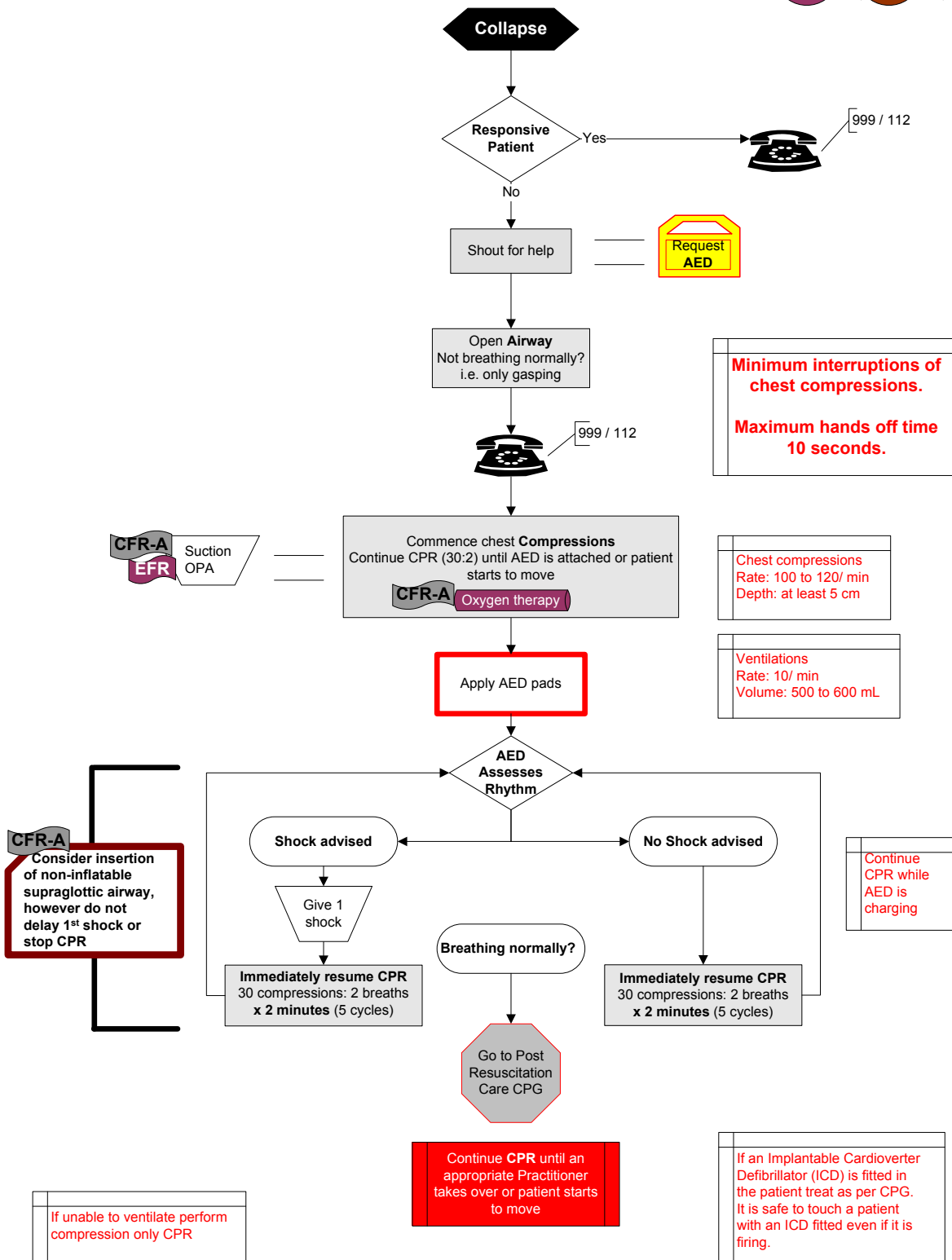
Basic Life Support – Adult

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EFR

OFA



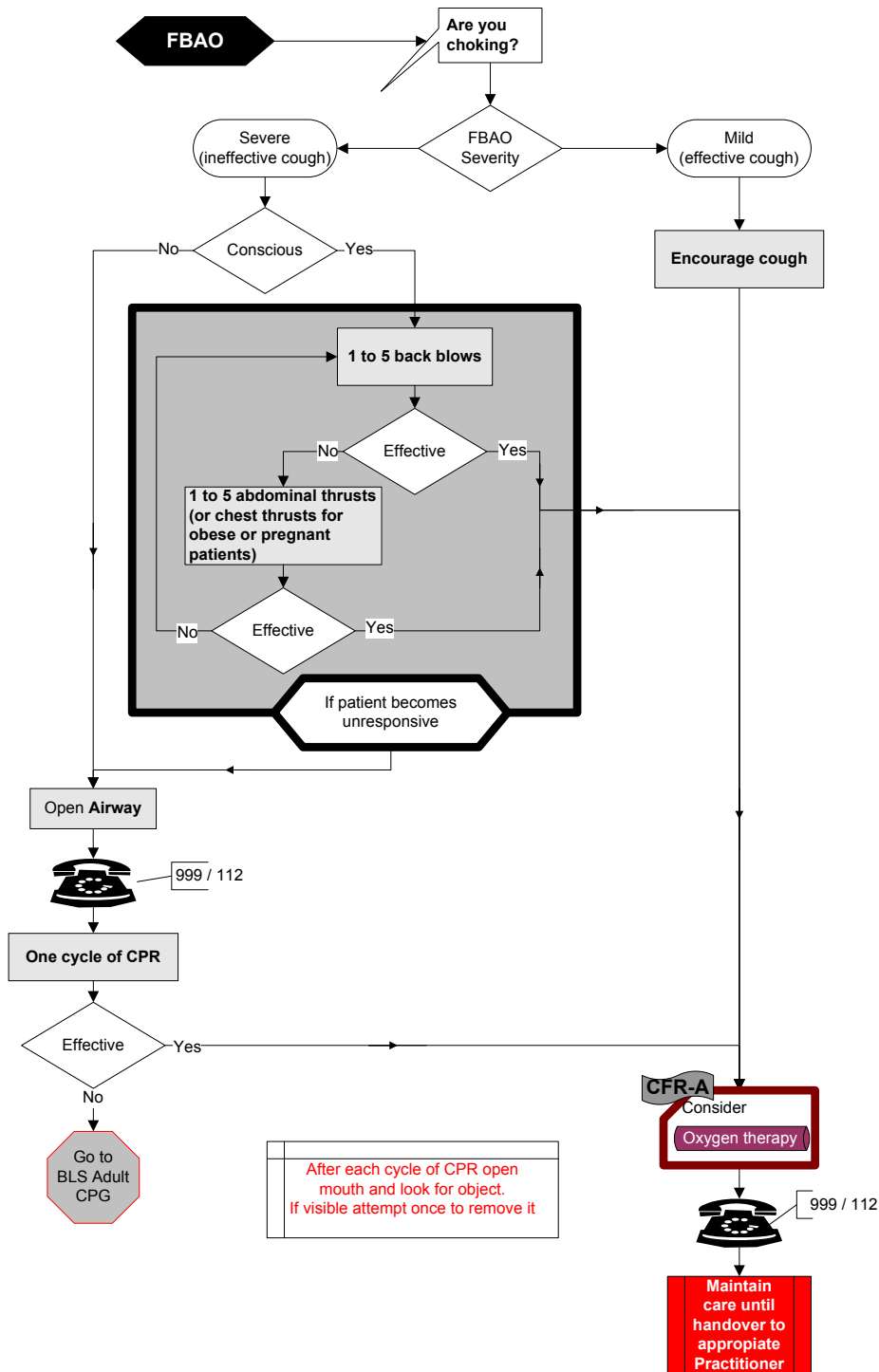
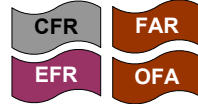
Reference: ILCOR Guidelines 2010

SECTION 4

MEDICAL EMERGENCIES

1/2/3.4.2
Version 3, 03/11

Foreign Body Airway Obstruction – Adult

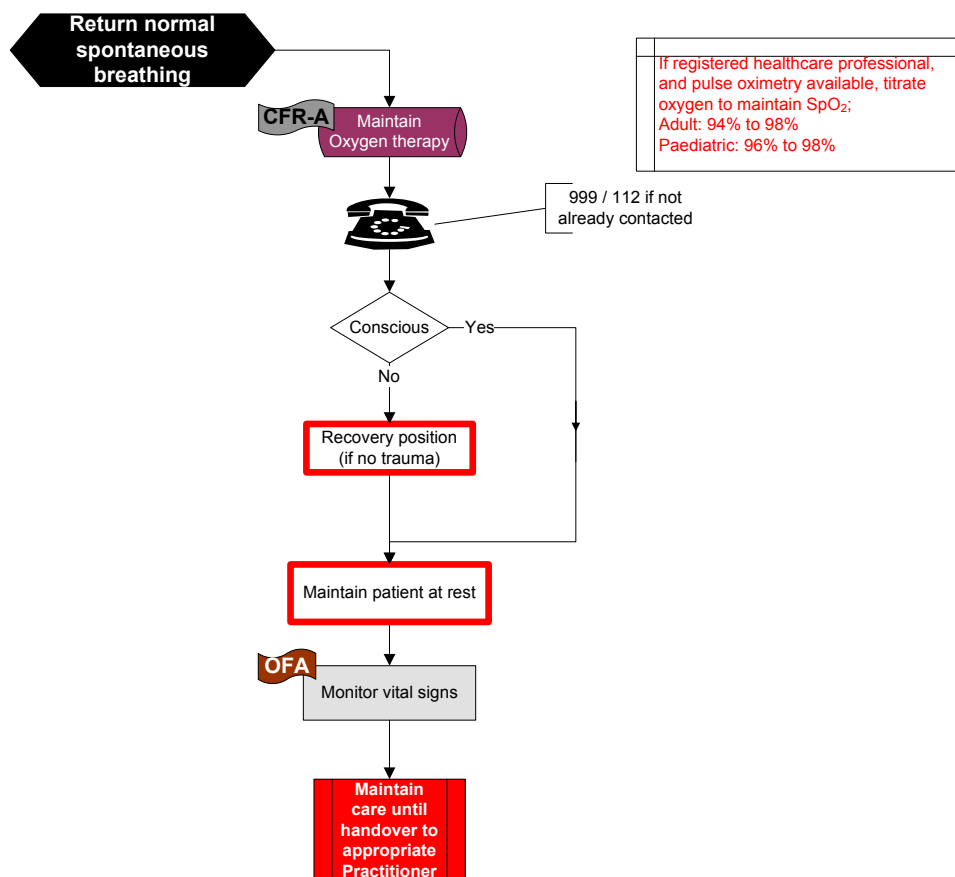
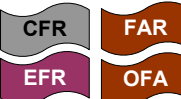


SECTION 4

MEDICAL EMERGENCIES

1/2/3.4.7
Version 3, 03/11

Post-Resuscitation Care



Special Authorisation:
CFR-As, linked to EMS, may be authorised to actively cool unresponsive patients following return of spontaneous circulation (ROSC)

For active cooling place cold packs in arm pits, groin & abdomen

SECTION 4

MEDICAL EMERGENCIES

1/2/3.4.9
Version 2, 05/08

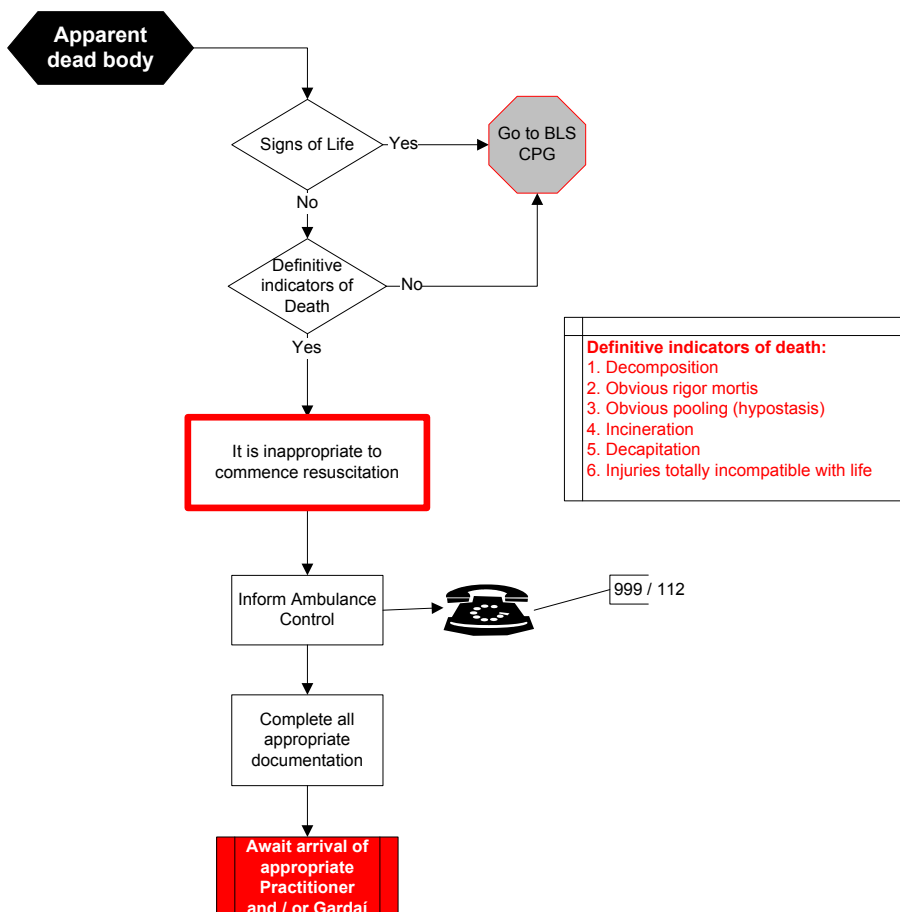
Recognition of Death – Resuscitation not Indicated

CFR

FAR

EFR

OFA

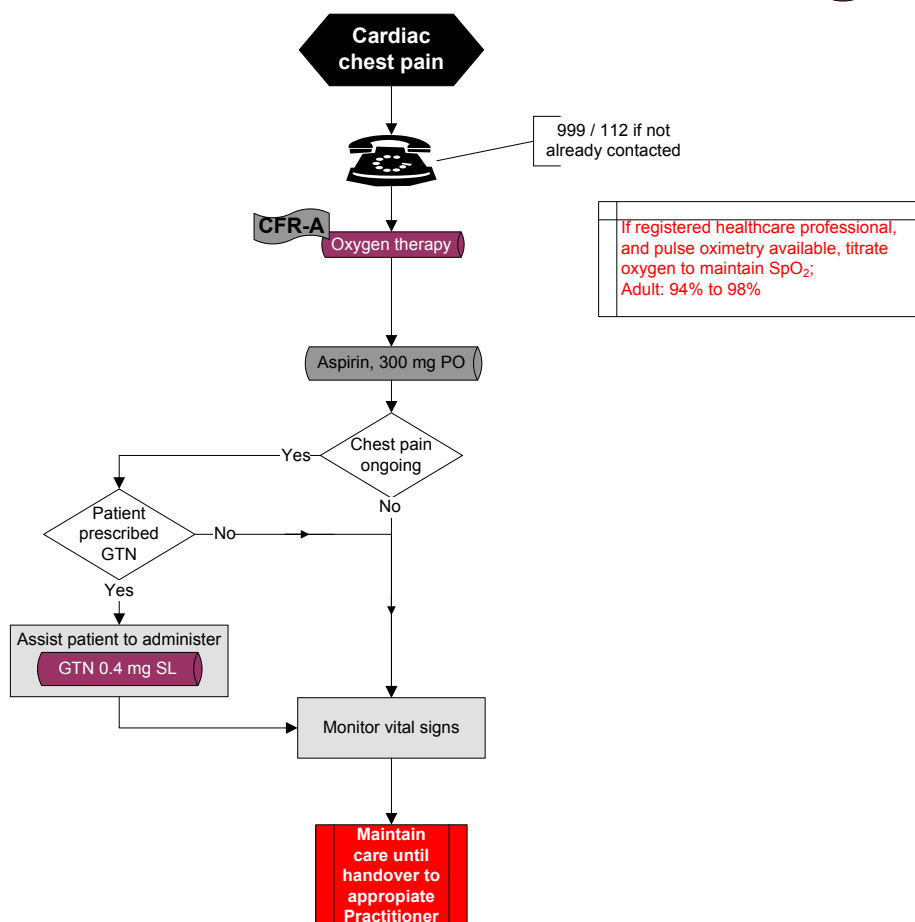
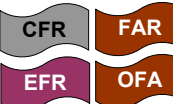


SECTION 4

MEDICAL EMERGENCIES

1/2/3.4.10
Version 2, 03/11

Cardiac Chest Pain – Acute Coronary Syndrome



SECTION 4

MEDICAL EMERGENCIES

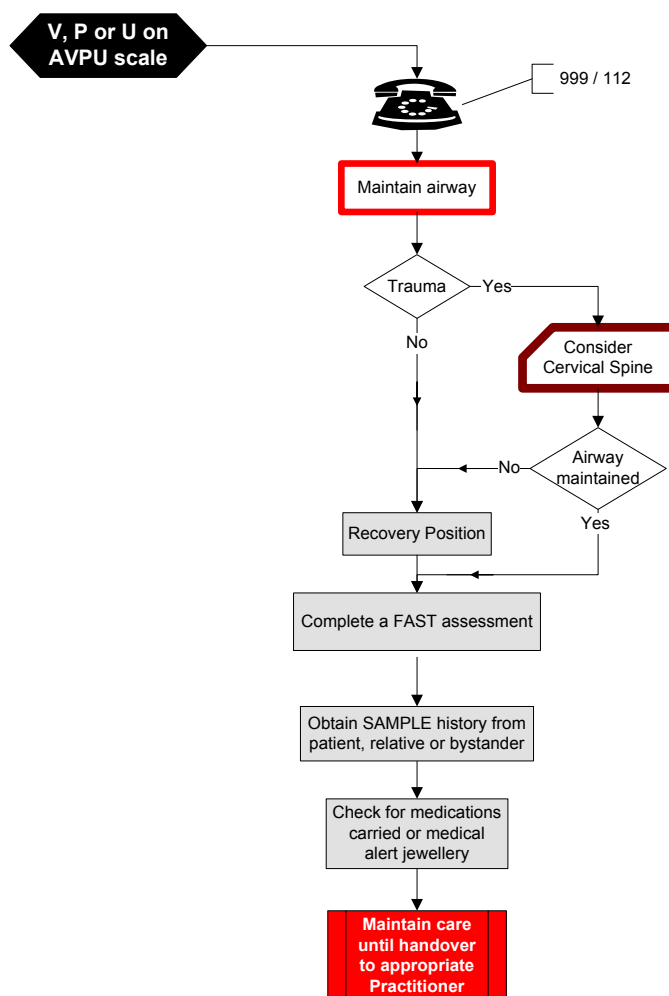
2/3.4.14
Version 1, 05/08

Altered Level of Consciousness – Adult

FAR

EFR

OFA



F – facial weakness
Can the patient smile?, Has their mouth or eye drooped?

A – arm weakness
Can the patient raise both arms?

S – speech problems
Can the patient speak clearly and understand what you say?

T – time to call 999 / 112 (if positive FAST)

SECTION 4

MEDICAL EMERGENCIES

2/3.4.15
Version 1, 12/11

Anaphylaxis – Adult

FAR

EFR

OFA

Patient's name	
Responder's name	
Doctor's name	

Anaphylaxis

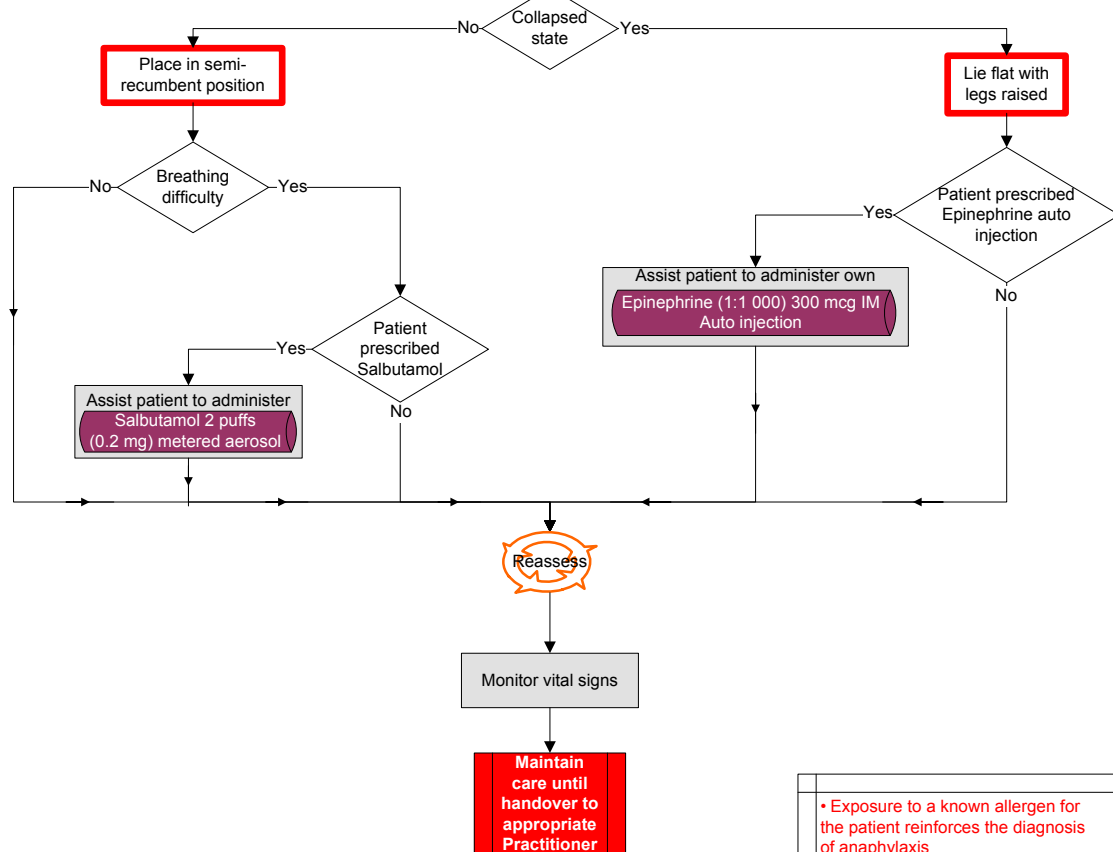


999/ 112

Oxygen therapy

Anaphylaxis is a life-threatening condition identified by the following criteria:

- Sudden onset and rapid progression of symptoms
- Difficulty breathing
- Diminished consciousness
- Red, blotchy skin



• Exposure to a known allergen for the patient reinforces the diagnosis of anaphylaxis
Be aware that:

- Skin or mouth/ tongue changes alone are not a sign of an anaphylactic reaction
- There may also be vomiting, abdominal pain or incontinence

Special Authorisation:
Responders who have received training and are authorised by a Medical Practitioner for a named patient may administer Salbutamol via an aerosol measured dose.

Special Authorisation:
Responders who have received training and are authorised by a Medical Practitioner for a named patient may administer Epinephrine via an auto injector.

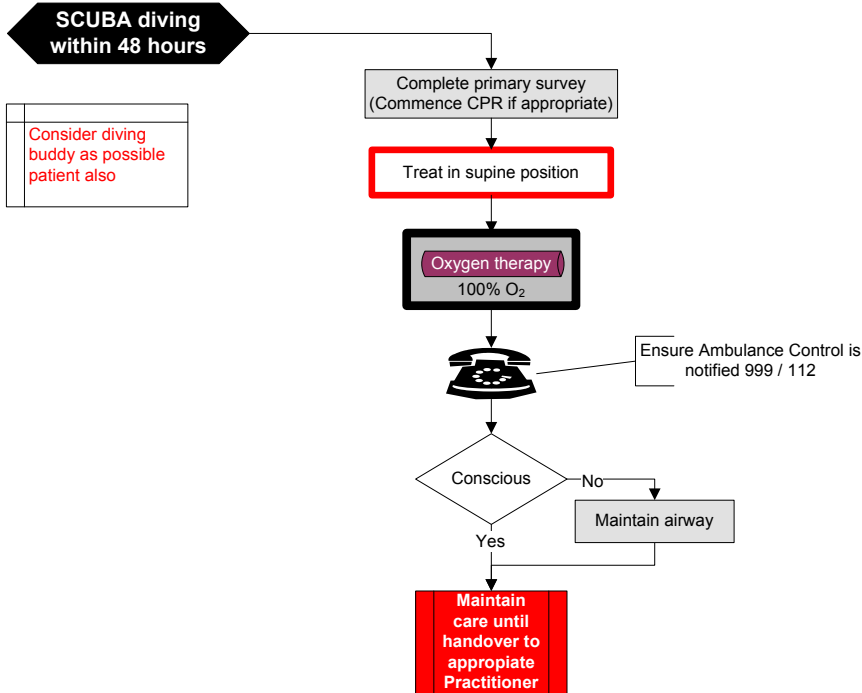
SECTION 4

MEDICAL EMERGENCIES

3.4.16
Version 1, 05/08

Decompression Illness (DCI)

EFR



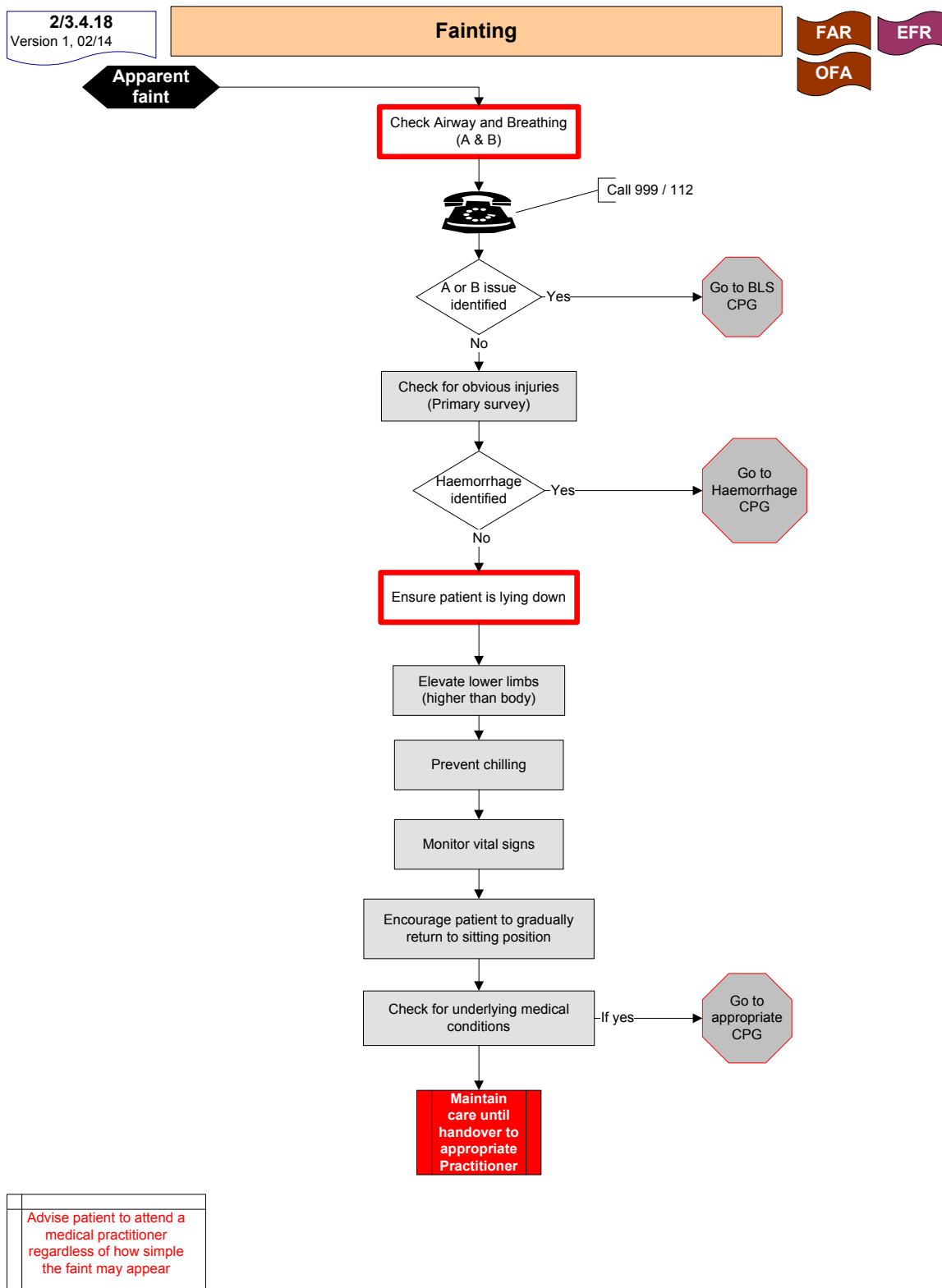
Consider diving
buddy as possible
patient also

Transport dive computer
and diving equipment
with patient, if possible

Transport is completed at
an altitude of < 300 metres
above incident site or
aircraft pressurised
equivalent to sea level

SECTION 4

MEDICAL EMERGENCIES



SECTION 4

MEDICAL EMERGENCIES

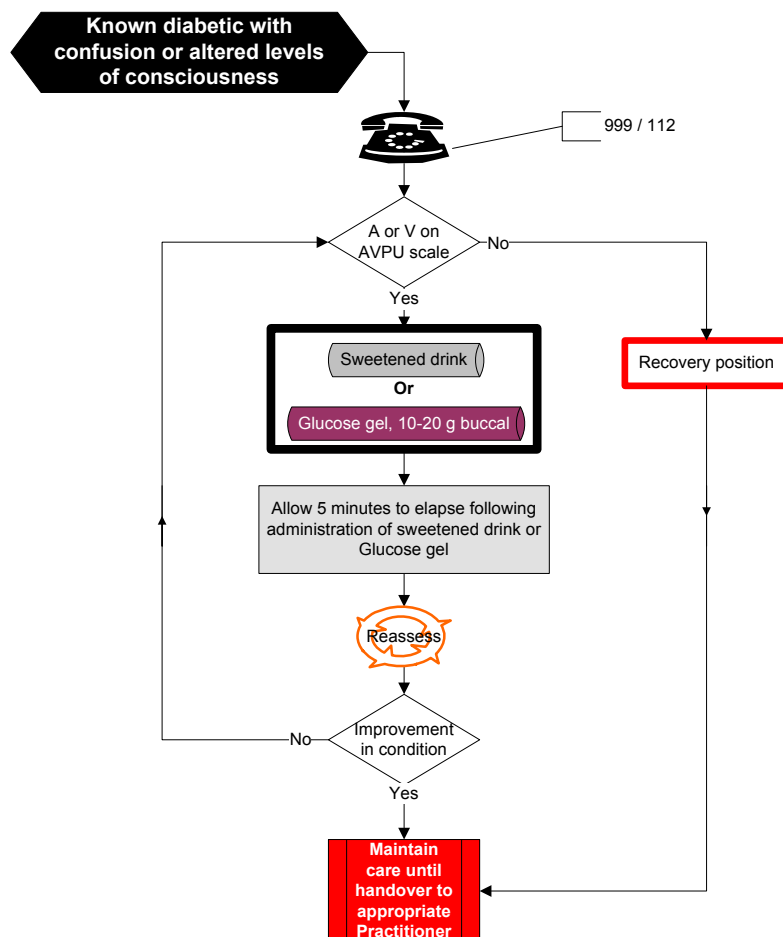
2/3.4.19
Version 1, 05/08

Glycaemic Emergency – Adult

FAR

EFR

OFA



SECTION 4

MEDICAL EMERGENCIES

2/3.4.20
Version 1, 02/12

Heat-Related Illnesses

FAR

EFR

OFA

Collapse from heat-related condition

Remove/ protect from hot environment
(providing it is safe to do so)

999 / 112

Conscious

Yes

No

Give cool fluids to drink

Recovery position
(maintain airway)

Exercise-related dehydration
should be treated with oral fluids.
(caution with over hydration with
water)

Cool patient

Monitor vital signs

Maintain
care until
handover to
appropriate
Practitioner

Cooling may be achieved by:
Removing clothing
Fanning
Tepid sponging

SECTION 4

MEDICAL EMERGENCIES

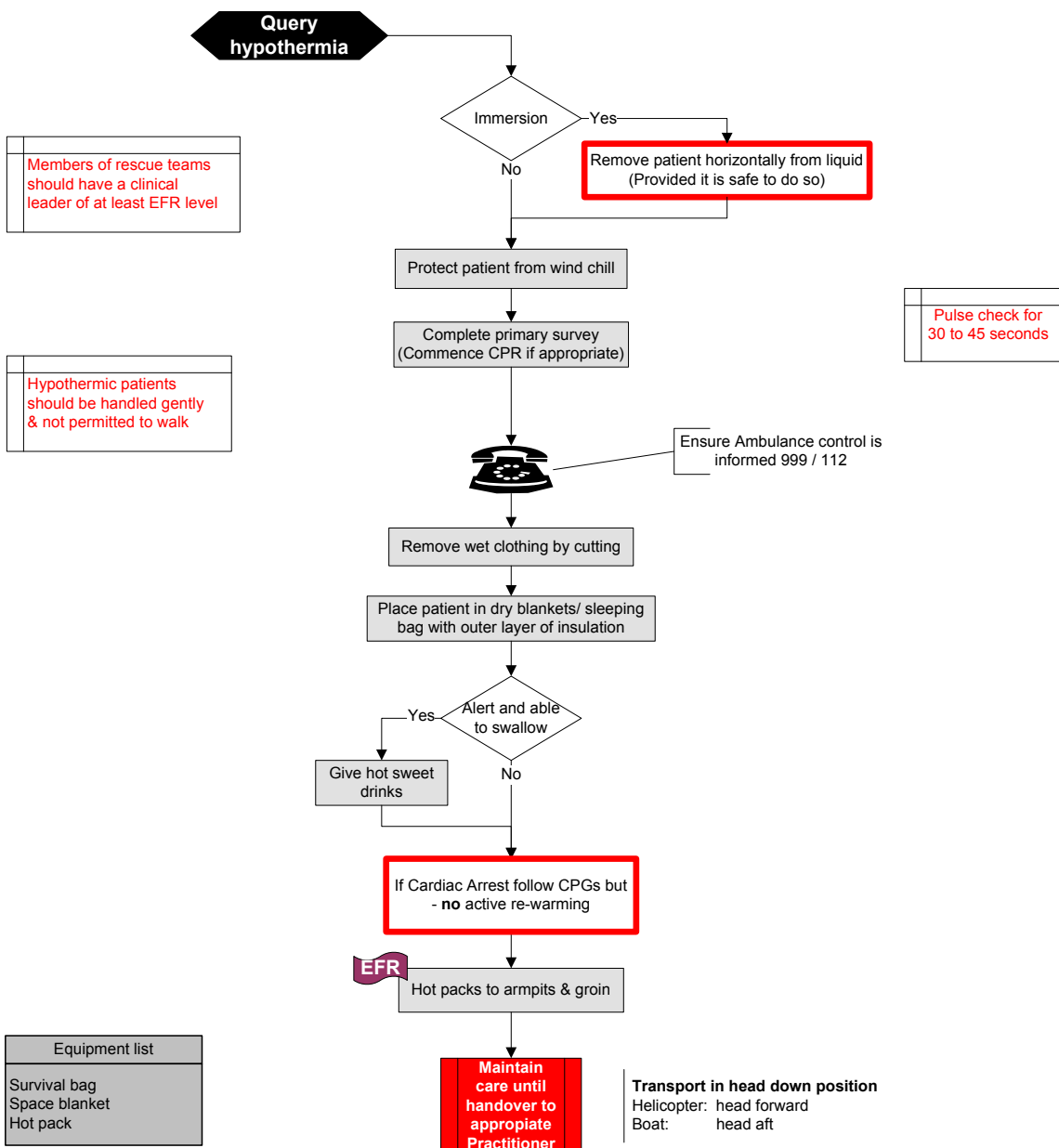
3.4.21
Version 2, 05/14

Hypothermia

FAR

EFR

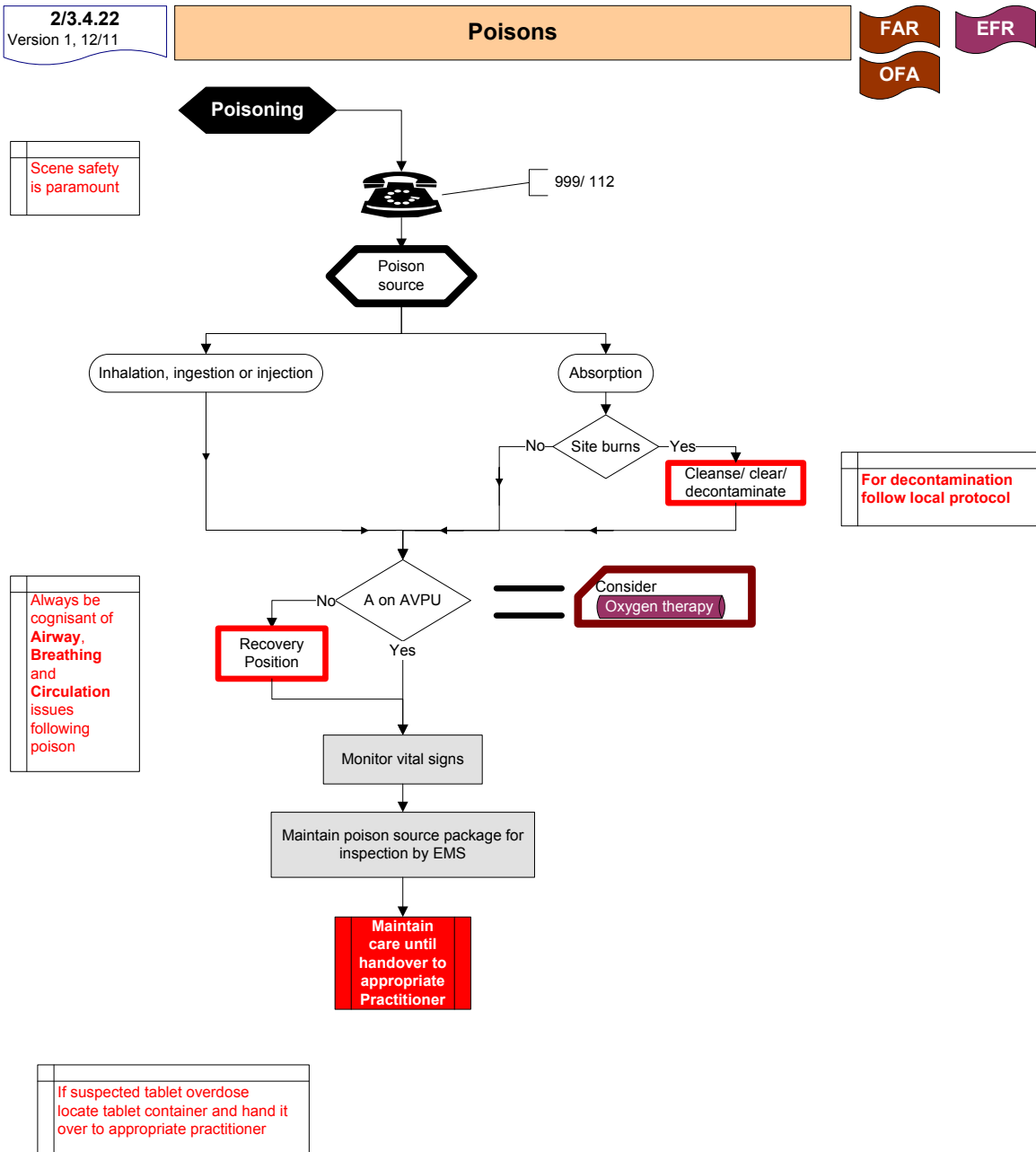
OFA



Reference: Golden, F & Tipton M, 2002, Essentials of Sea Survival, Human Kinetics
 AHA, 2005, Part 10.4: Hypothermia, Circulation 2005:112:136-138
 Soar, J et al, 2005, European Resuscitation Council Guidelines for Resuscitation 2005, Section 7. Cardiac arrest in special circumstances, Resuscitation (2005) 6751, S135-S170
 Pennington M, et al, 1994, Wilderness EMT, Wilderness EMS Institute

SECTION 4

MEDICAL EMERGENCIES



SECTION 4

MEDICAL EMERGENCIES

2/3.4.23
Version 2, 07/11

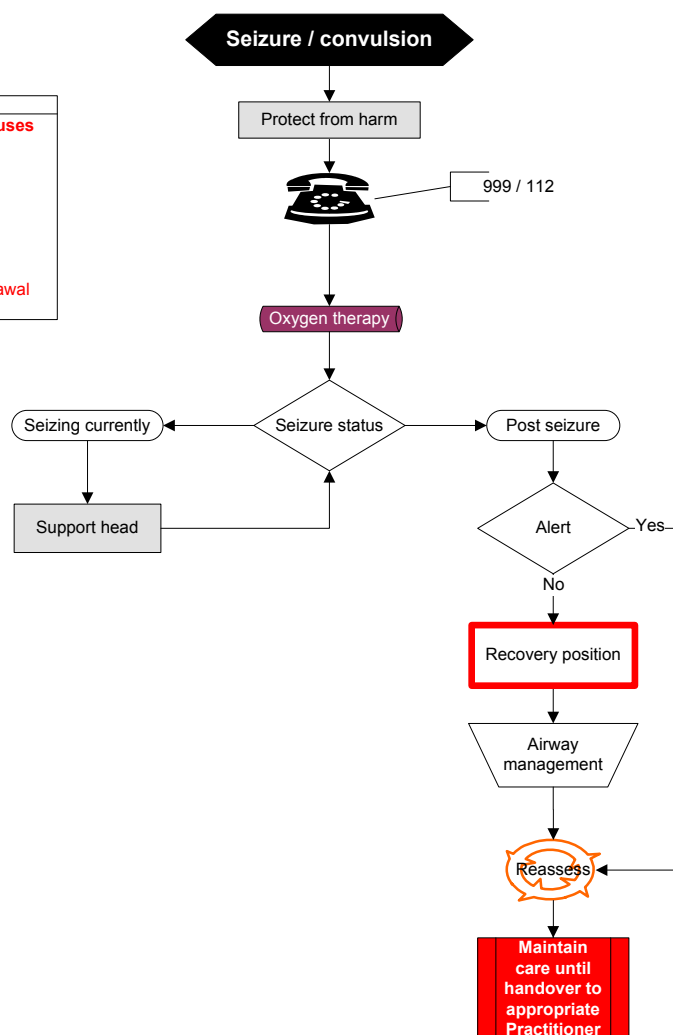
Seizure/Convulsion – Adult

FAR

EFR

OFA

Consider other causes of seizures
Meningitis
Head injury
Hypoglycaemia
Eclampsia
Fever
Poisons
Alcohol/drug withdrawal



SECTION 4

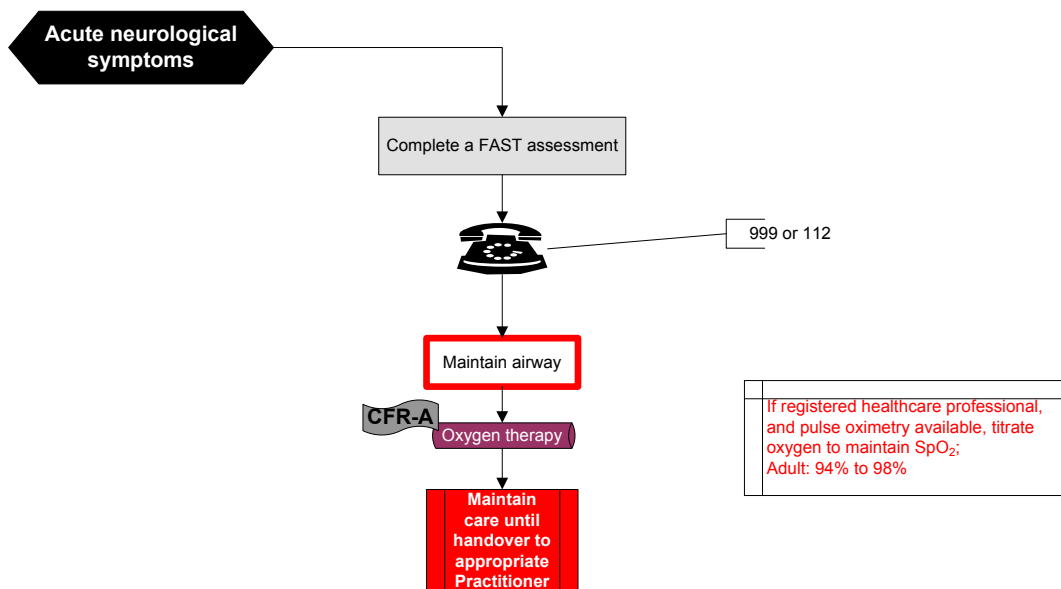
MEDICAL EMERGENCIES

1/2/3.4.28
Version 2, 03/11

Stroke

CFR
EFR

FAR
OFA



F – facial weakness
Can the patient smile?, Has their mouth or eye drooped? Which side?

A – arm weakness
Can the patient raise both arms and maintain for 5 seconds?

S – speech problems
Can the patient speak clearly and understand what you say?

T – time to call 999 / 112 now if FAST positive

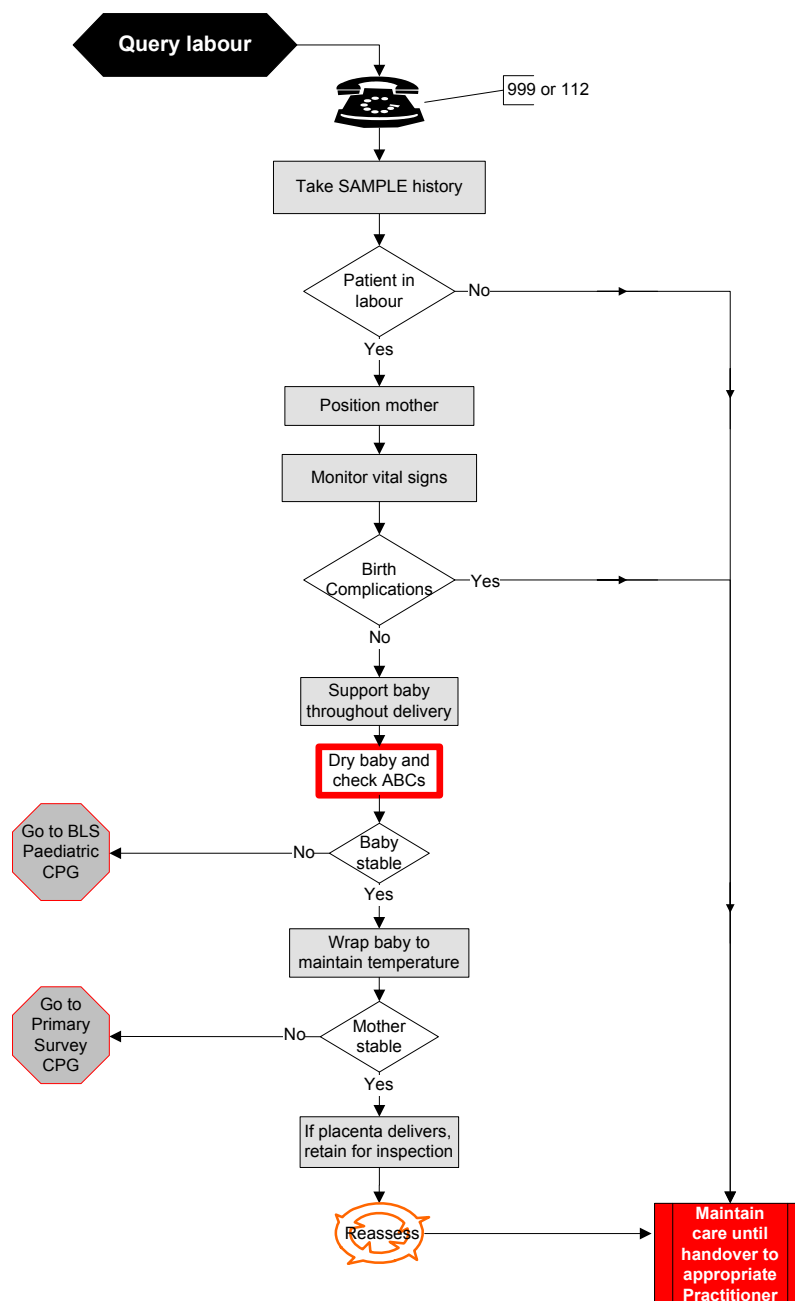
SECTION 5

OBSTETRIC EMERGENCIES

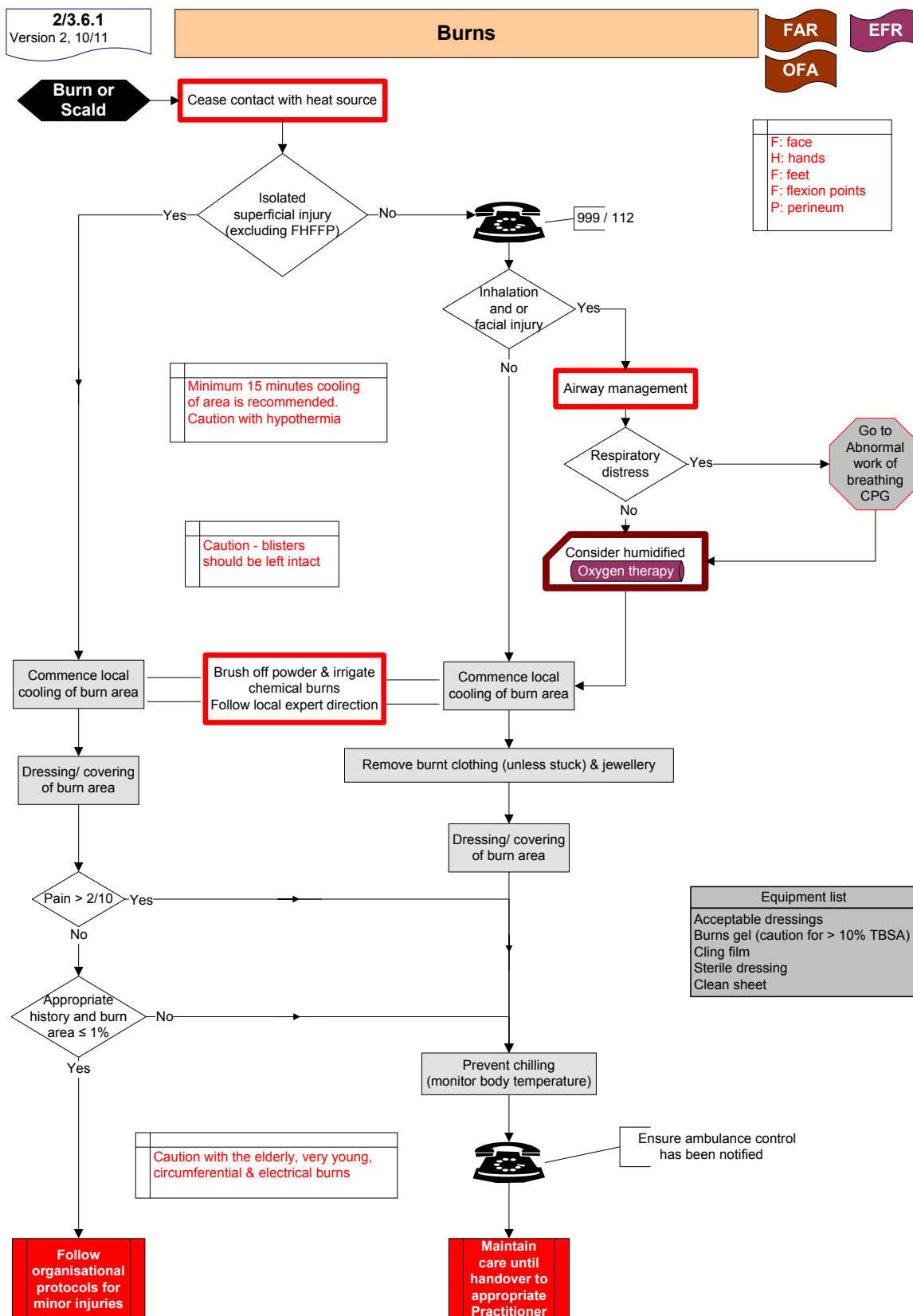
3.5.1
Version 1, 05/08

Pre-Hospital Emergency Childbirth

EFR



SECTION 6 TRAUMA



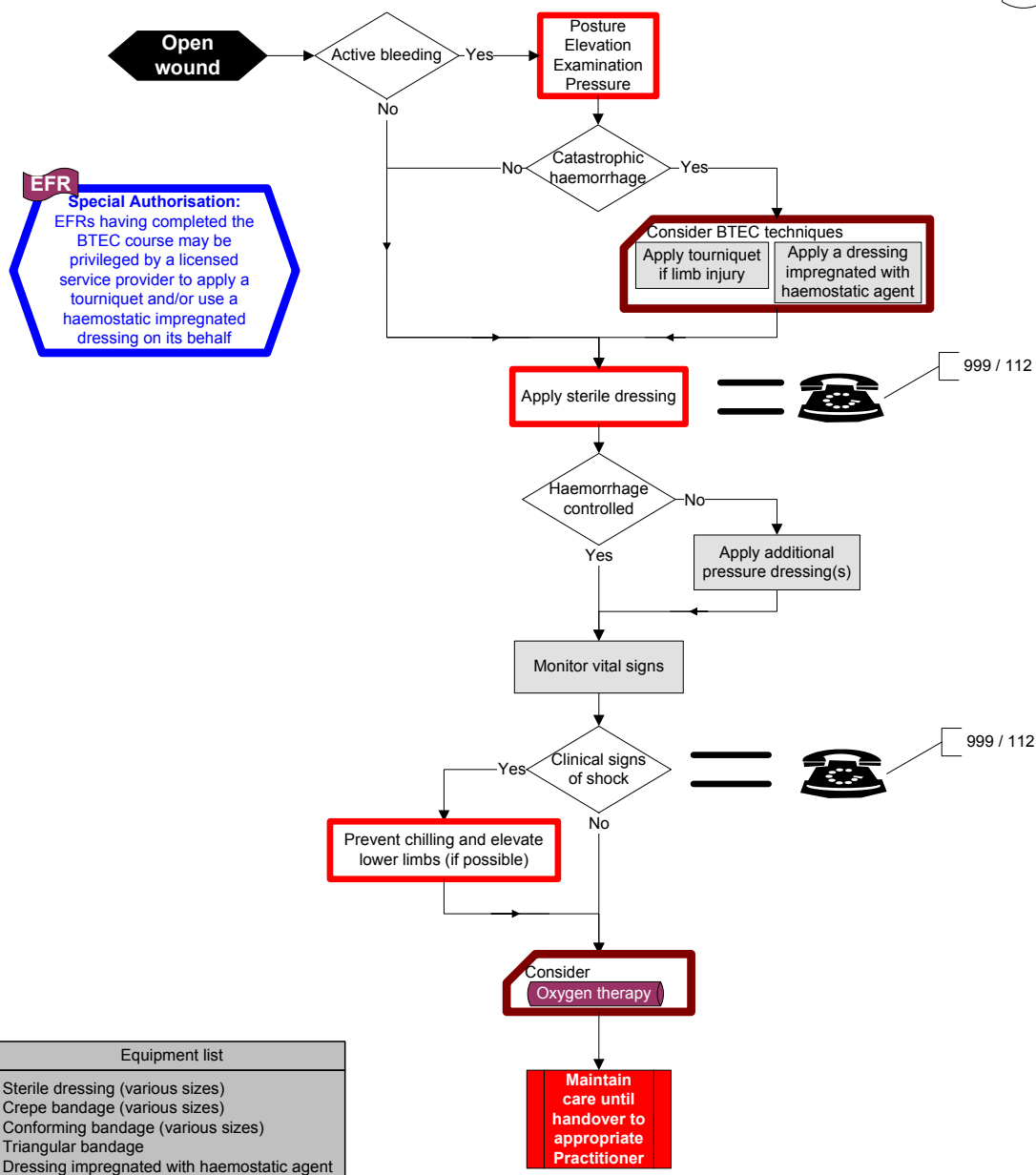
Reference: Allison, K et al, 2004, Consensus on the prehospital approach to burns patient management, Emerg Med J 2004; 21:112-114
Sanders, M, 2001, Paramedic Textbook 2nd Edition, Mosby
ILCOR Guidelines 2010

SECTION 6 TRAUMA

3.6.1T
Version 3, 02/14

External Haemorrhage

EFR
BTEC



Reference:

ILCOR Guidelines 2010,

Granville-Chapman J, et al. Pre-hospital haemostatic dressings: A systematic review. Injury (2010), doi: 10.1016/j.injury.2010.09.037

SECTION 6 TRAUMA

2/3.6.4
Version 2, 05/14

Harness Induced Suspension Trauma

OFA

EFR

**This CPG does not
authorise rescue
by untrained
personnel**

Caution

**Personal
safety of the
Responder
is
paramount**

If circulation is compromised
remove the harness when
the patient is safely lowered
to the ground

**Fall arrested by
harness/rope**



999 / 112

No Patient still
suspended

Yes
Advise patient to move
legs (to encourage
blood flow back to the
heart)

Elevate lower limbs if
possible during rescue

Consider removing a harness
suspended person from
suspension in the direction of
gravity i.e. downwards, so as
to avoid further negative
hydrostatic force, however
this measure should not
otherwise delay rescue.

**Place patient in a horizontal
position as soon as practically
possible**

Monitor vital signs

Oxygen therapy

Go to
appropriate
CPG

**Patients must be
transported to ED
following suspension
trauma regardless of
injury status**

Symptoms of pre-syncope
light-headedness
nausea
sensations of flushing
tingling or numbness of the arms or legs
anxiety
visual disturbance
a feeling of about to faint

Reference:

Adish A et al, 2009, Evidence-based review of the current guidance on first aid measures for suspension trauma, Health and Safety Executive (UK) Research report RR708
Australian Resuscitation Council, 2009, Guideline 9.1.5 Harness Suspension Trauma first aid management.
Thomassen O et al, Does the horizontal position increase risk of rescue death following suspension trauma?, *Emerg Med J* 2009;26:896-898 doi:10.1136/emj.2008.064931

SECTION 6 TRAUMA

2/3.6.6
Version 2, 05/14

Heat-Related Emergency

FAR

EFR

OFA

Collapse from heat-related condition

Remove/ protect from hot environment
(providing it is safe to do so)



999 / 112

Alert
and able to
swallow

Yes

No

Give cool fluids to drink

Recovery position
(maintain airway)

Exercise-related dehydration
should be treated with oral fluids.
(caution with over hydration with
water)

Cool patient

Monitor vital signs

Maintain
care until
handover to
appropriate
Practitioner

Cooling may be achieved by:
Removing clothing
Fanning
Tepid sponging

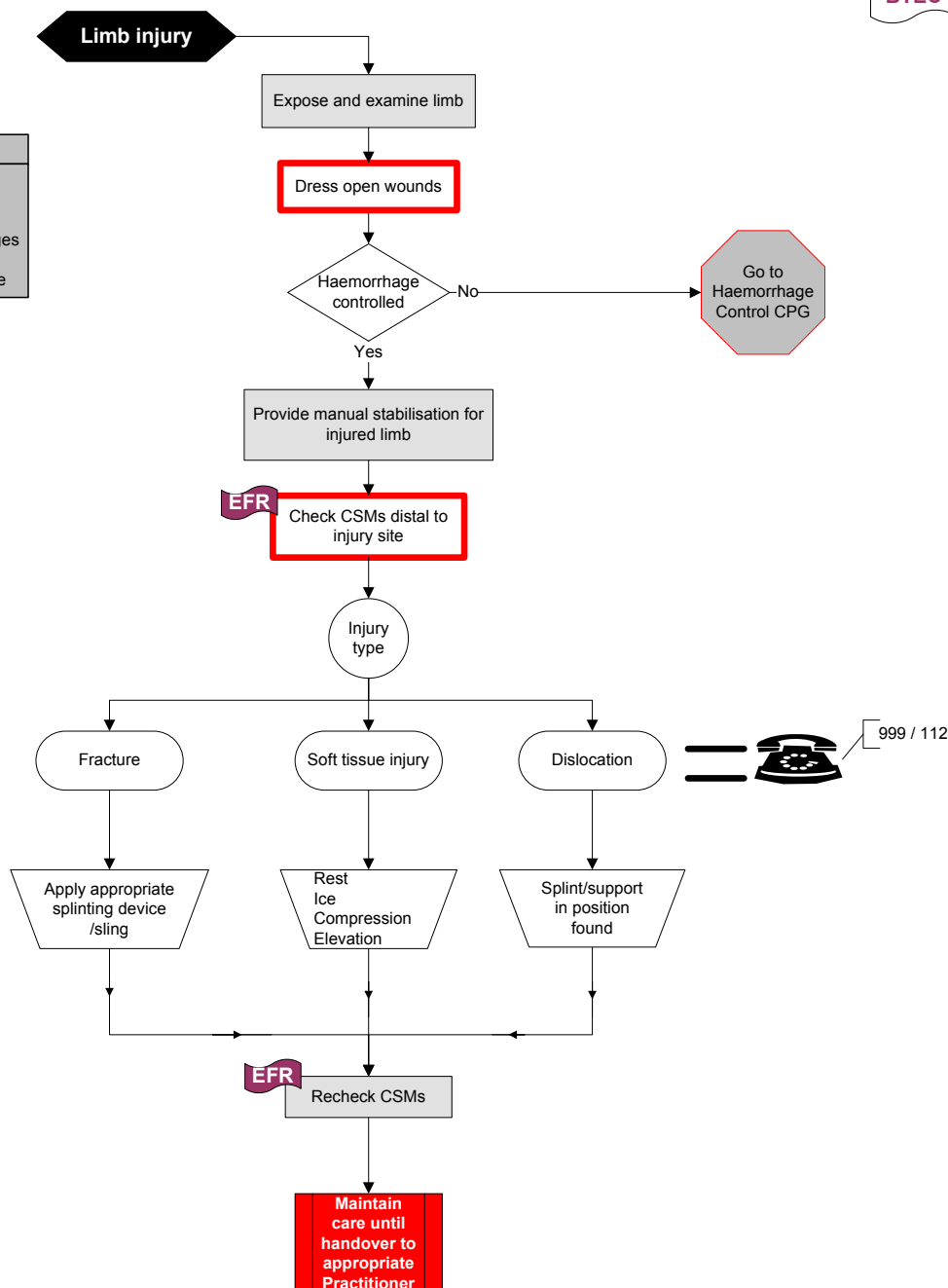
SECTION 6 TRAUMA

3.6.7T
Version 3, 02/14

Limb Injury

EFR
BTEC

Equipment list
Dressings
Triangular bandages
Splinting devices
Compression bandages
Ice packs
Pelvic splinting device



EFR

Special Authorisation:
EFRs having completed the BTEC course may be privileged by a licensed service provider to apply a pelvic splinting device on its behalf

SECTION 6 TRAUMA

2/3.6.9
Version 1, 05/08

Spinal Immobilisation – Adult

FAR

EFR

OFA

**If in doubt,
treat as
spinal injury**

**Trauma
Indications for spinal
immobilisation**

**Do not forcibly restrain a
patient that is combative**



999 / 112

Return head to neutral position unless on
movement there is Increase in
Pain, Resistance or Neurological symptoms

Neurological symptoms
Reduction in feeling in an area
Reduction in movement in a limb
Pins and needles
Paralysis

Equipment list
Rigid cervical collar

Stabilise cervical spine

EFR

Remove helmet
(if worn)

EFR

Apply cervical collar

**Maintain
care until
handover to
appropriate
Practitioner**

EFR

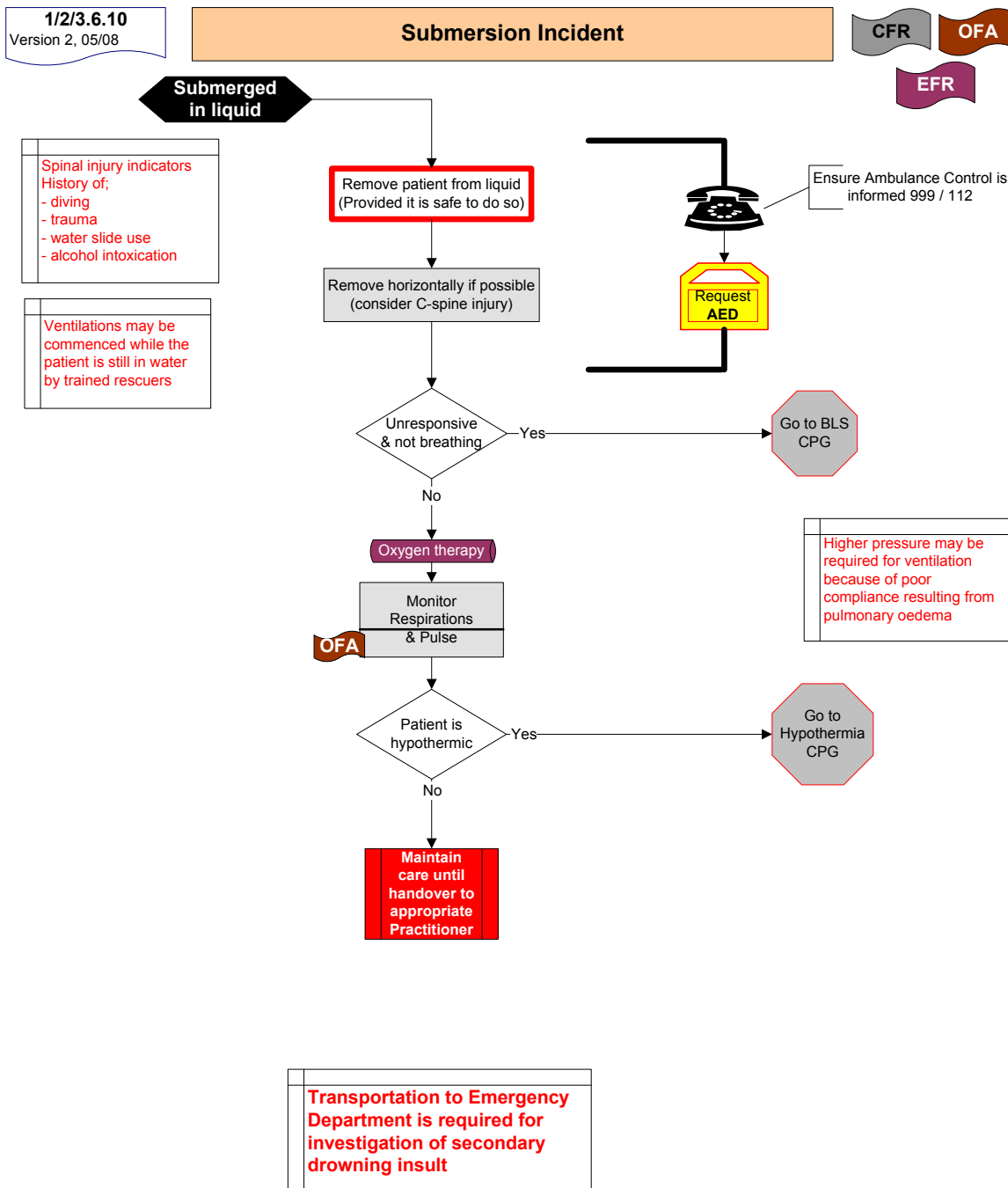
Special Authorisation:

EFRs may extricate a patient on a long board in the absence of a Practitioner if;

1 an unstable environment prohibits the attendance of a Practitioner, or

2 while awaiting the arrival of a Practitioner the patient requires rapid extrication to initiate emergency care

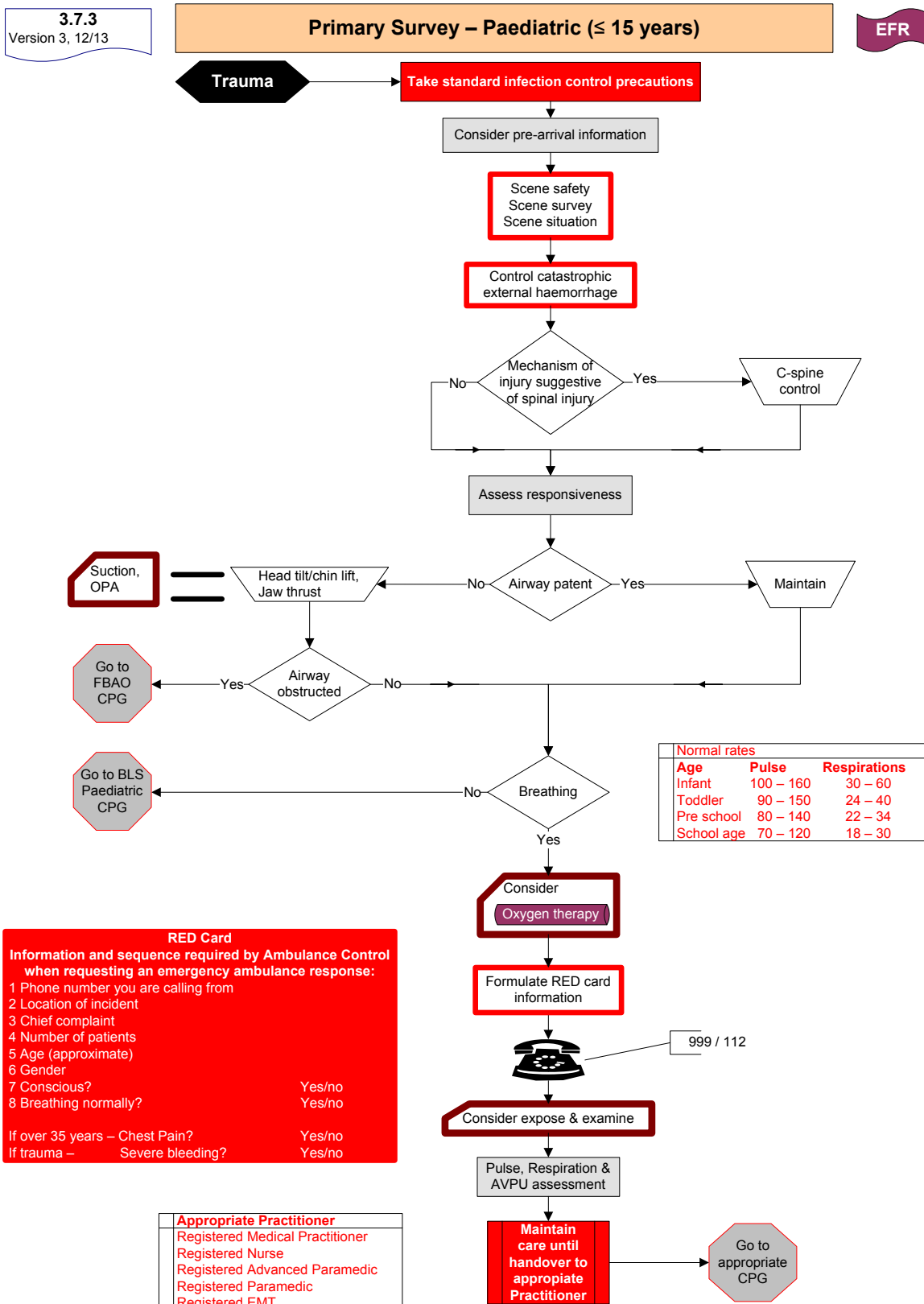
SECTION 6 TRAUMA



Reference: Golden, F & Tipton M, 2002, Essentials of Sea Survival, Human Kinetics
Verie, M, 2007, Near Drowning, E medicine, www.emedicine.com/ped/topic20570.htm
Shepherd, S, 2005, Submersion Injury, Near Drowning, E Medicine, www.emedicine.com/emerg/topic744.htm

SECTION 7

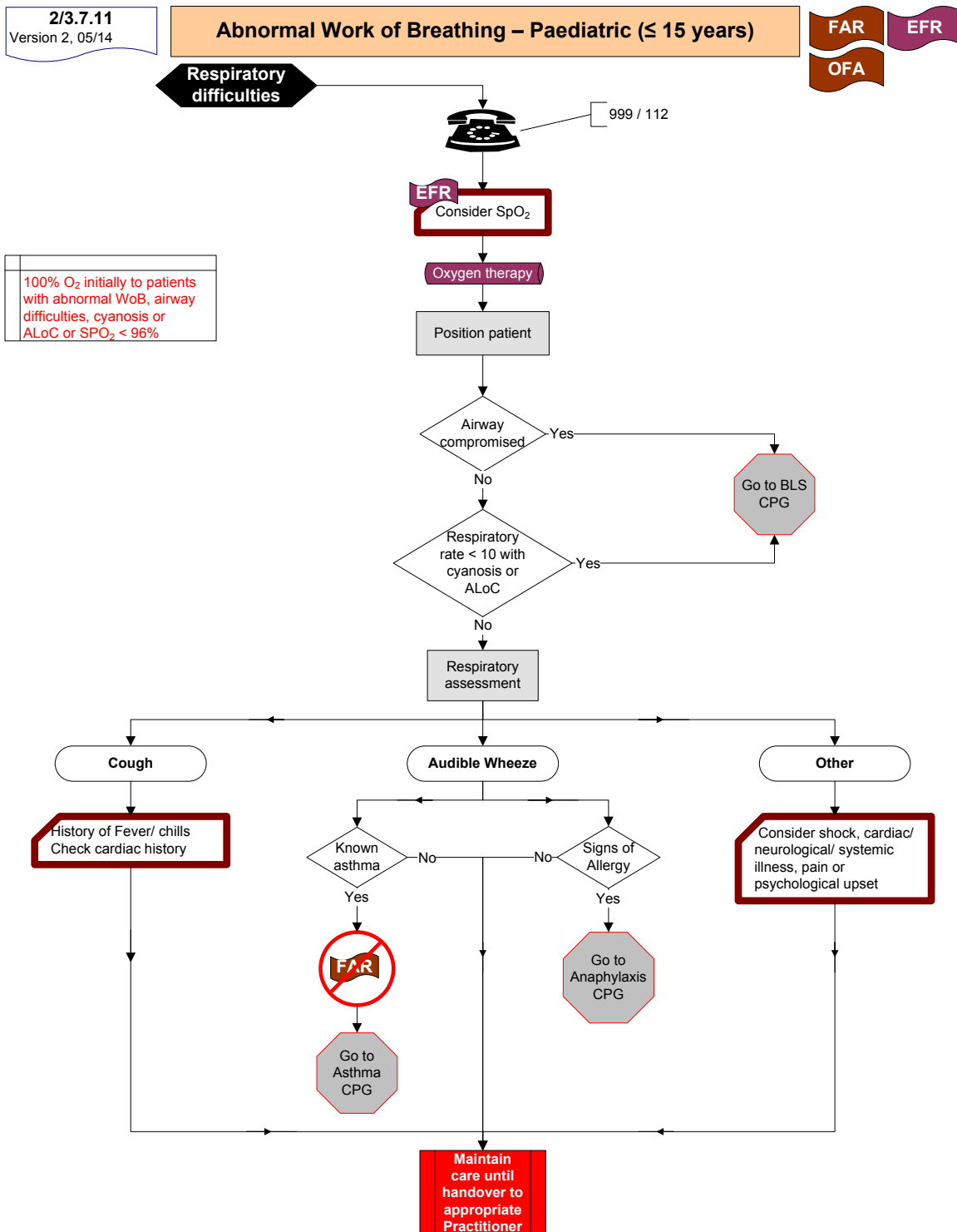
PAEDIATRIC EMERGENCIES



Reference: ILCOR Guidelines 2010, American Academy of Pediatrics, 2000, Pediatric Education for Prehospital Professionals

SECTION 7

PAEDIATRIC EMERGENCIES



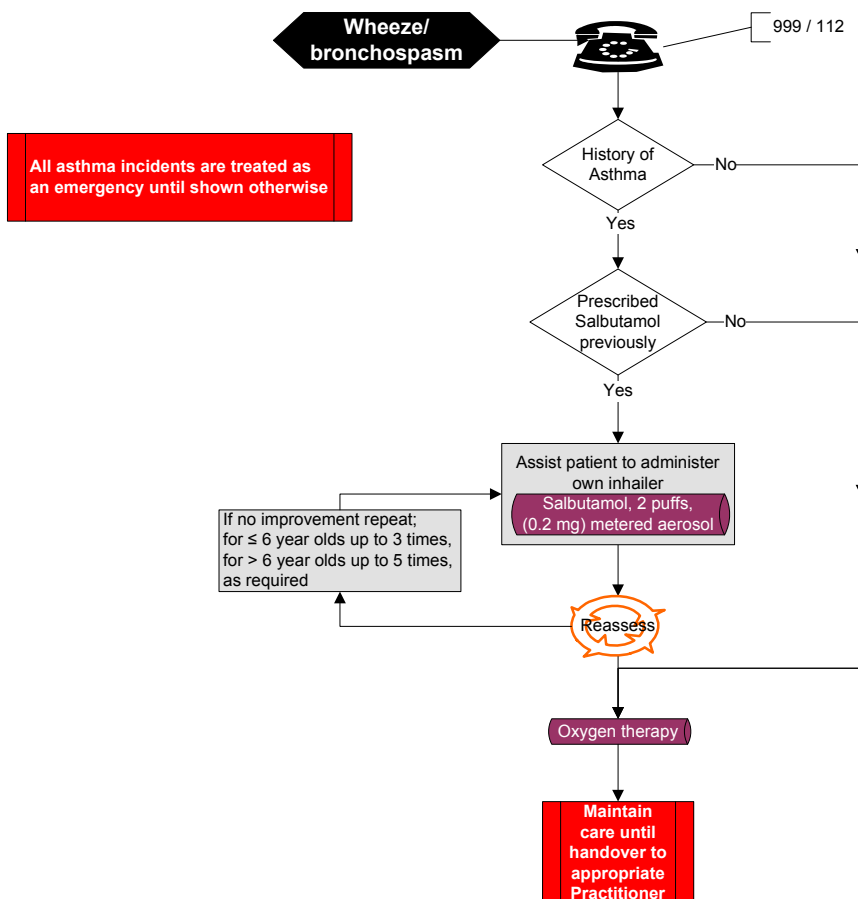
SECTION 7

PAEDIATRIC EMERGENCIES

3.7.12
Version 1, 11/13

Asthma – Paediatric (≤ 15 years)

EFR



Reference: HSE National Asthma Programme 2012, Emergency Asthma Guidelines, British Thoracic Society, 2008, British Guidelines on the Management of Asthma, a national clinical guideline

SECTION 7

PAEDIATRIC EMERGENCIES

1/2/3.7.20
Version 5, 12/13

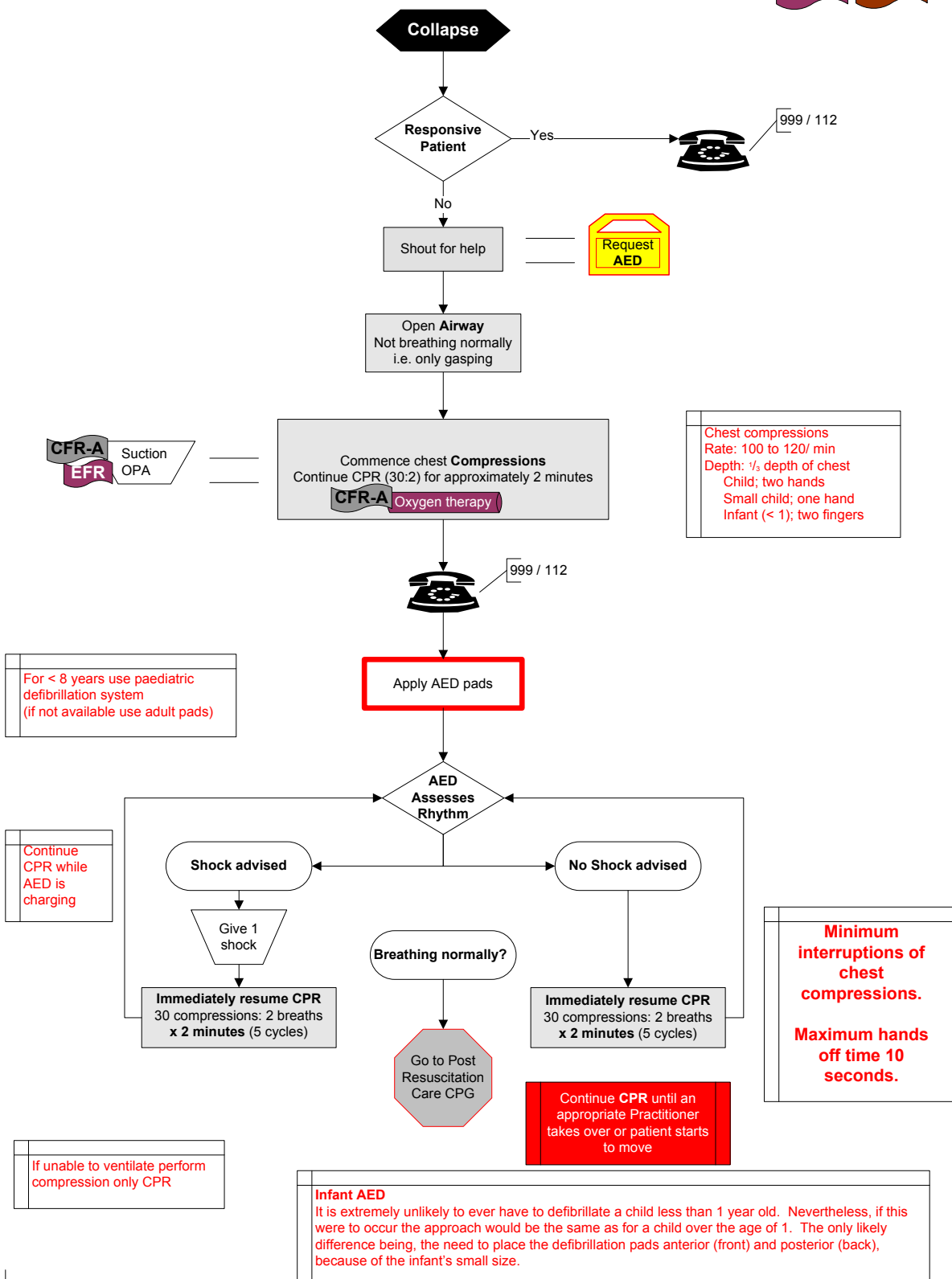
Basic Life Support – Paediatric (≤ 15 Years)

CFR

FAR

EFR

OFA



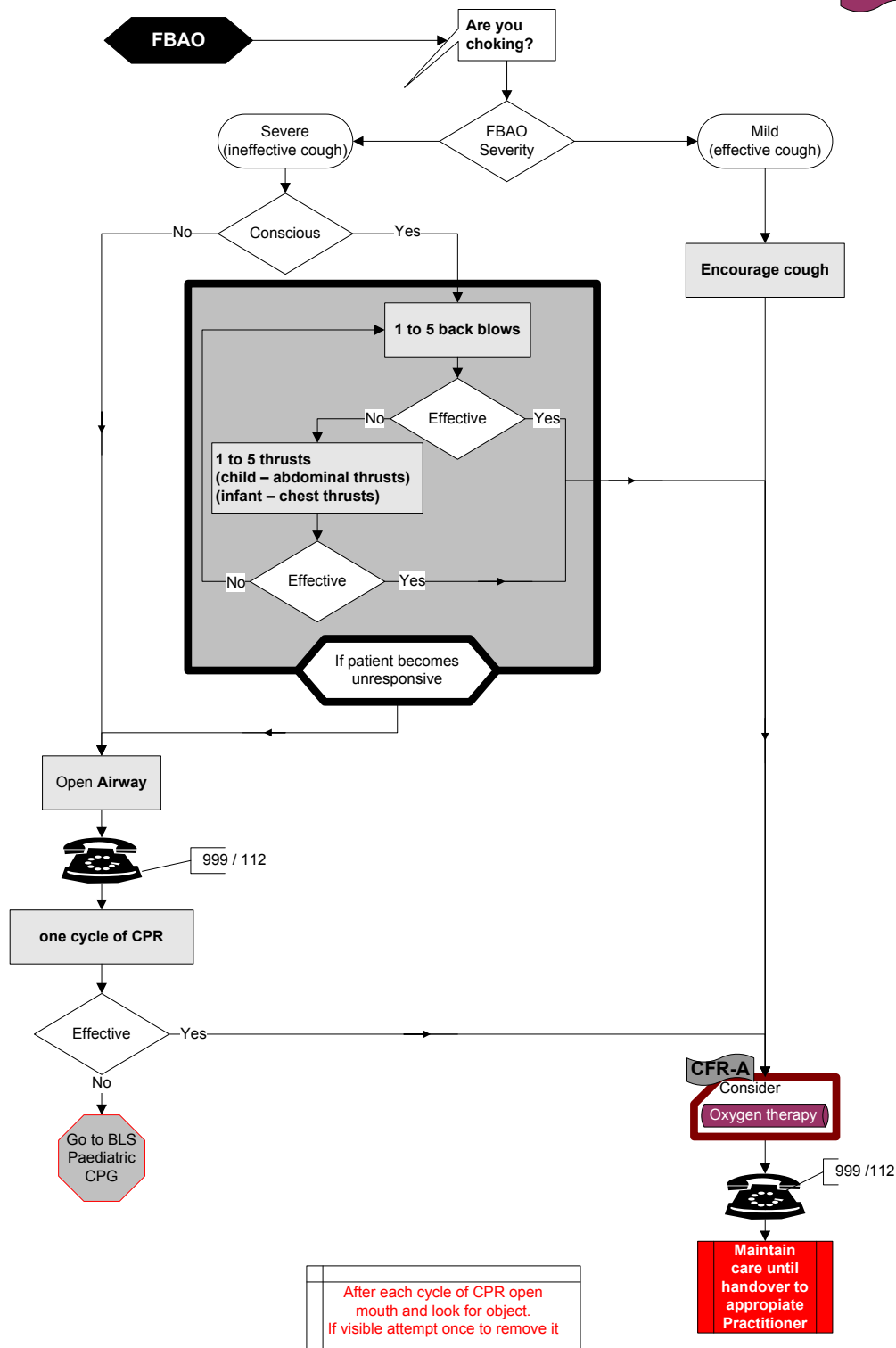
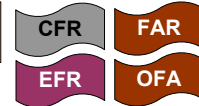
Reference: ILCOR Guidelines 2010

SECTION 7

PAEDIATRIC EMERGENCIES

1/2/3.7.21
Version 4, 12/13

Foreign Body Airway Obstruction – Paediatric (≤ 15 years)



ILCOR Guidelines 2010: Chest thrusts, back blows, or abdominal thrusts are effective for relieving FBAO in conscious adults and children > 1 year of age

SECTION 7

PAEDIATRIC EMERGENCIES

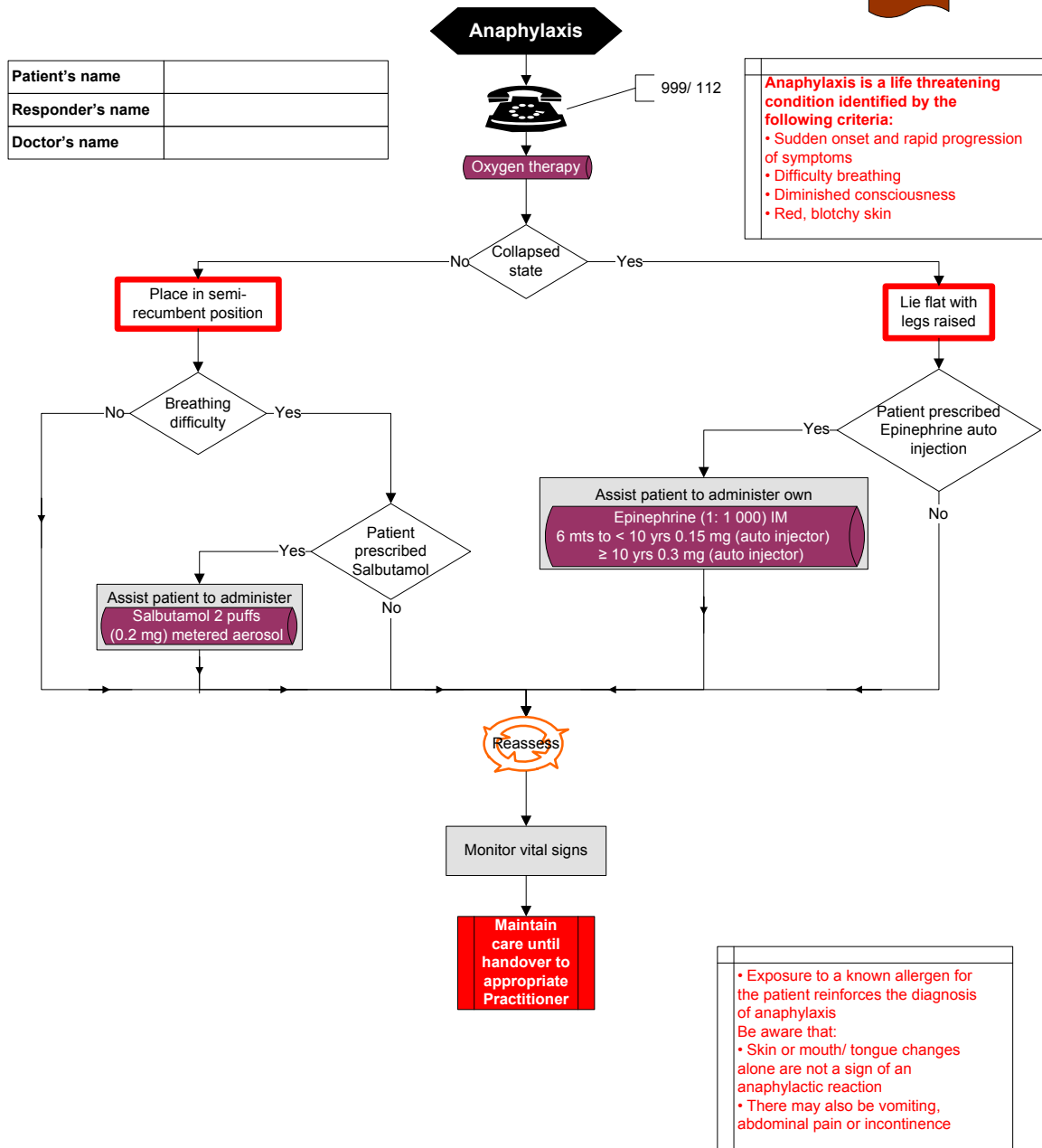
2/3.7.31
Version 2, 12/13

Anaphylaxis – Paediatric (≤ 15 years)

FAR

EFR

OFA



Special Authorisation:
Responders who have received training and are authorised by a Medical Practitioner for a named patient may administer Salbutamol via an aerosol measured dose.

Special Authorisation:
Responders who have received training and are authorised by a Medical Practitioner for a named patient may administer Epinephrine via an auto injector.

SECTION 7

PAEDIATRIC EMERGENCIES

2/3.7.33
Version 3, 12/13

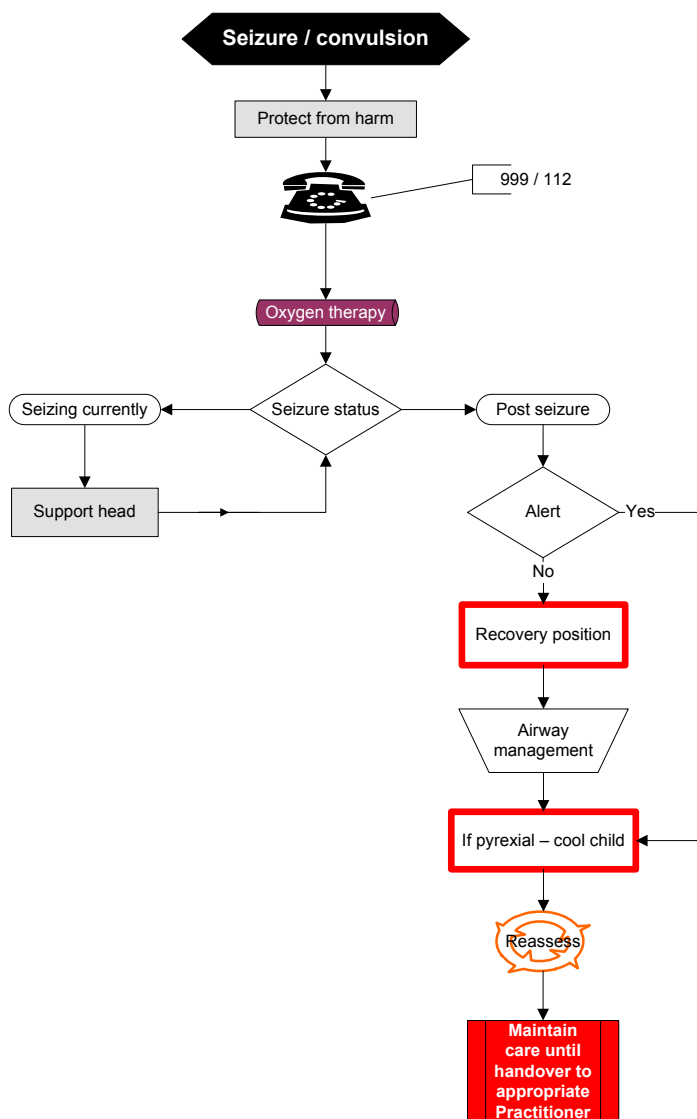
Seizure/Convulsion – Paediatric (≤ 15 years)

FAR

EFR

OFA

Consider other causes of seizures
Meningitis
Head injury
Hypoglycaemia
Fever
Poisons
Alcohol/drug withdrawal



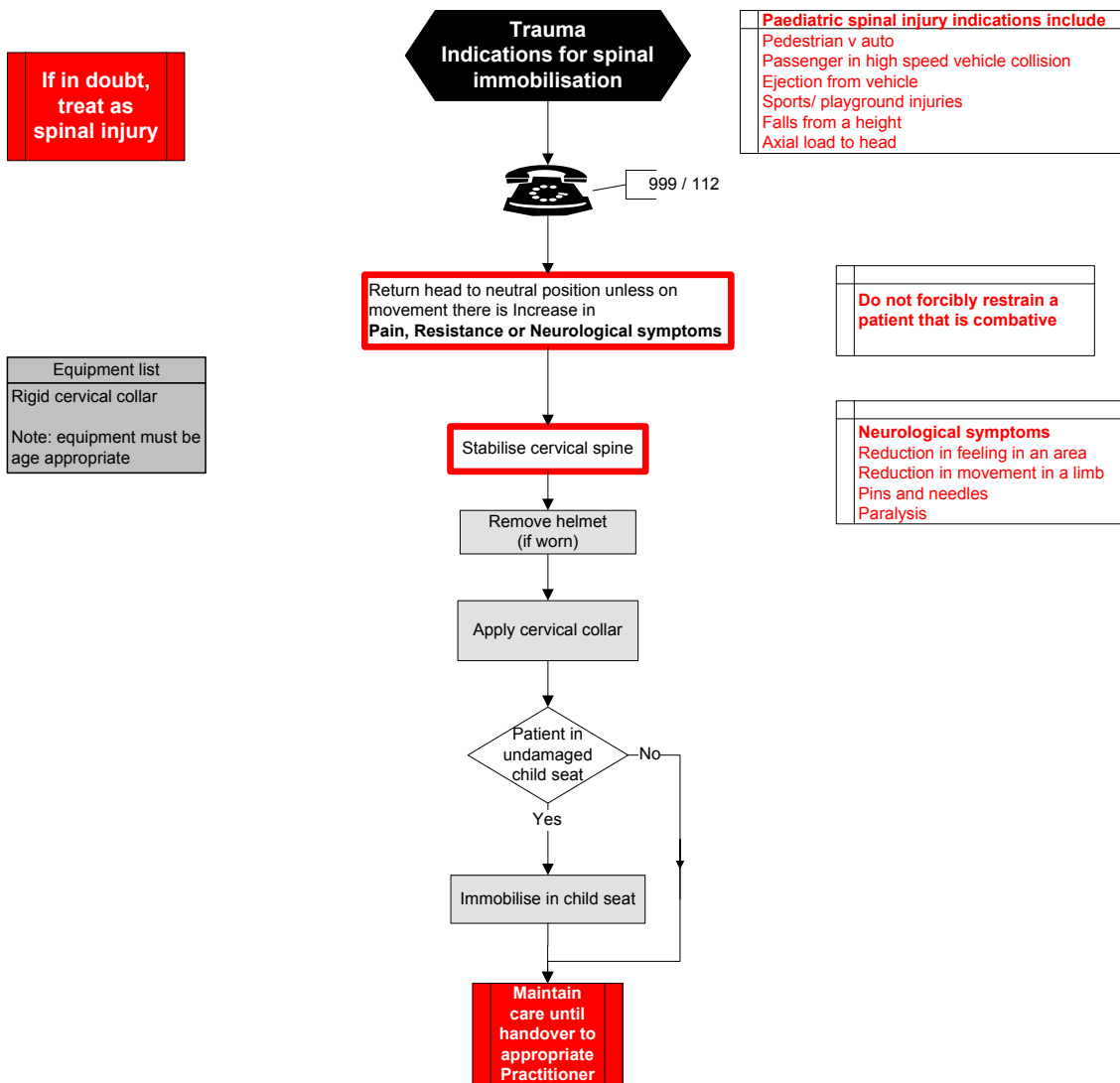
SECTION 7

PAEDIATRIC EMERGENCIES

3.7.52
Version 2, 12/13

Spinal Immobilisation – Paediatric (≤ 15 years)

EFR



EFR

Special Authorisation:

EFRs may extricate a patient on a long board in the absence of a Practitioner if;

- 1 an unstable environment prohibits the attendance of a Practitioner, or
- 2 while awaiting the arrival of a Practitioner the patient requires rapid extrication to initiate emergency care

References:

Viccellio, P, et al, 2001, A Prospective Multicentre Study of Cervical Spine Injury in Children, Pediatrics vol 108, e20
Slack, S. & Clancy, M, 2004, Clearing the cervical spine of paediatric trauma patients, EMJ 21; 189-193

APPENDIX 1

MEDICATION FORMULARY

The medication formulary is published by the Pre-Hospital Emergency Care Council (PHECC) to support Emergency First Responder – BTEC to be competent in the use of medications permitted under Clinical Practice Guidelines (CPGs).

The Medication Formulary is recommended by the Medical Advisory Committee (MAC) prior to publication by Council.

The medications herein may be administered provided:

- 1 The Emergency First Responder – BTEC complies with the CPGs published by PHECC.
- 2 The Emergency First Responder is acting on behalf of an organisation (paid or voluntary) that is a PHECC licensed CPG provider.
- 3 The Emergency First Responder – BTEC is privileged, by the organisation on whose behalf he/she is acting, to administer the medications.
- 4 The Emergency First Responder – BTEC has received training on, and is competent in, the administration of the medication.

The context for administration of the medications listed here is outlined in the CPGs. Every effort has been made to ensure accuracy of the medication doses herein. The dose specified on the relevant CPG shall be the definitive dose in relation to Emergency First Responder – BTEC administration of medications. The principle of titrating the dose to the desired effect shall be applied. The onus rests on the Emergency First Responder – BTEC to ensure that he/she is using the latest versions of CPGs which are available on the PHECC website www.phecc.ie

All medication doses for patients ≤ 15 years shall be calculated on a weight basis unless an age-related dose is specified for that medication.

The route of administration should be appropriate to the patients clinical presentation. IO access is authorised for Advanced Paramedics for life threatening emergencies (or under medical direction).

The dose for paediatric patients may never exceed the adult dose.

Paediatric weight estimations acceptable to PHECC are:

Neonate	3.5 Kg
Six months	6 Kg
One to five years	$(\text{age} \times 2) + 8 \text{ Kg}$
Greater than 5 years	$(\text{age} \times 3) + 7 \text{ Kg}$

Reviewed on behalf of PHECC by Prof Peter Weedle, Adjunct Professor of Clinical Pharmacy, School of Pharmacy, University College Cork.

This edition contains 6 medications for Emergency First Responder – BTEC.

APPENDIX 1 MEDICATION FORMULARY

Amendments to the 2012 Edition

The paediatric age range has been increased to reflect the HSE National Clinical Programme for Paediatrics and Neonatology age profile:

A paediatric patient is defined as a patient up to the eve of his/her 16th birthday (≤ 15 years).

Oxygen

HEADING	ADD	DELETE
Contraindications		Paraquat poisoning
Indications	Sickle Cell Disease - 100%	
Additional Information	Caution with paraquat poisoning, administer oxygen if SpO ₂ < 92%	

Please visit www.phecc.ie for the latest edition/version.

APPENDIX 1

MEDICATION FORMULARY

(Adult ≥ 16 and Paediatric ≤ 15 unless otherwise stated)

LIST OF MEDICATIONS

Aspirin	56
Epinephrine (1:1000)	57
Glucose gel	58
Glyceryl Trinitrate (GTN)	59
Oxygen	60
Salbutamol	61

APPENDIX 1

MEDICATION FORMULARY

CLINICAL LEVEL:



Medication	Aspirin
Class	Platelet aggregation inhibitor.
Descriptions	Anti-inflammatory agent and an inhibitor of platelet function. Useful agent in the treatment of various thromboembolic diseases such as acute myocardial infarction.
Presentation	300 mg dispersible tablet.
Administration	Orally (PO) – dispersed in water, or to be chewed – if not dispersible form. (CPG: 5/6.4.10, 4.4.10, 1/2/3.4.10).
Indications	Cardiac chest pain or suspected Myocardial Infarction.
Contraindications	Active symptomatic gastrointestinal (GI) ulcer. Bleeding disorder (e.g. haemophilia). Known severe adverse reaction. Patients < 16 years old.
Usual Dosages	Adult: 300 mg tablet. Paediatric: Contraindicated.
Pharmacology/Action	Antithrombotic Inhibits the formation of thromboxane A ₂ , which stimulates platelet aggregation and artery constriction. This reduces clot/thrombus formation in an MI.
Side effects	Epigastric pain and discomfort. Bronchospasm. Gastrointestinal haemorrhage.
Long-term effects	Generally mild and infrequent but incidence of gastro-intestinal irritation with slight asymptomatic blood loss, increased bleeding time, bronchospasm and skin reaction in hypersensitive patients.
Additional information	Aspirin 300 mg is indicated for cardiac chest pain regardless if patient is on anticoagulants or is already on aspirin. If the patient has swallowed an aspirin (enteric coated) preparation without chewing it, the patient should be regarded as not having taken any aspirin; administer 300 mg PO.

APPENDIX 1 MEDICATION FORMULARY

CLINICAL LEVEL:

EFR

EMT

P

AP

Medication	Epinephrine (1:1,000)
Class	Sympathetic agonist
Description	Naturally occurring catecholamine. It is a potent alpha and beta adrenergic stimulant; however, its effect on beta receptors is more profound.
Presentation	Pre-filled syringe, ampoule or Auto injector (for EMT use) 1 mg/1 mL (1:1,000)
Administration	Intramuscular (IM) (CPG: 5/6.4.15, 4.4.15, 2/3.4.16, 5/6.7.31, 4.7.31, 2/3.7.31)
Indications	Severe anaphylaxis
Contraindications	None known
Usual Dosages	<p>Adult: 0.5 mg (500 mcg) IM (0.5 mL of 1: 1,000) EMT & (EFR assist patient) 0.3 mg (Auto injector) Repeat every 5 minutes prn</p> <p>Paediatric: < 6 months: 0.05 mg (50 mcg) IM (0.05 mL of 1:1 000) 6 months to 5 years: 0.125 mg (125 mcg) IM (0.13 mL of 1:1 000) 6 to 8 years: 0.25 mg (250 mcg) IM (0.25 mL of 1:1 000) > 8 years: 0.5 mg (500 mcg) IM (0.5 mL of 1:1 000) EMT & (EFR assist patient): 6 months < 10 years: 0.15 mg (Auto injector) ≥ 10 years: 0.3 mg (Auto injector) Repeat every 5 minutes prn</p>
Pharmacology/Action	Alpha and beta adrenergic stimulant Reversal of laryngeal oedema & bronchospasm in anaphylaxis Antagonises the effects of histamine
Side effects	Palpitations Tachyarrhythmias Hypertension Angina-like symptoms
Additional information	N.B. Double check the concentration on pack before use

APPENDIX 1

MEDICATION FORMULARY

CLINICAL LEVEL:



Medication	Glucose gel
Class	Antihypoglycaemic.
Description	Synthetic glucose paste.
Presentation	Glucose gel in a tube or sachet.
Administration	Buccal administration: Administer gel to the inside of the patient's cheek and gently massage the outside of the cheek. (CPG: 5/6.4.19, 4.4.19, 2/3.4.19, 5/6.7.32, 4.7.32)
Indications	Hypoglycaemia. Blood glucose < 4 mmol/L. EFR – Known diabetic with confusion or altered levels of consciousness.
Contraindications	Known severe adverse reaction.
Usual Dosages	Adult: 10 – 20 g buccal. Repeat prn. Paediatric: ≤ 8 years; 5 – 10 g buccal. > 8 years: 10 – 20 g buccal. Repeat prn.
Pharmacology/Action	Increases blood glucose levels.
Side effects	May cause vomiting in patients under the age of five if administered too quickly.
Additional information	Glucose gel will maintain glucose levels once raised but should be used secondary to Dextrose to reverse hypoglycaemia. Proceed with caution: Patients with airway compromise. Altered level of consciousness.

APPENDIX 1

MEDICATION FORMULARY

CLINICAL LEVEL:



Medication	Glyceryl Trinitrate (GTN)
Class	Nitrate.
Description	Special preparation of Glyceryl trinitrate in an aerosol form that delivers precisely 0.4 mg of Glyceryl trinitrate per spray.
Presentation	Aerosol spray: metered dose 0.4 mg (400 mcg).
Administration	Sublingual (SL): Hold the pump spray vertically with the valve head uppermost. Place as close to the mouth as possible and spray under the tongue. The mouth should be closed after each dose. (CPG: 5/6.3.5, 4.4.10, 5/6.4.10).
Indications	Angina. Suspected Myocardial Infarction (MI). EFRs may assist with administration. Advanced Paramedic and Paramedic – Pulmonary oedema.
Contraindications	SBP < 90 mmHg. Viagra or other phosphodiesterase type 5 inhibitors (Sildenafil, Tadalafil and Vardenafil) used within previous 24 hours. Known severe adverse reaction.
Usual Dosages	Adult: Angina or MI: 0.4 mg (400 mcg) Sublingual. Repeat at 3–5 min intervals, Max: 1.2 mg. EFRs 0.4 mg sublingual max. Pulmonary oedema; 0.8 mg (800 mcg) sublingual. Repeat x 1. Paediatric: Not indicated.
Pharmacology/Action	Vasodilator Releases nitric oxide which acts as a vasodilator. Dilates coronary arteries particularly if in spasm increasing blood flow to myocardium. Dilates systemic veins reducing venous return to the heart (pre load) and thus reduces the heart's workload. Reduces BP.
Side effects	Headache. Transient Hypotension. Flushing. Dizziness.
Additional information	If the pump is new or has not been used for a week or more, the first spray should be released into the air.

APPENDIX 1

MEDICATION FORMULARY

CLINICAL LEVEL:



Medication	Oxygen
Class	Gas.
Description	Odourless, tasteless, colourless gas necessary for life.
Presentation	D, E or F cylinders, coloured black with white shoulders. CD cylinder; white cylinder. Medical gas.
Administration	Inhalation via: High concentration reservoir (non-rebreather) mask. Simple face mask. Venturi mask. Tracheostomy mask. Nasal cannulae. Bag Valve Mask. (CPG: Oxygen is used extensively throughout the CPGs)
Indications	Absent/inadequate ventilation following an acute medical or traumatic event. SpO ₂ < 94% adults and < 96% paediatrics. SpO ₂ < 92% for patients with acute exacerbation of COPD.
Contraindications	Bleomycin lung injury.
Usual Dosages	<p>Adult: Cardiac and respiratory arrest and Sickle Cell Crisis; 100%. Life threats identified during primary survey; 100% until a reliable SpO₂ measurement obtained then titrate O₂ to achieve SpO₂ of 94% – 98%. For patients with acute exacerbation of COPD, administer O₂ titrate to achieve SpO₂ 92% or as specified on COPD Oxygen Alert Card. All other acute medical and trauma titrate O₂ to achieve SpO₂ 94% – 98%.</p> <p>Paediatric: Cardiac and respiratory arrest; 100%. Life threats identified during primary survey; 100% until a reliable SpO₂ measurement obtained then titrate O₂ to achieve SpO₂ of 96% – 98%. All other acute medical and trauma titrate O₂ to achieve SpO₂ of 96% – 98%.</p>
Pharmacology/Action	Oxygenation of tissue/organs.
Side effects	Prolonged use of O ₂ with chronic COPD patients may lead to reduction in ventilation stimulus.
Additional information	A written record must be made of what oxygen therapy is given to every patient. Documentation recording oximetry measurements should state whether the patient is breathing air or a specified dose of supplemental oxygen. Consider humidifier if oxygen therapy for paediatric patients is > 30 minute duration. Caution with paraquat poisoning, administer oxygen if SpO ₂ < 92% Avoid naked flames, powerful oxidising agent.

APPENDIX 1

MEDICATION FORMULARY

CLINICAL LEVEL:



Medication	Salbutamol
Class	Sympathetic agonist.
Description	Sympathomimetic that is selective for beta-2 adrenergic receptors.
Presentation	Nebule 2.5 mg in 2.5 mL. Nebule 5 mg in 2.5 mL. Aerosol inhaler: metered dose 0.1 mg (100 mcg).
Administration	Nebuliser (NEB). Inhalation via aerosol inhaler. (CPG: 4/5/6.3.3, 4/5/6.3.4, 3.3.4, 5/6.4.15, 4.4.15, 2/3.4.16, 4/5/6.6.10, 4/5/6.7.12, 3.7.12, 5/6.7.31, 4.7.31, 2/3.7.31).
Indications	Bronchospasm. Exacerbation of COPD. Respiratory distress following submersion incident.
Contraindications	Known severe adverse reaction.
Usual Dosages	<p>Adult: 5 mg NEB (or 0.1 mg metered aerosol spray x 5) Repeat at 5 min prn. (EFRs: 0.1 mg metered aerosol spray x 2).</p> <p>Paediatric: < 5 yrs - 2.5 mg NEB (or 0.1 mg metered aerosol spray x 3). ≥ 5 yrs - 5 mg NEB (or 0.1 mg metered aerosol spray x 5). Repeat at 5 min prn. (EFRs: 0.1 mg metered aerosol spray x 2).</p>
Pharmacology/Action	Beta-2 agonist. Bronchodilation. Relaxation of smooth muscle.
Side effects	Tachycardia. Tremors. Tachyarrhythmias. High doses may cause hypokalaemia.
Additional information	It is more efficient to use a volumizer in conjunction with an aerosol inhaler when administering Salbutamol. If an oxygen driven nebuliser is used to administer Salbutamol for a patient with acute exacerbation of COPD it should be limited to 6 minutes maximum.

APPENDIX 2

MEDICATIONS & SKILLS MATRIX

NEW FOR 2014

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
Burns care			✓	✓	✓	✓	✓
Soft tissue injury			✓	✓	✓	✓	✓
SpO ₂ monitoring				✓			
Move and secure a patient to a paediatric board					✓		
Ibuprofen PO					✓		
Salbutamol Nebule					✓		
Subcutaneous injection					✓	✓	
Naloxone IN					✓	✓	✓
Pain assessment					✓	✓	✓
Haemostatic agent					✓	✓	✓
End Tidal CO ₂ monitoring						✓	
Hydrocortisone IM						✓	
Ipratropium Bromide Nebule						✓	
CPAP / BiPAP						✓	✓
Naloxone SC						✓	✓
Nasal pack						✓	✓
Ticagrelor						✓	✓
Treat and referral						✓	✓
Tranexamic Acid							✓

CARE MANAGEMENT INCLUDING THE ADMINISTRATION OF MEDICATIONS AS PER LEVEL OF TRAINING AND DIVISION ON THE PHECC REGISTER AND RESPONDER LEVELS.

Pre-Hospital responders and practitioners shall only provide care management including medication administration for which they have received specific training. Practitioners must be privileged by a licensed CPG provider to administer specific medications and perform specific clinical interventions.

KEY		
✓	=	Authorised under PHECC CPGs
URMPIO	=	Authorised under PHECC CPGs under registered medical practitioner's instructions only
APO	=	Authorised under PHECC CPGs to assist practitioners only (when applied to EMT, to assist Paramedic or higher clinical levels)
SA	=	Authorised subject to special authorisation as per CPG
BTEC	=	Authorised subject to Basic Tactical Emergency Care rules

APPENDIX 2

MEDICATIONS & SKILLS MATRIX

MEDICATIONS

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
Aspirin PO	✓	✓	✓	✓	✓	✓	✓
Oxygen		✓		✓	✓	✓	✓
Glucose Gel Buccal				✓	✓	✓	✓
GTN SL				✓SA	✓	✓	✓
Salbutamol Aerosol				✓SA	✓	✓	✓
Epinephrine (1:1,000) auto injector				✓SA	✓	✓	✓
Glucagon IM					✓	✓	✓
Nitrous oxide & Oxygen (Entonox®)					✓	✓	✓
Naloxone IN					✓	✓	✓
Paracetamol PO					✓	✓	✓
Ibuprofen PO					✓	✓	✓
Salbutamol nebule					✓	✓	✓
Morphine IM					URMPIO	URMPIO	✓SA
Clopidogrel PO						✓	✓
Epinephrine (1: 1,000) IM						✓	✓
Hydrocortisone IM						✓	✓
Ipratropium Bromide Nebule						✓	✓
Midazolam IM/Buccal/IN						✓	✓
Naloxone IM/SC						✓	✓
Ticagrelor						✓	✓
Dextrose 10% IV						✓SA	✓
Hartmann's Solution IV/IO						✓SA	✓
Sodium Chloride 0.9% IV/IO						✓SA	✓
Amiodarone IV/IO							✓
Atropine IV/IO							✓
Benzympenicillin IM/IV/IO							✓
Cyclizine IV							✓
Diazepam IV/PR							✓
Epinephrine (1:10,000) IV/IO							✓
Fentanyl IN							✓
Furosemide IV/IM							✓
Hydrocortisone IV							✓
Lorazepam PO							✓
Magnesium Sulphate IV							✓
Midazolam IV							✓

APPENDIX 2

MEDICATIONS & SKILLS MATRIX

MEDICATIONS (contd)

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
Morphine IV/PO							✓
Naloxone IV/IO							✓
Nifedipine PO							✓
Ondansetron IV							✓
Paracetamol PR							✓
Sodium Bicarbonate IV/ IO							✓
Syntometrine IM							✓
Tranexamic Acid							✓
Enoxaparin IV/SC							✓ SA
Lidocaine IV							✓ SA
Tenecteplase IV							✓ SA

AIRWAY & BREATHING MANAGEMENT

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
FBAO management	✓	✓	✓	✓	✓	✓	✓
Head tilt chin lift	✓	✓	✓	✓	✓	✓	✓
Pocket mask	✓	✓	✓	✓	✓	✓	✓
Recovery position	✓	✓	✓	✓	✓	✓	✓
Non rebreather mask		✓		✓	✓	✓	✓
OPA		✓		✓	✓	✓	✓
Suctioning		✓		✓	✓	✓	✓
Venturi mask		✓		✓	✓	✓	✓
SpO ₂ monitoring		✓ SA		✓	✓	✓	✓
Jaw Thrust				✓	✓	✓	✓
Nasal cannula		✓		✓	✓	✓	✓
BVM		✓		✓ SA	✓	✓	✓
NPA				BTEC	BTEC	✓	✓
Supraglottic airway adult (uncuffed)		✓			✓	✓	✓
Oxygen humidification					✓	✓	✓
Supraglottic airway adult (cuffed)					✓ SA	✓	✓
CPAP / BiPAP						✓	✓
Non-invasive ventilation device						✓	✓
Peak Expiratory Flow						✓	✓

APPENDIX 2

MEDICATIONS & SKILLS MATRIX

AIRWAY & BREATHING MANAGEMENT (contd)

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
End Tidal CO ₂ monitoring						✓	✓
Supraglottic airway paediatric						✓SA	✓
Endotracheal intubation							✓
Laryngoscopy and Magill forceps							✓
Needle cricothyrotomy							✓
Needle thoracocentesis							✓

CARDIAC

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
AED adult & paediatric	✓	✓	✓	✓	✓	✓	✓
CPR adult, child & infant	✓	✓	✓	✓	✓	✓	✓
Recognise death and resuscitation not indicated	✓	✓	✓	✓	✓	✓	✓
Targeted temperature management		✓SA			✓	✓	✓
CPR newly born					✓	✓	✓
ECG monitoring (lead II)					✓	✓	✓
Mechanical assist CPR device					✓	✓	✓
12 lead ECG						✓	✓
Cease resuscitation - adult						✓	✓
Manual defibrillation						✓	✓

HAEMORRHAGE CONTROL

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
Direct pressure			✓	✓	✓	✓	✓
Nose bleed			✓	✓	✓	✓	✓
Haemostatic agent					✓	✓	✓
Tourniquet use				BTEC	BTEC	✓	✓
Nasal pack						✓	✓
Pressure points						✓	✓

APPENDIX 2

MEDICATIONS & SKILLS MATRIX

MEDICATION ADMINISTRATION

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
Oral	✓	✓	✓	✓	✓	✓	✓
Buccal route				✓	✓	✓	✓
Per aerosol (inhaler) + spacer				✓SA	✓	✓	✓
Sublingual				✓SA	✓	✓	✓
Intramuscular injection					✓	✓	✓
Intranasal					✓	✓	✓
Per nebuliser					✓	✓	✓
Subcutaneous injection					✓	✓	✓
IV & IO Infusion maintenance						✓SA	✓
Infusion calculations							✓
Intraosseous injection/infusion							✓
Intravenous injection/infusion							✓
Per rectum							✓

TRAUMA

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
Burns care			✓	✓	✓	✓	✓
Cervical spine manual stabilisation			✓	✓	✓	✓	✓
Application of a sling			✓	✓	✓	✓	✓
Soft tissue injury			✓	✓	✓	✓	✓
Cervical collar application				✓	✓	✓	✓
Helmet stabilisation/removal				✓	✓	✓	✓
Splinting device application to upper limb				✓	✓	✓	✓
Move and secure patient to a long board				✓SA	✓	✓	✓
Rapid Extraction				✓SA	✓	✓	✓
Log roll				AP0	✓	✓	✓
Move patient with a carrying sheet				AP0	✓	✓	✓
Move patient with an orthopaedic stretcher				AP0	✓	✓	✓
Splinting device application to lower limb				AP0	✓	✓	✓
Secure and move a patient with an extrication device				AP0	AP0	✓	✓

APPENDIX 2

MEDICATIONS & SKILLS MATRIX

TRAUMA (contd)

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
Pelvic Splinting device				BTEC	✓	✓	✓
Move and secure patient into a vacuum mattress				BTEC	✓	✓	✓
Active re-warming					✓	✓	✓
Move and secure a patient to a paediatric board					✓	✓	✓
Traction splint application					APO	✓	✓
Spinal Injury Decision						✓	✓
Taser gun barb removal						✓	✓
Reduction dislocated patella							✓

OTHER

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
Assist in the normal delivery of a baby				APO	✓	✓	✓
De-escalation and breakaway skills					✓	✓	✓
Glucometry					✓	✓	✓
Broselow tape						✓	✓
Delivery Complications						✓	✓
External massage of uterus						✓	✓
Intraosseous cannulation							✓
Intravenous cannulation							✓
Urinary catheterisation							✓

PATIENT ASSESSMENT

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
Assess responsiveness	✓	✓	✓	✓	✓	✓	✓
Check breathing	✓	✓	✓	✓	✓	✓	✓
FAST assessment	✓	✓	✓	✓	✓	✓	✓
Capillary refill			✓	✓	✓	✓	✓
AVPU			✓	✓	✓	✓	✓
Breathing & pulse rate			✓	✓	✓	✓	✓

APPENDIX 2

MEDICATIONS & SKILLS MATRIX

PATIENT ASSESSMENT (contd)

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
Primary survey			✓	✓	✓	✓	✓
SAMPLE history			✓	✓	✓	✓	✓
Secondary survey			✓	✓	✓	✓	✓
CSM assessment				✓	✓	✓	✓
Rule of Nines				✓	✓	✓	✓
Assess pupils				✓	✓	✓	✓
Blood pressure				✓SA	✓	✓	✓
Capacity evaluation					✓	✓	✓
Do Not Attempt Resuscitation					✓	✓	✓
Paediatric Assessment Triangle					✓	✓	✓
Pain assessment					✓	✓	✓
Patient Clinical Status					✓	✓	✓
Pre-hospital Early Warning Score					✓	✓	✓
Pulse check (cardiac arrest)		✓SA			✓	✓	✓
Temperature °C					✓	✓	✓
Triage sieve					✓	✓	✓
Chest auscultation						✓	✓
GCS						✓	✓
Treat and referral						✓	✓
Triage sort						✓	✓

APPENDIX 3

CRITICAL INCIDENT STRESS MANAGEMENT

Your Psychological Well-Being

As a Responder it is extremely important for your psychological well-being that you do not expect to save every critically ill or injured patient that you treat. For a patient who is not in hospital, whether they survive a cardiac arrest or multiple trauma depends on a number of factors including any other medical condition the patient has. Your aim should be to perform your interventions well and to administer the appropriate medications within your scope of practice. However sometimes you may encounter a situation which is highly stressful for you, giving rise to Critical Incident Stress (CIS). A critical incident is an incident or event which may overwhelm or threaten to overwhelm our normal coping responses. As a result of this we can experience CIS.

SYMPTOMS OF CIS INCLUDE SOME OR ALL OF THE FOLLOWING:

Examples of physical symptoms:

- Feeling hot and flushed, sweating a lot
- Dry mouth, churning stomach
- Diarrhoea and digestive problems
- Needing to urinate often
- Muscle tension
- Restlessness, tiredness, sleep difficulties, headaches
- Increased drinking or smoking
- Overeating, or loss of appetite
- Loss of interest in sex
- Racing heart, breathlessness and rapid breathing

Examples of psychological symptoms:

- Feeling overwhelmed
- Loss of motivation
- Dreading going to work
- Becoming withdrawn
- Racing thoughts
- Confusion
- Not looking after yourself properly
- Difficulty making decisions
- Poor concentration
- Poor memory
- Anger
- Anxiety
- Depression

Post-Traumatic Stress Reactions

Normally the symptoms of Critical Incident Stress subside within a few weeks or less. Sometimes however, they may persist and develop into a post-traumatic stress reaction and you may also experience emotional reactions.

Anger at the injustice and senselessness of it all.

Sadness and depression caused by an awareness of how little can be done for people who are severely injured and dying, sense of a shortened future, poor concentration, not being able to remember things as well as before.

Guilt caused by believing that you should have been able to do more or that you could have acted differently.

Fear of 'breaking down' or 'losing control', not having done all you could have done, being blamed for something or a similar event happening to you or your loved ones.

APPENDIX 3

CRITICAL INCIDENT STRESS MANAGEMENT

Avoiding the scene of the trauma or anything that reminds you of it.

Intrusive thoughts in the form of memories or flashbacks which cause distress and the same emotions as you felt at the time.

Irritability outbursts of anger, being easily startled and constantly being on guard for threats.

Feeling numb leading to a loss of your normal range of feelings, for example, being unable to show affection, feeling detached from others.

EXPERIENCING SIGNS OF EXCESSIVE STRESS

If the range of physical, emotional and behavioural signs and symptoms already mentioned do not reduce over time (for example, after two weeks), it is important that you get support and help.

Where to find help?

Your own CPG approved organisation will have a CISM support network or system.

We recommend that you contact them for help and advice. (i.e. your peer support worker/coordinator/staff support officer).

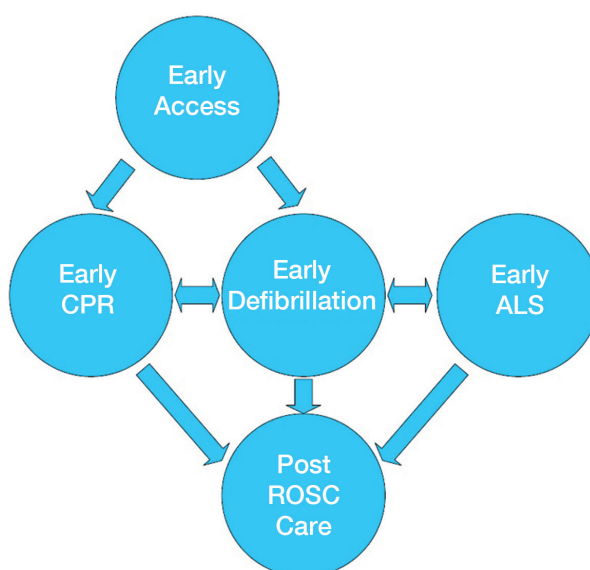
- For a self-help guide, please go to www.cismnetworkireland.ie
- The NAS CISM/ CISM Network published a booklet called 'Critical Incident Stress Management for Emergency Personnel'. It can be purchased by emailing info@cismnetworkireland.ie
- The NAS CISM committee in partnership with PHECC developed an eLearning CISM Stress Awareness Training (SAT) module. It can be accessed by all PHECC registered practitioners using their PHECC eLearning username and password. In due course PHECC will launch a CISM SAT module for non-PHECC registered personnel.
- See a health professional who specialises in traumatic stress.

APPENDIX 4

PRE-HOSPITAL DEFIBRILLATION POSITION PAPER

Defibrillation is a lifesaving intervention for victims of sudden cardiac arrest (SCA). Defibrillation in isolation is unlikely to reverse SCA unless it is integrated into the chain of survival. The chain of survival should not be regarded as a linear process with each link as a separate entity but once commenced with 'early access' the other links, other than 'post return of spontaneous circulation (ROSC) care', should be operated in parallel subject to the number of people and clinical skills available.

Cardiac arrest management process



ILCOR guidelines 2010 identified that without ongoing CPR, survival with good neurological function from SCA is highly unlikely. Defibrillators in AED mode can take up to 30 seconds between analysing and charging during which time no CPR is typically being performed. The position below is outlined to ensure maximum resuscitation efficiency and safety.

Position

1. Defibrillation mode

- 1.1 Advanced paramedics, and health care professionals whose scope of practice permits, should use defibrillators in manual mode for all age groups.
- 1.2 Paramedics may consider using defibrillators in manual mode for all age groups.
- 1.3 EMTs and responders shall use defibrillators in AED mode for all age groups.

2. Hands off time (time when chest compressions are stopped)

- 2.1 Minimise hands off time, absolute maximum 10 seconds.
- 2.2 Rhythm and/or pulse checks in manual mode should take no more than 5 to 10 seconds and CPR should be recommenced immediately.
- 2.3 When defibrillators are charging CPR should be ongoing and only stopped for the time it takes to press the defibrillation button and recommenced immediately without reference to rhythm or pulse checks.
- 2.4 It is necessary to stop CPR to enable some AEDs to analyse the rhythm. Unfortunately this time frame is not standard with all AEDs. As soon as the analysing phase is completed and the charging phase has begun CPR should be recommenced.

APPENDIX 4

PRE-HOSPITAL DEFIBRILLATION POSITION PAPER

3 Energy

- 3.1 Biphasic defibrillation is the method of choice.
- 3.2 Biphasic truncated exponential (BTE) waveform energy commencing at 150 to 200 joules shall be used.
- 3.3 If unsuccessful the energy on second and subsequent shocks shall be as per manufacturer of defibrillator instructions.
- 3.4 Monophasic defibrillators currently in use, although not as effective as biphasic defibrillators, may continue to be used until they reach the end of their lifespan.

4 Safety

- 4.1 For the short number of seconds while a patient is being defibrillated no person should be in contact with the patient.
- 4.2 The person pressing the defibrillation button is responsible for defibrillation safety.
- 4.3 Defibrillation pads should be used as opposed to defibrillation paddles for pre-hospital defibrillation.

5 Defibrillation pad placement

- 5.1 The right defibrillation pad should be placed mid clavicular directly under the right clavicle.
- 5.2 The left defibrillation pad should be placed mid-axillary with the top border directly under the left nipple.
- 5.3 If a pacemaker or Implantable Cardioverter Defibrillator (ICD) is fitted, defibrillator pads should be placed at least 8 cm away from these devices. This may result in anterior and posterior pad placement which is acceptable.

6 Paediatric defibrillation

- 6.1 Paediatric defibrillation refers to patients less than 8 years of age.
- 6.2 Manual defibrillator energy shall commence and continue with 4 joules/Kg.
- 6.3 AEDs should use paediatric energy attenuator systems.
- 6.4 If a paediatric energy attenuator system is not available an adult AED may be used.
- 6.5 It is extremely unlikely to ever have to defibrillate a child less than 1 year old. Nevertheless, if this were to occur the approach would be the same as for a child over the age of 1. The only likely difference being, the need to place the defibrillation pads anterior and posterior, because of the infant's small size.

7 Implantable Cardioverter Defibrillator (ICD)

- 7.1 If an Implantable Cardioverter Defibrillator (ICD) is fitted in the patient, treat as per CPG. It is safe to touch a patient with an ICD fitted even if it is firing.

8 Cardioversion

- 8.1 Advanced paramedics are authorised to use synchronised cardioversion for unresponsive patients with a tachycardia greater than 150.

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