

Clinical Practice Guidelines - 2017 Edition

EMERGENCY FIRST RESPONDER



Pre-Hospital
Emergency Care
Council



These CPGs are dedicated to the memory of Dr Geoff King, the inaugural Director of the Pre-Hospital Emergency Care Council (PHECC), who sadly passed away in August 2014. Geoff was a true leader who had the ability to influence change through his own charismatic presence, vision and the respect he showed to all who met and dealt with him. He had an ability to empower others to perform and achieve to a "higher standard".

Geoff's message was consistent "If you always put the patient first when making a decision, you will never make the wrong decision".

His immense legacy is without equal.

Ní bheidh a leithéid arís ann.

PHECC Clinical Practice Guidelines

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FOREWORD

This Handbook comprises the 2017 Edition Clinical Practice Guidelines (CPGs). These guidelines outline patient assessments and pre-hospital management for responders at Emergency First Responder-Basic Tactical Emergency Care, Emergency First Responder, First Aid Responder and Occupational First Aider levels, and registered practitioners at Emergency Medical Technician, Paramedic and Advanced Paramedic levels, and I am delighted that there are now 386 CPGs to guide integrated care across the six pre-hospital emergency care clinical levels. These CPGs ensure that responders and practitioners are practicing to best international standards and support PHECC's vision that people in Ireland receive excellent pre-hospital emergency care.



I would like to acknowledge the hard work and commitment the members of the Medical Advisory Committee have shown during the development of this publication, guided by Dr Mick Molloy (Chair). I would also like to pay tribute to the Medical Advisory Groups, chaired by Dr Cathal O'Donnell and Dr Zelig Gaffney, for their dedication and expertise in the publication of previous guidelines, during my term as Chair of Council. A special word of thanks goes to Mr Brian Power, PHECC Programme Development Officer, and the PHECC executive, for their continued support in researching and compiling these CPGs.

I recognise the contribution made by many responders and practitioners, whose feedback has assisted PHECC in the continual improvement and development of CPGs, and welcome these guidelines as an important contribution to best practice in pre-hospital emergency care.

A handwritten signature in black ink, appearing to read 'Tom Mooney', written over a horizontal line.

Mr Tom Mooney, Chair, Pre-Hospital Emergency Care Council (June 2008 – June 2016)

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
Capillary Refill Time.....	CRT
Carbon Dioxide.....	CO ₂
Cardiopulmonary Resuscitation.....	CPR
Cervical Spine.....	C-spine
Chronic Obstructive Pulmonary Disease.....	COPD
Clinical Practice Guideline.....	CPG
Continuous Positive Airway Pressure.....	CPAP
Degree.....	°
Degrees Centigrade.....	°C
Dextrose 10% in water.....	D ₁₀ W
Dextrose 5% in water.....	D ₅ W
Do Not Resuscitate.....	DNR
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
Intramuscular.....	IM
Intranasal.....	IN
Intraosseous.....	IO
Intravenous.....	IV
Joules.....	J
Kilogram.....	Kg
Laryngeal Mask Airway.....	LMA

ACCEPTED ABBREVIATIONS Continued

Mean Arterial Pressure	MAP
Milligram	mg
Millilitre	mL
Millimole	mmol
Minute	min
Modified Early Warning Score	MEWS
Motor Vehicle Collision	MVC
Myocardial Infarction	MI
Milliequivalent	mEq
Millimetres of mercury	mmHg
Nasopharyngeal airway	NPA
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 Rate	PEFR
Per rectum	PR
Per vagina	PV
Percutaneous Coronary Intervention	PCI
Personal Protective Equipment	PPE
Pulseless Electrical Activity	PEA
Pulseless Ventricular Tachycardia	pVT
Registered Medical Practitioner	RMP
Registered Psychiatric Nurse	RPN
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
Supraventricular Tachycardia	SVT
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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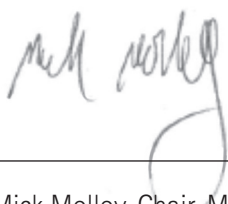
INTRODUCTION

Welcome to the 2017 edition of the Clinical Practice Guidelines for pre-hospital care in Ireland. The field of pre-hospital care is still in its infancy and rapidly developing, as is evident from the 386 Clinical Practice Guidelines covering both responder and practitioner levels from Cardiac First Responder to Advanced Paramedic level.

A number of CPGs have been updated to reflect the 2015 guidelines from the International Liaison Committee on Resuscitation (ILCOR).

I would like to thank the focus groups for the substantial work they have completed on spinal injury management, which is reflected in the updated guidance on appropriate use of spinal motion restriction. Pain management has also been enhanced with the addition of Methoxyflurane and Ketamine, which will substantially improve management of pain for certain groups of patients.

We have developed a robust Delphi process for development and review of CPGs thanks to the work of Brian Power. This process prioritises those issues that are clinically important and likely to impact the widest group of patients. I would like to thank all the members of the Medical Advisory Committee for their work on this edition of the CPGs and on the Delphi process; without their input it would not have been possible to complete this body of work. It is our intention to develop or update guidelines which provide an effective and efficient practice of pre-hospital care. Feedback is welcomed on this edition and on issues you feel are not addressed but encountered in your pre-hospital practice.



Dr Mick Molloy, Chair, Medical Advisory Committee (May 2013 – June 2016)

Feedback on the CPGs may be sent to CPG-feedback@phecc.ie

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.
4. Special authorisation conditions, if applicable, are adhered to in full.

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.

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,

IMPLEMENTATION Continued

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 lead. 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)

The EFR-BTEC is an education and training standard published in 2014. Entry criteria to this course includes the minimum age of 18 and successful completion of a CFR-Advanced course within one calendar year of commencing the EFR-BTEC course. 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.

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:

- Paramedics and advanced paramedics should use manual defibrillation for all age groups
- EMTs and responders shall use AED mode for all age groups

Pre-Hospital Spinal Injury Management







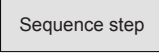

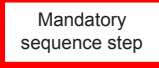

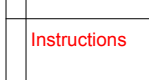


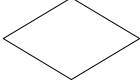
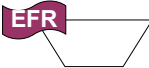
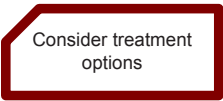


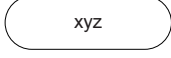
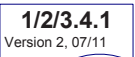
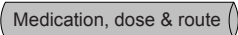
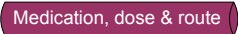


The Medical Advisory Committee has recommended that 'spinal motion restriction' shall be used as the preferred terminology in relation to pre-hospital spinal injury management. They further recommend that at paramedic and advanced paramedic levels a 'spinal injury rule in' should apply and not actively performing 'spinal motion restriction' on all trauma patients. Details of all recommendations are available in Appendix 6.

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CLINICAL PRACTICE GUIDELINES for EMERGENCY FIRST RESPONDER

(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 (Responder)

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 112/999 using the RED card process, or
 - Obtain practitioner help on scene through pre determined processes.
3. A person has capacity in respect to clinical decisions affecting themselves unless the contrary is shown (Assisted Decision Making (Capacity) Act 2015).
4. 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.
5. 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 (Responder)

6. 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 112/999 is called early.
7. Control all external haemorrhage.
8. Identify and manage other conditions.
9. Place the patient in the appropriate posture according to the presenting condition.
10. Ensure the maintenance of normal body temperature (unless a CPG indicates otherwise).
11. Provide reassurance at all times.
12. Monitor and record patient's vital observations.
13. Maintain responsibility for patient care until handover to an appropriate responder/practitioner.
14. Complete a patient care record following an interaction with a patient.
15. Identify the clinical lead on scene.

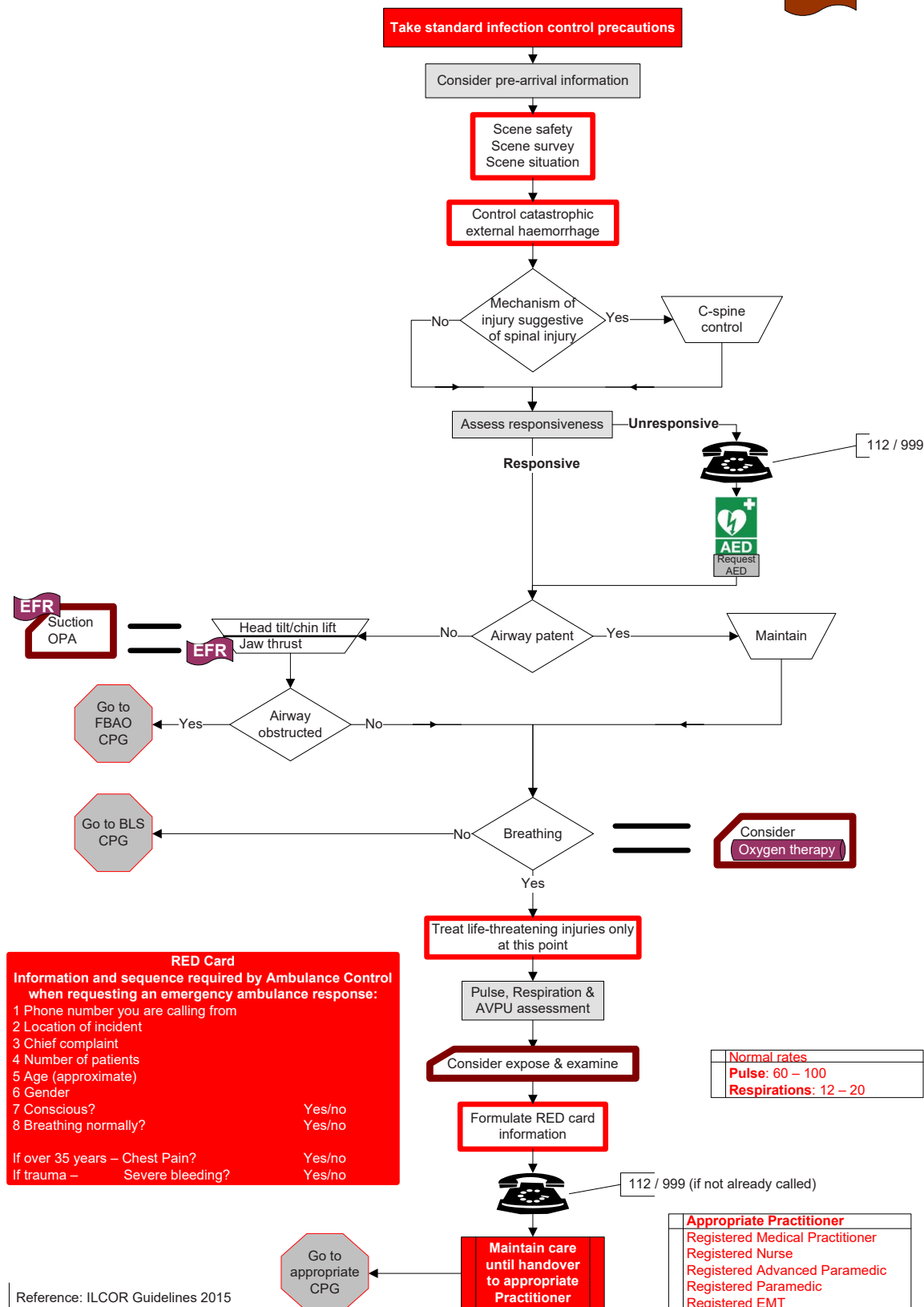
SECTION 2 - Patient Assessment

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Version 4, 03/2016

Primary Survey - Adult

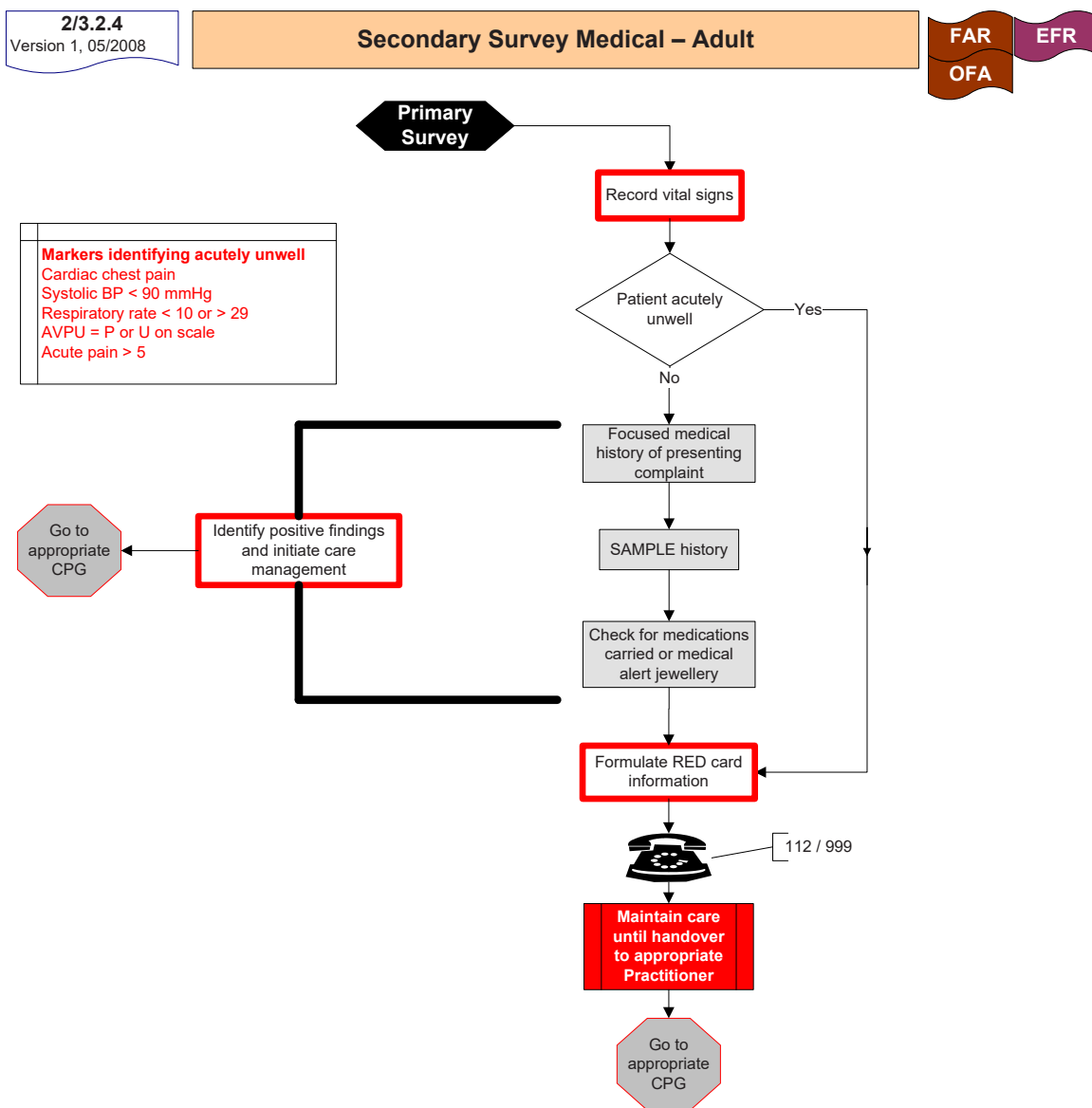
FAR
OFA

EFR



Reference: ILCOR Guidelines 2015

SECTION 2 – Patient Assessment



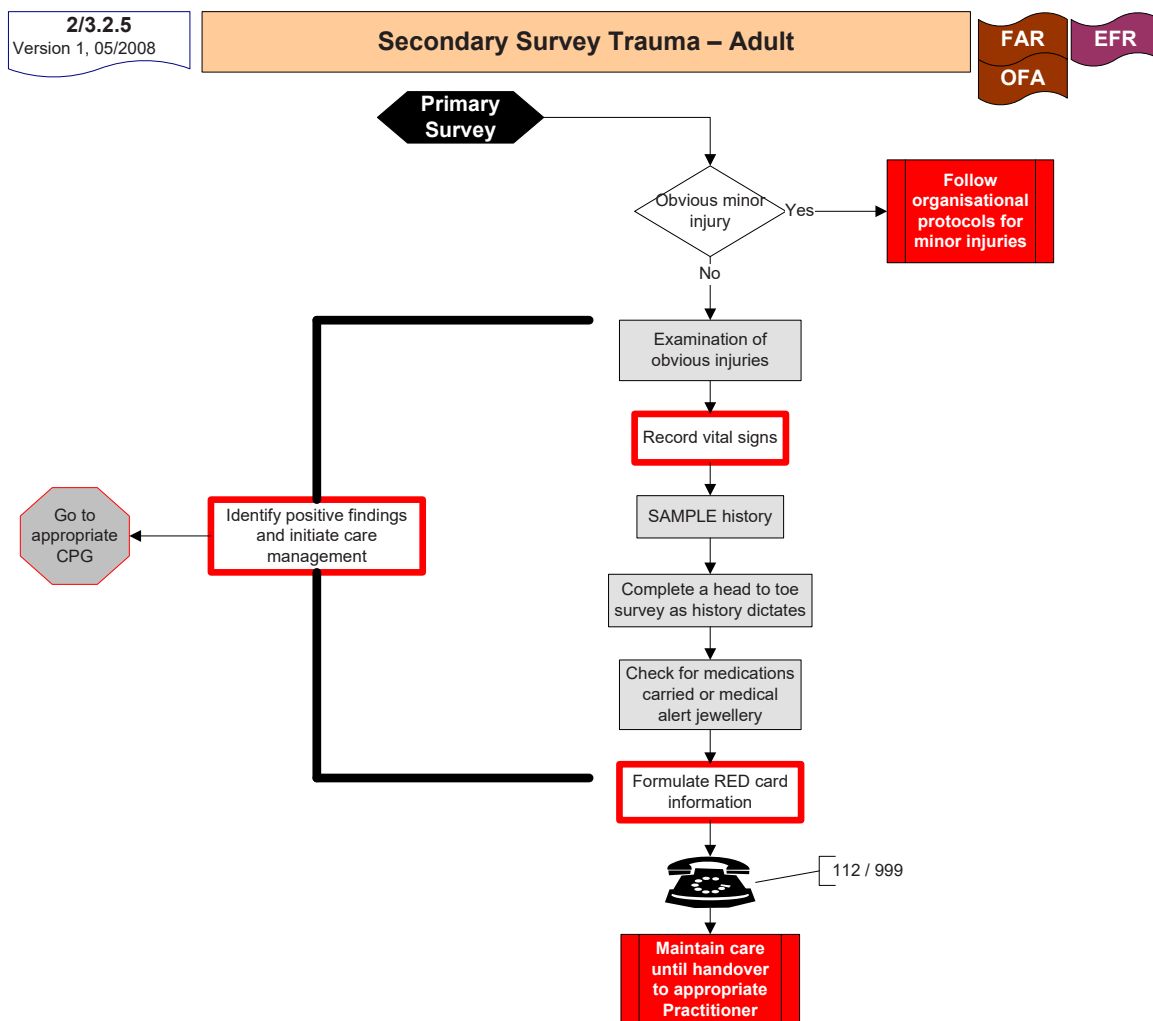
RED Card	
Information and sequence required by Ambulance Control when requesting an emergency ambulance response:	
1 Phone number you are calling from	
2 Location of incident	
3 Chief complaint	
4 Number of patients	
5 Age (approximate)	
6 Gender	
7 Conscious?	Yes/no
8 Breathing normally?	Yes/no
If over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

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

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 2 – Patient Assessment

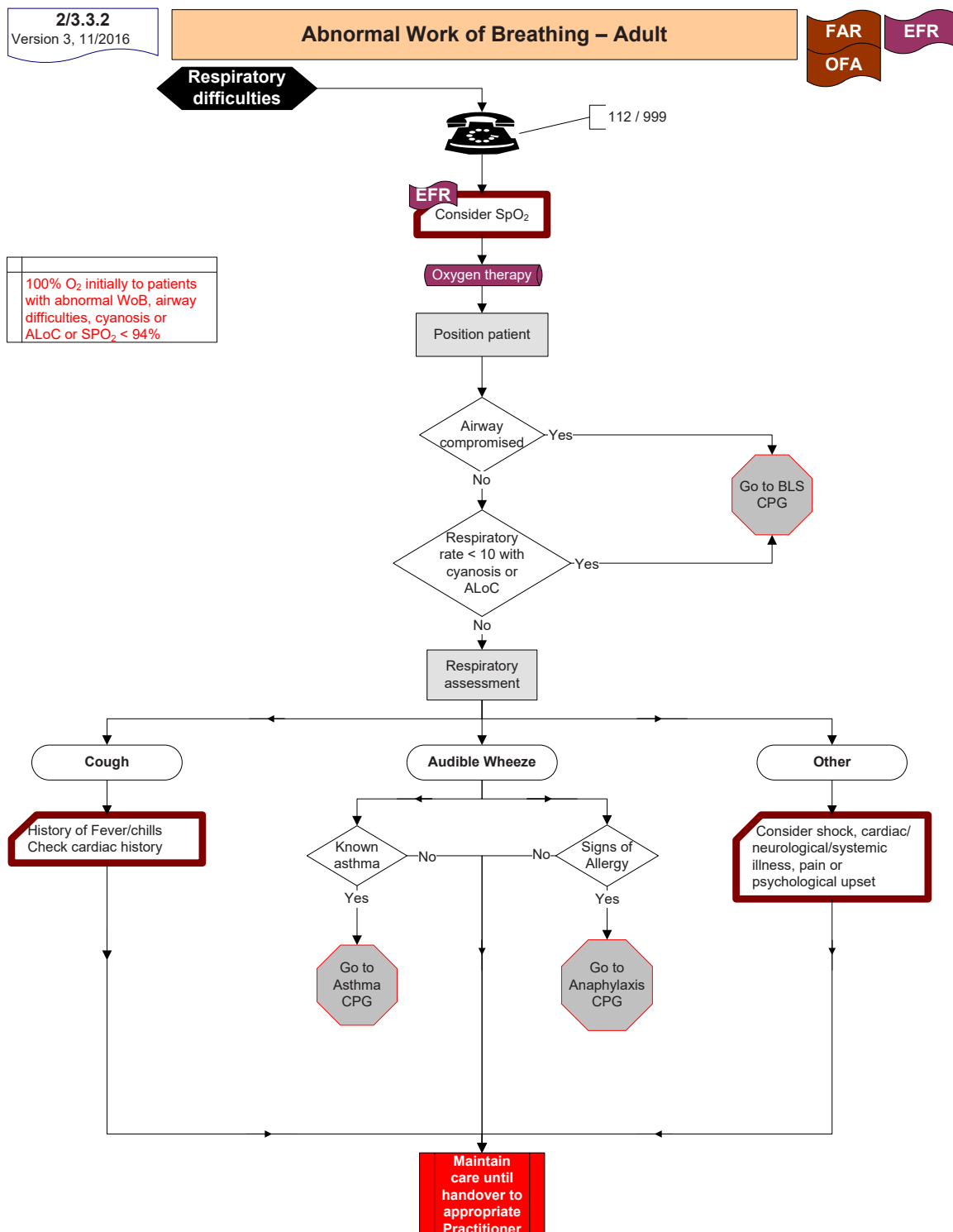


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7 Conscious?	Yes/no	
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If over 35 years – Chest Pain?	Yes/no	
If trauma – Severe bleeding?	Yes/no	

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



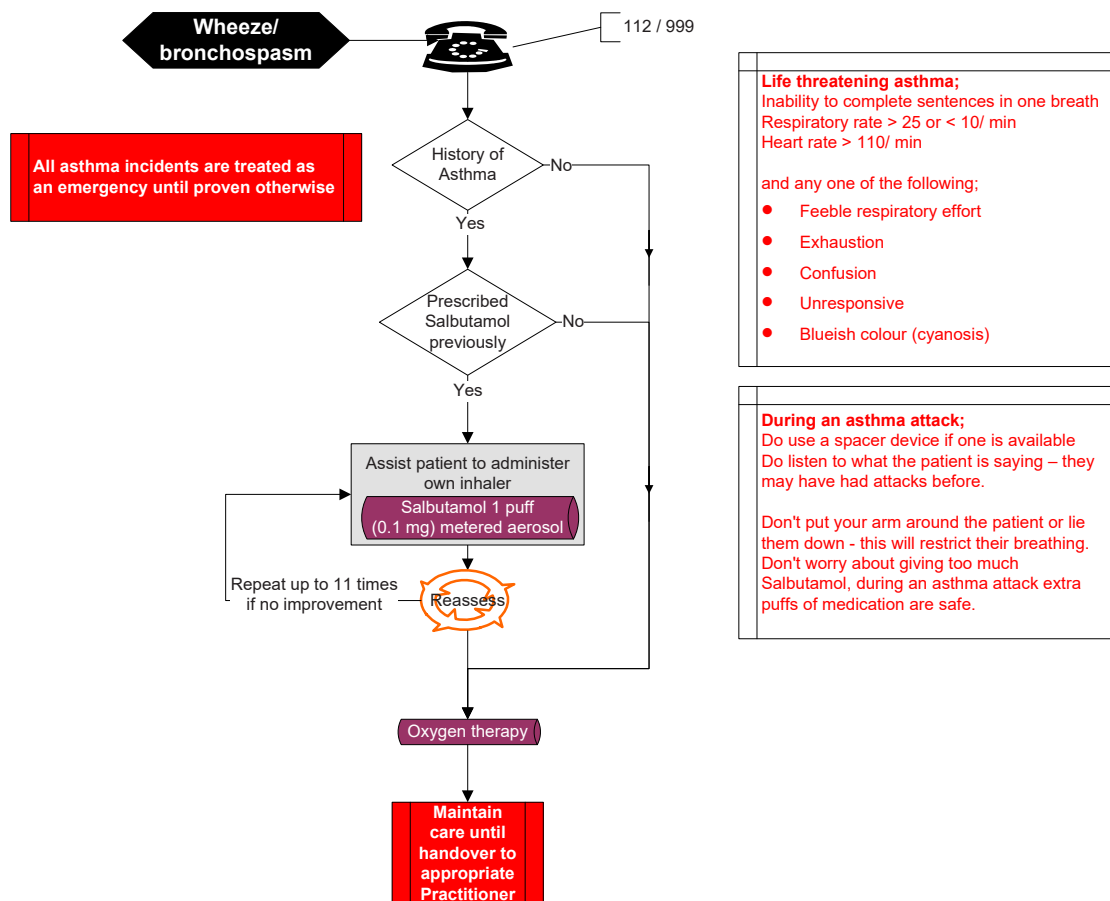
SECTION 3 – Respiratory Emergencies

2/3.3.4
Version 3, 11/2016

Asthma – Adult

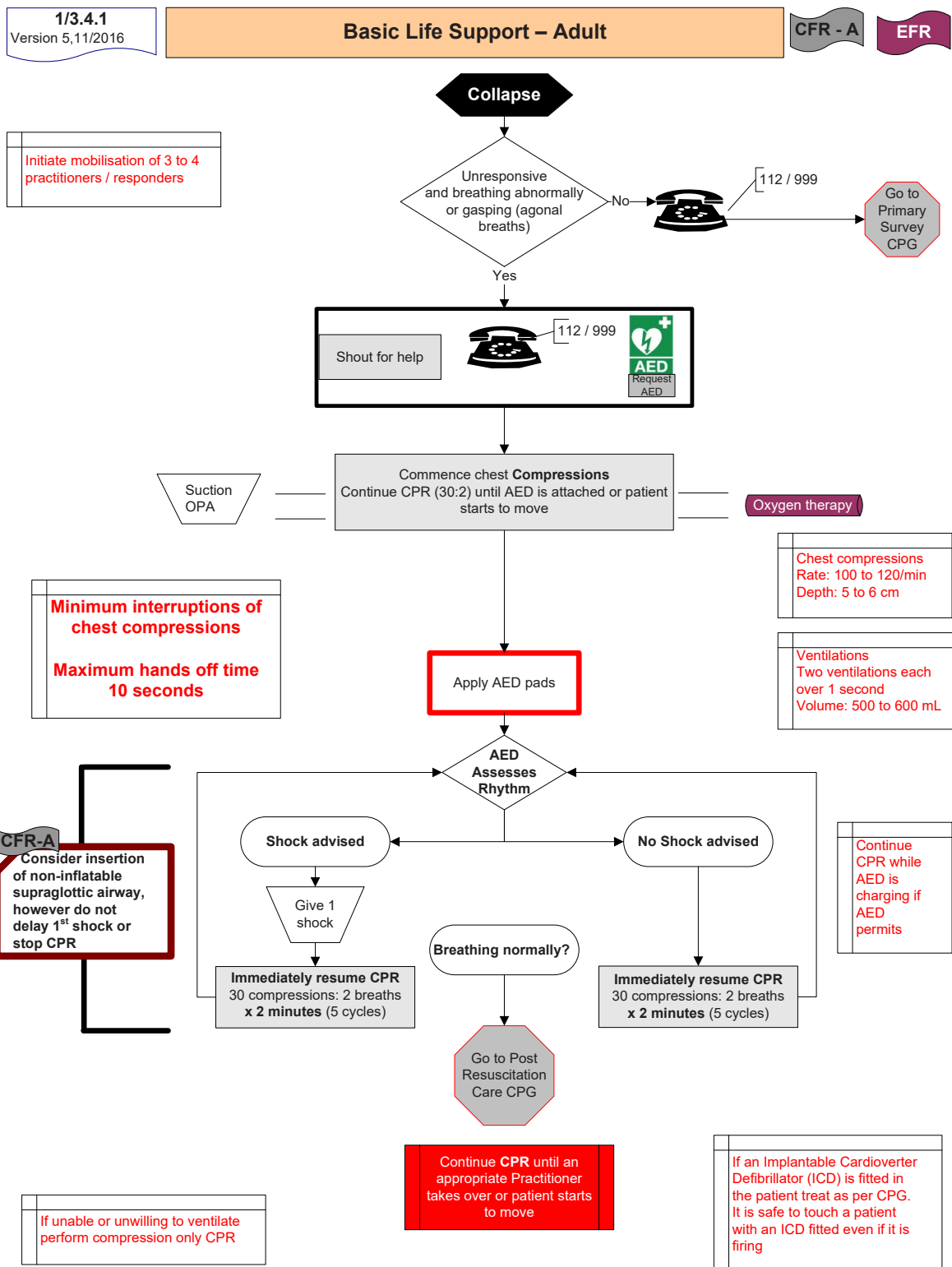
FAR
OFA

EFR



Reference: Management of an Acute Asthma Attack in Adults, Clinical Guideline No. 14, National Clinical Effectiveness Committee, 2015, Emergency Asthma Guidelines, British Thoracic Society, 2008, British Guidelines on the Management of Asthma, a national clinical guideline, ILCOR Guidelines 2015, Asthma Society of Ireland.

SECTION 4 - Medical Emergencies

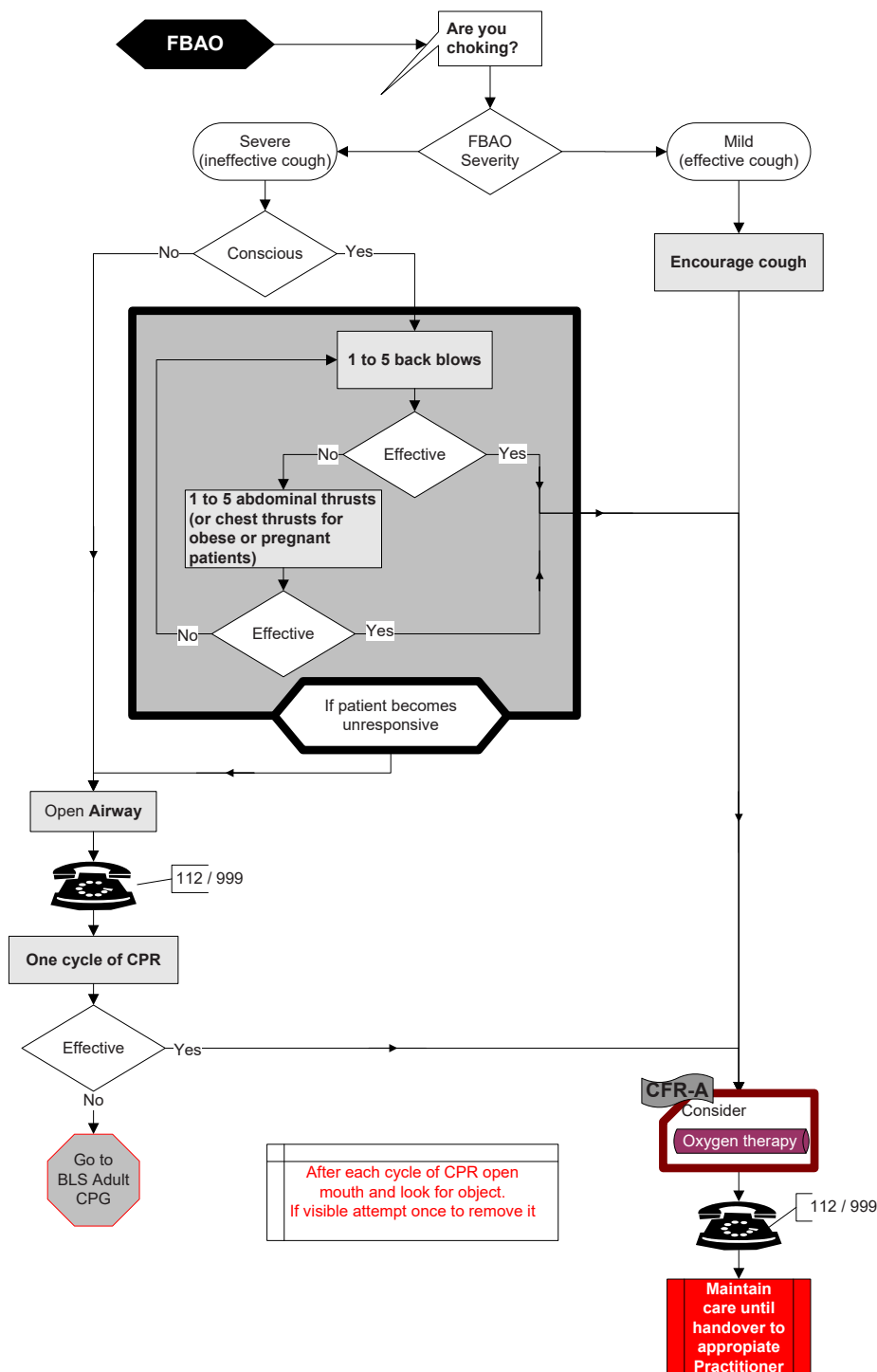
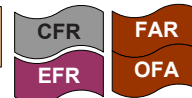


Reference: ILCOR Guidelines 2015

SECTION 4 - Medical Emergencies

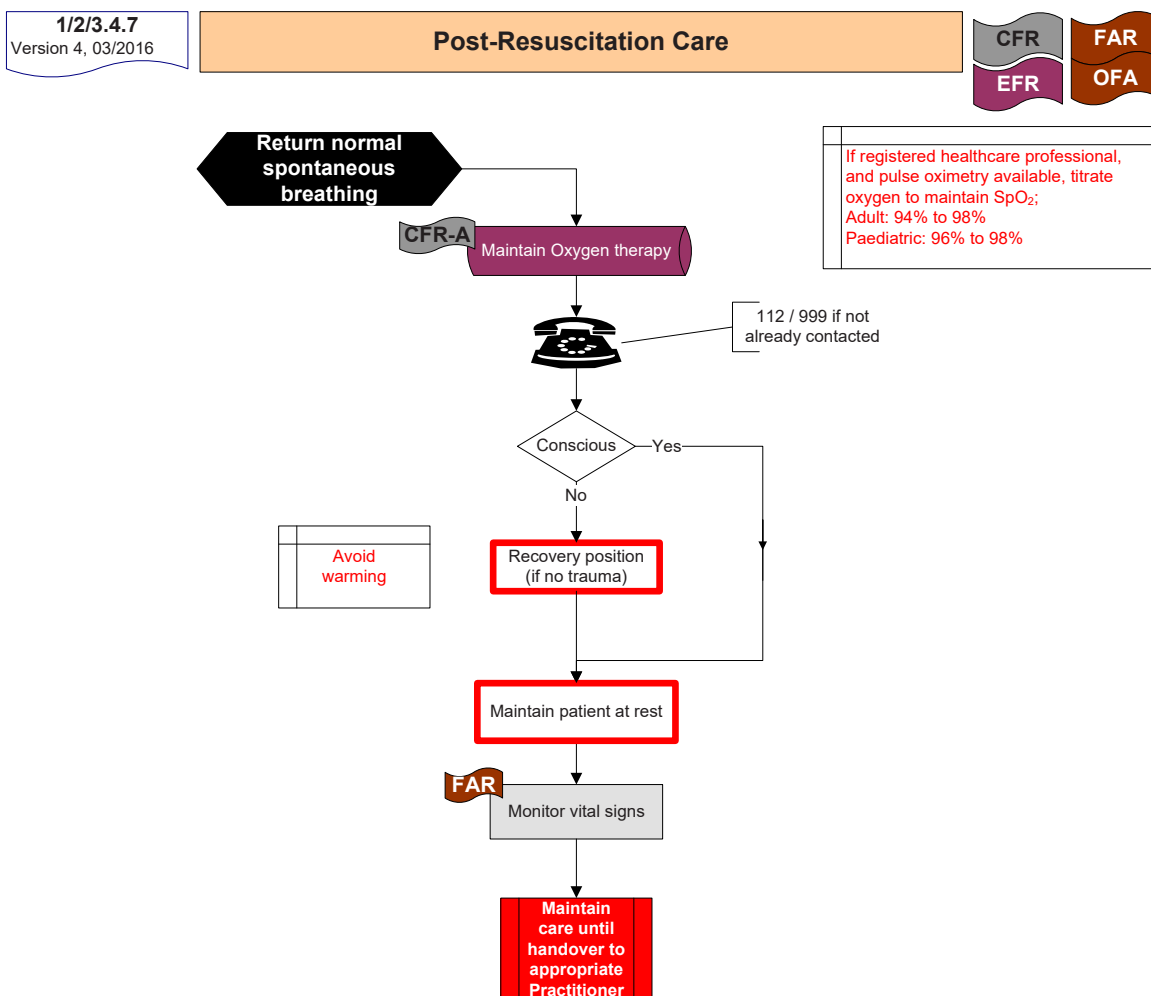
1/2/3.4.2
Version 4 03/2016

Foreign Body Airway Obstruction – Adult



Reference: ILCOR Guidelines 2015

SECTION 4 – Medical Emergencies

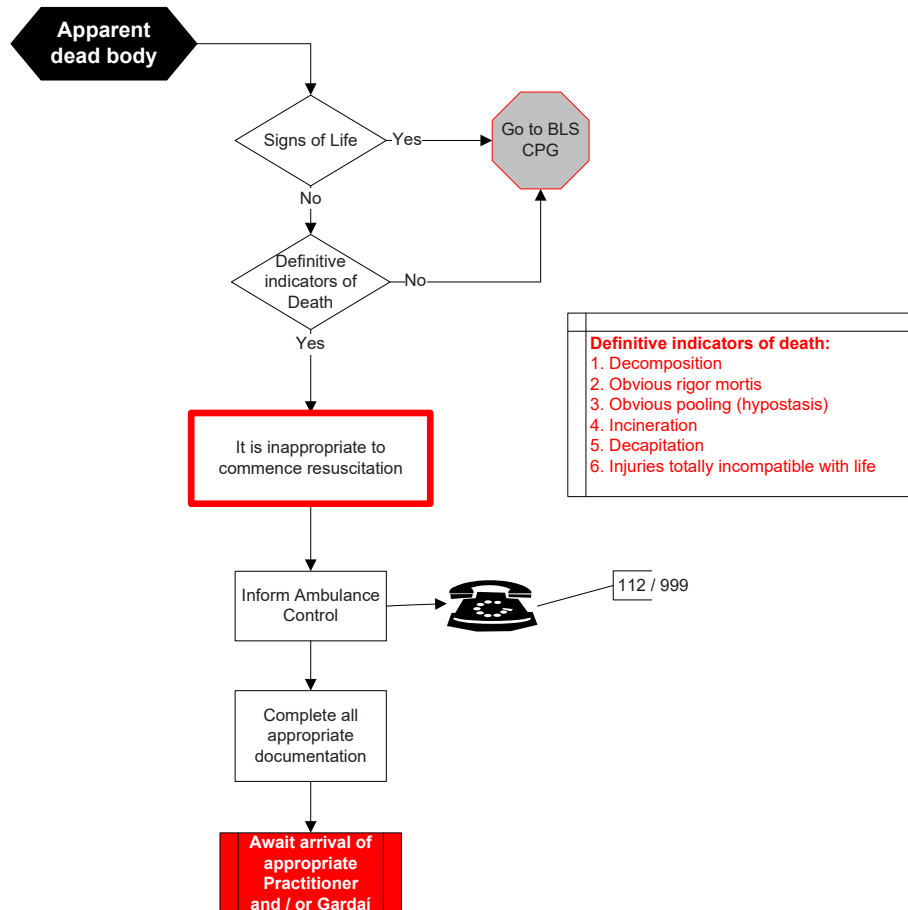
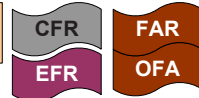


Reference: ILCOR Guidelines 2015

SECTION 4 - Medical Emergencies

1/2/3.4.9
Version 2, 05/2008

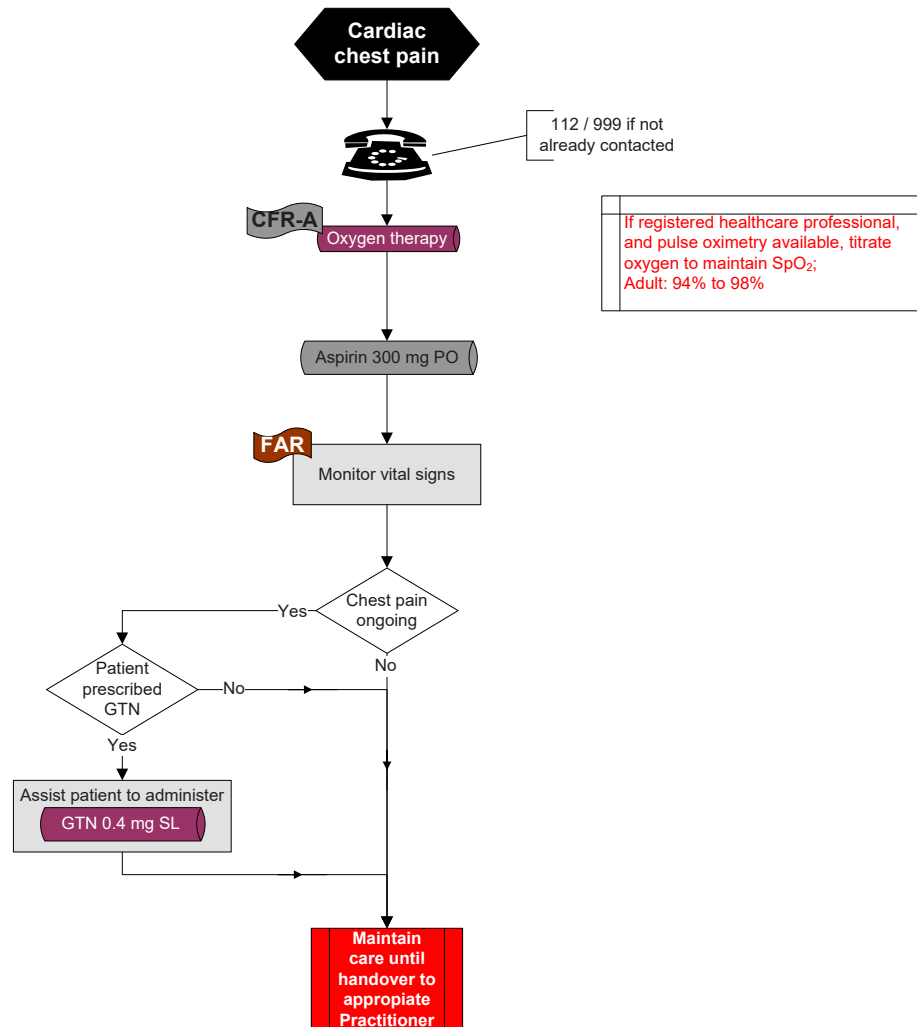
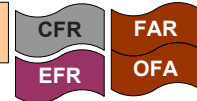
Recognition of Death – Resuscitation not Indicated



SECTION 4 – Medical Emergencies

1/2/3.4.10
Version 3, 03/2016

Cardiac Chest Pain – Acute Coronary Syndrome



Reference: ILCOR Guidelines 2015

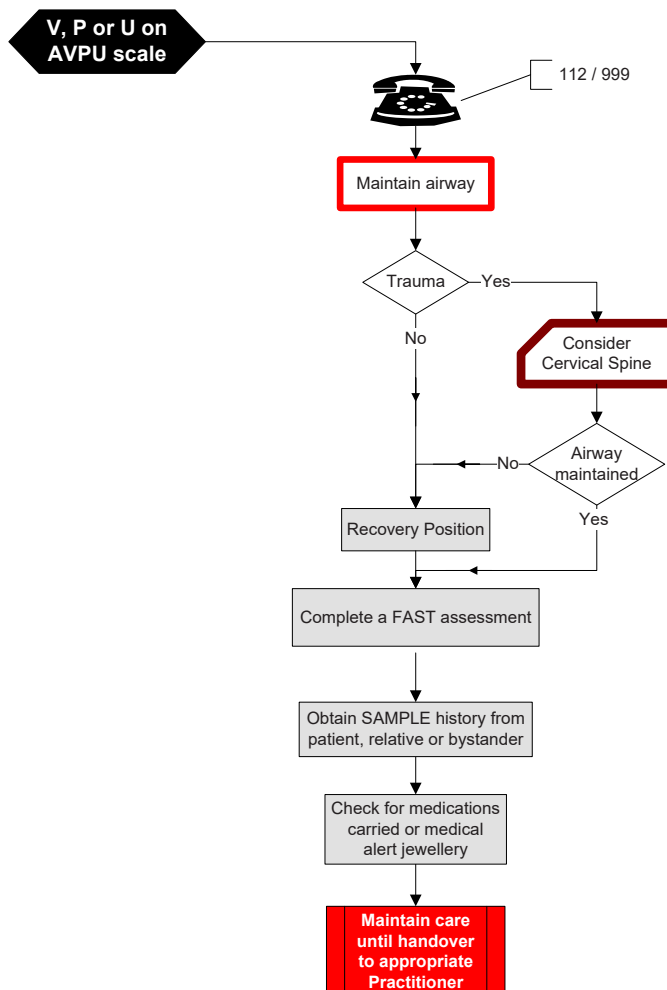
SECTION 4 – Medical Emergencies

2/3.4.14
Version 1, 05/2008

Altered Level of Consciousness – Adult

OFA
FAR

EFR



F – facial weakness

Can the patient smile? Has their mouth or eye drooped? Which side?

A – arm weakness

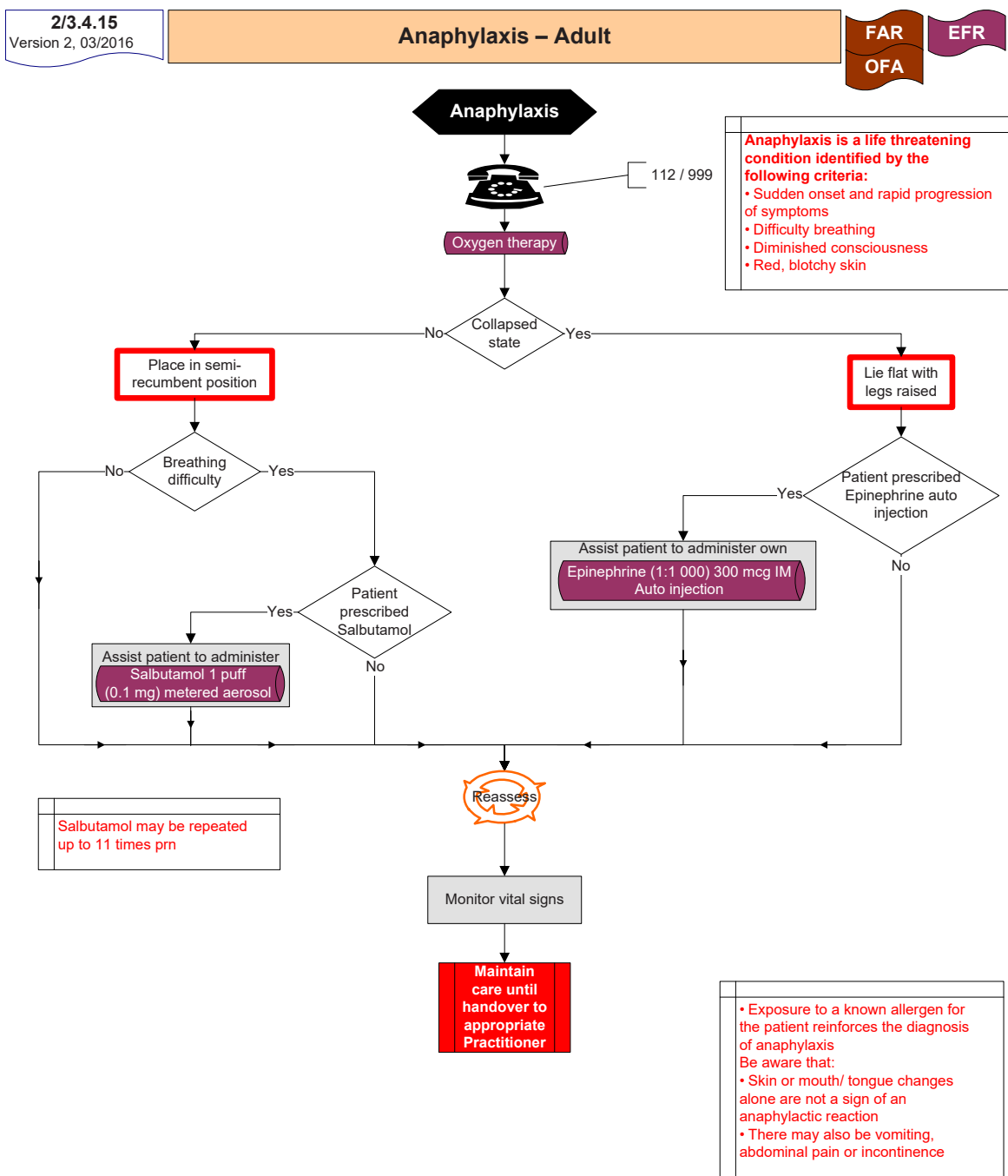
Can the patient raise both arms and maintain for 5 seconds?

S – speech problems

Can the patient speak clearly and understand what you say?

T – time to call 112 (if positive FAST)

SECTION 4 - Medical Emergencies

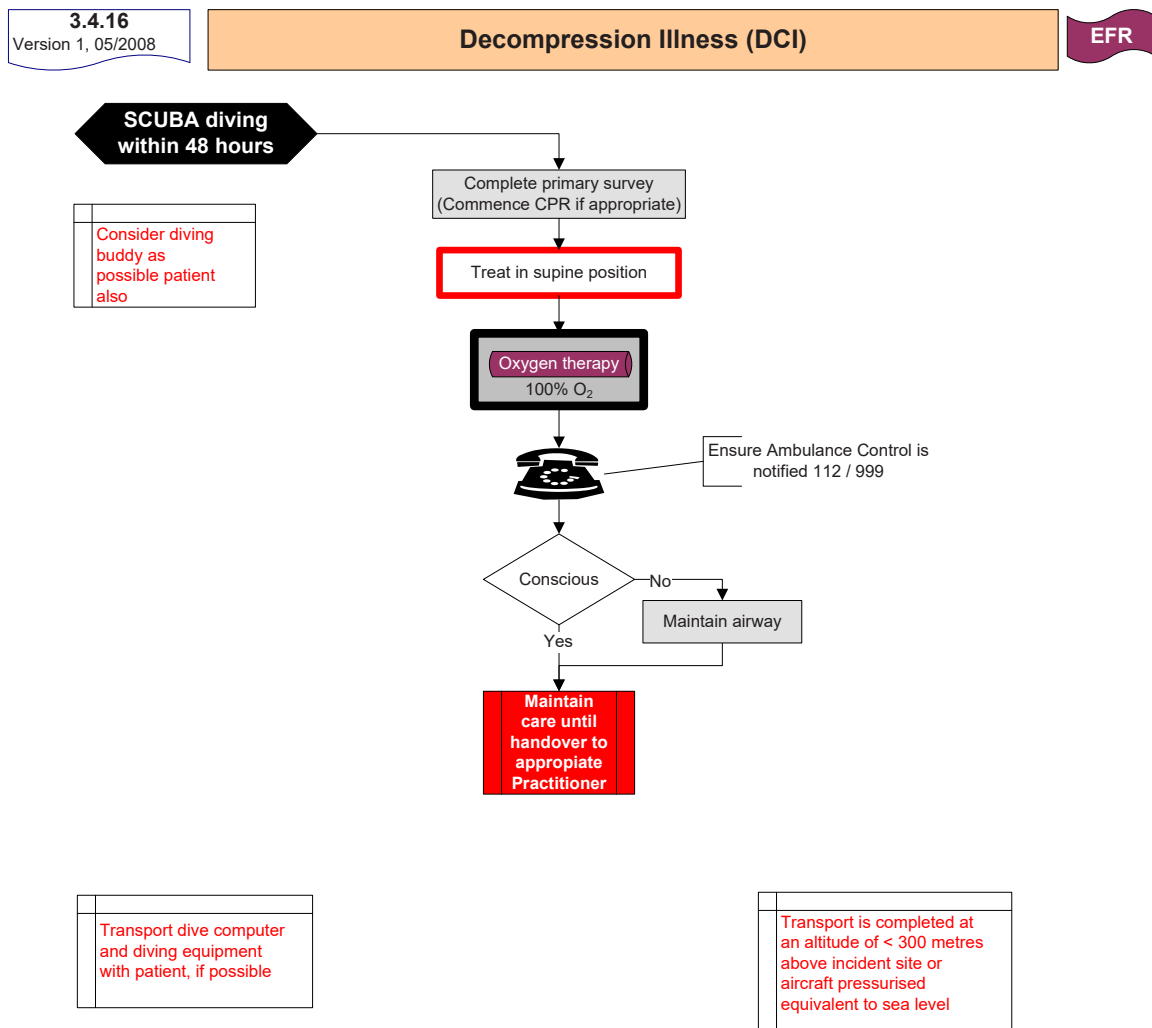


Special Authorisation:
Responders who have received training and are authorised by a Medical Practitioner for a named patient may administer Salbutamol via an aerosol measured dose.

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.

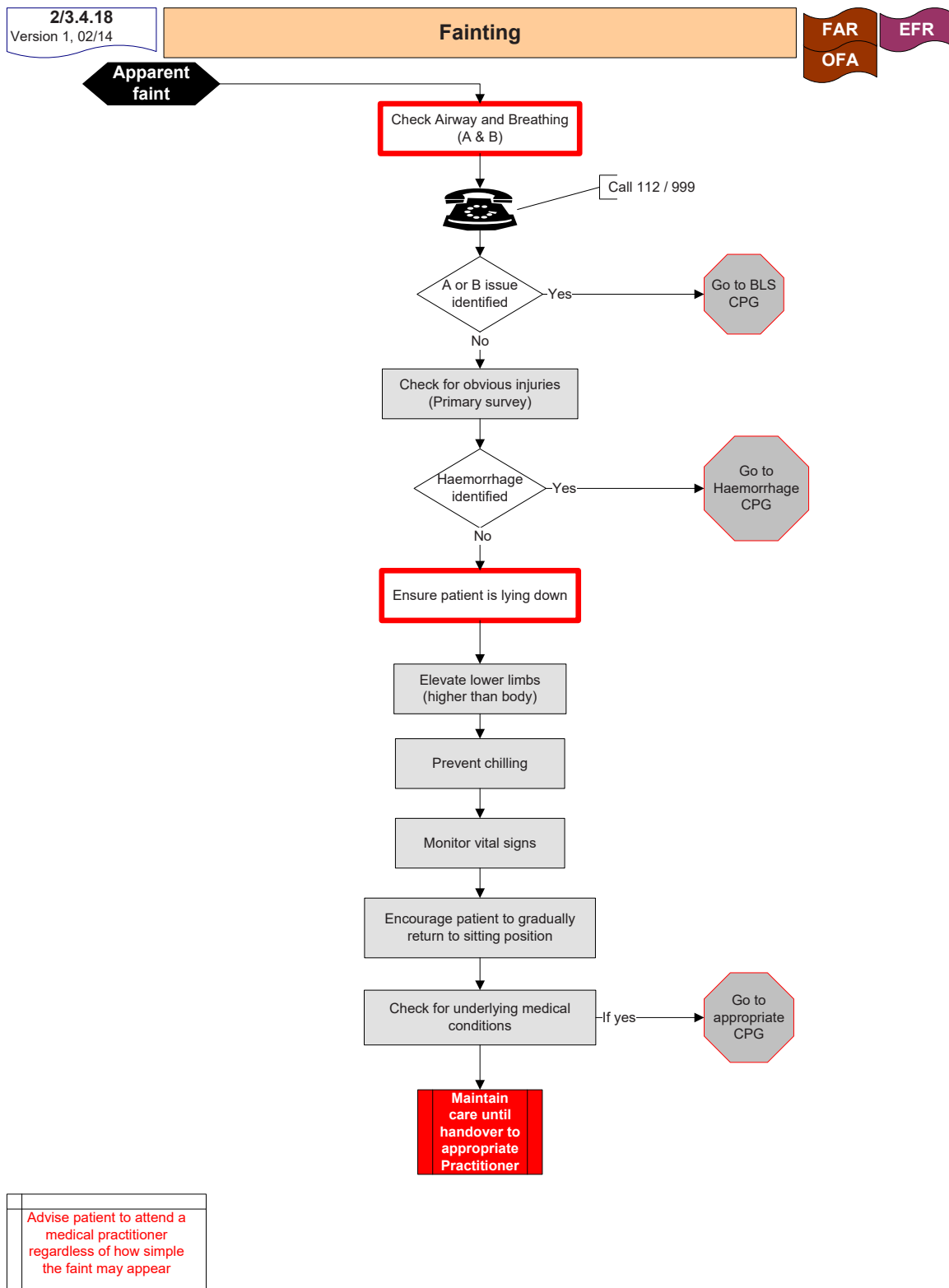
Reference: Immunisation Guidelines for Ireland 2008 RCPI, ILCOR Guidelines 2015

SECTION 4 – Medical Emergencies



Reference: The Primary Clinical Care Manual 3rd Edition, 2003, Queensland Health and the Royal Flying Doctor Service (Queensland Section)

SECTION 4 - Medical Emergencies



Reference: Schoenwetter, David J. Fainting/ Syncope, Emergency Medicine

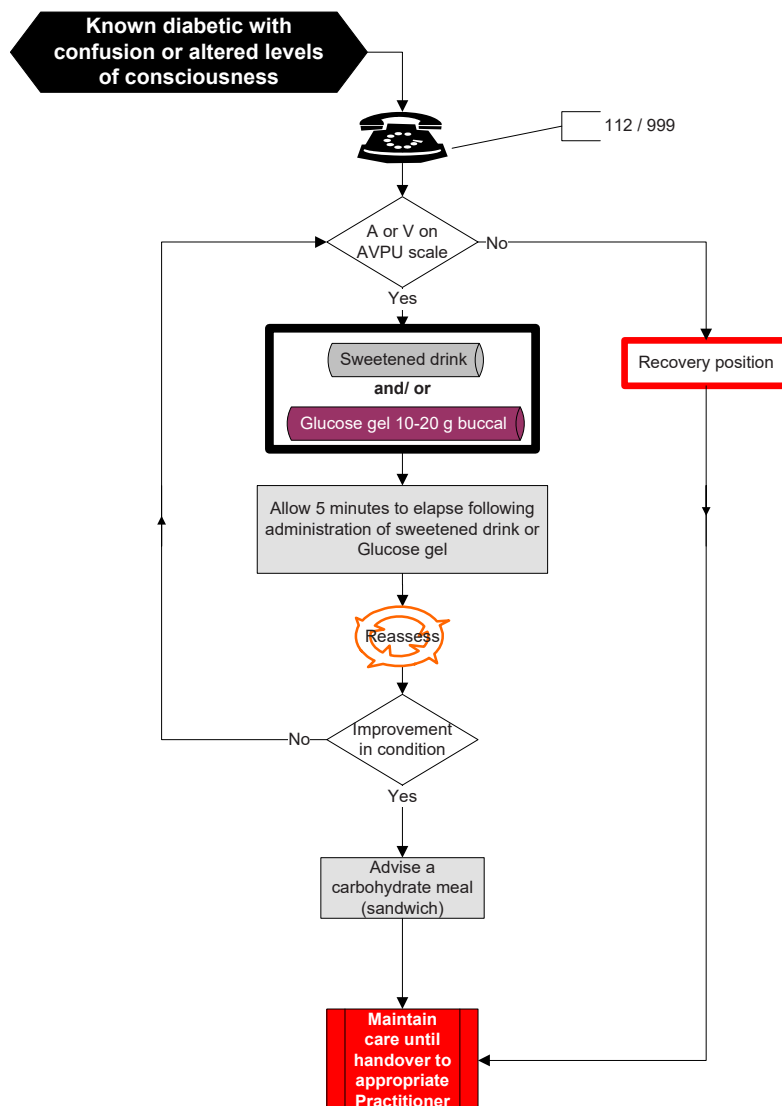
SECTION 4 - Medical Emergencies

2/3.4.19
Version 2, 04/2016

Glycaemic Emergency – Adult

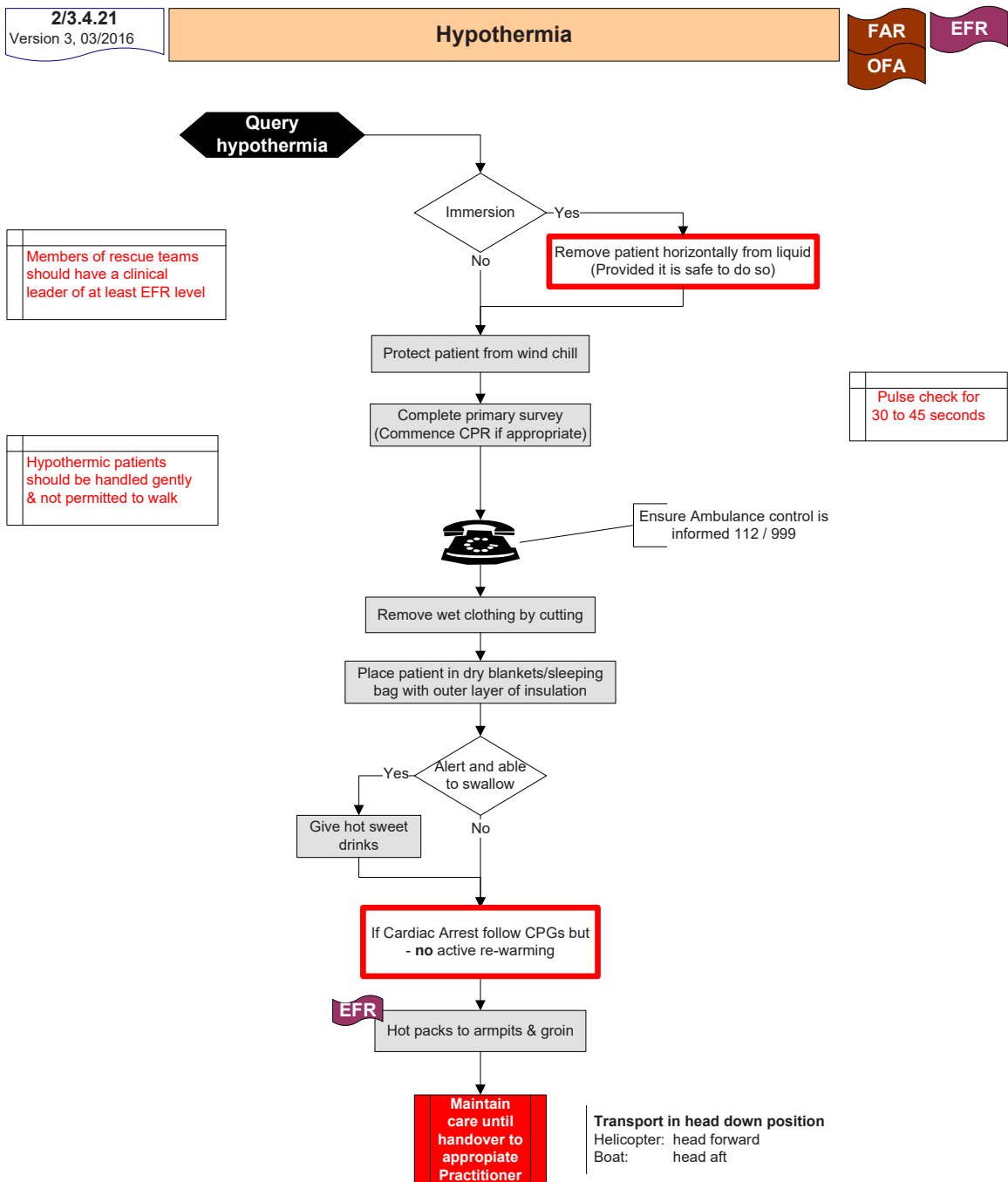
FAR
OFA

EFR



Reference: Mohun J, 2003, First Aid Manual 8th Edition, Irish Red Cross & Order of Malta Ambulance Corps

SECTION 4 - Medical Emergencies



Reference: Golden, F & Tipton M, 2002, Essentials of Sea Survival, Human Kinetics
 European Resuscitation Council Guidelines for Resuscitation 2015
 Pennington M, et al, 1994, Wilderness EMT, Wilderness EMS Institute

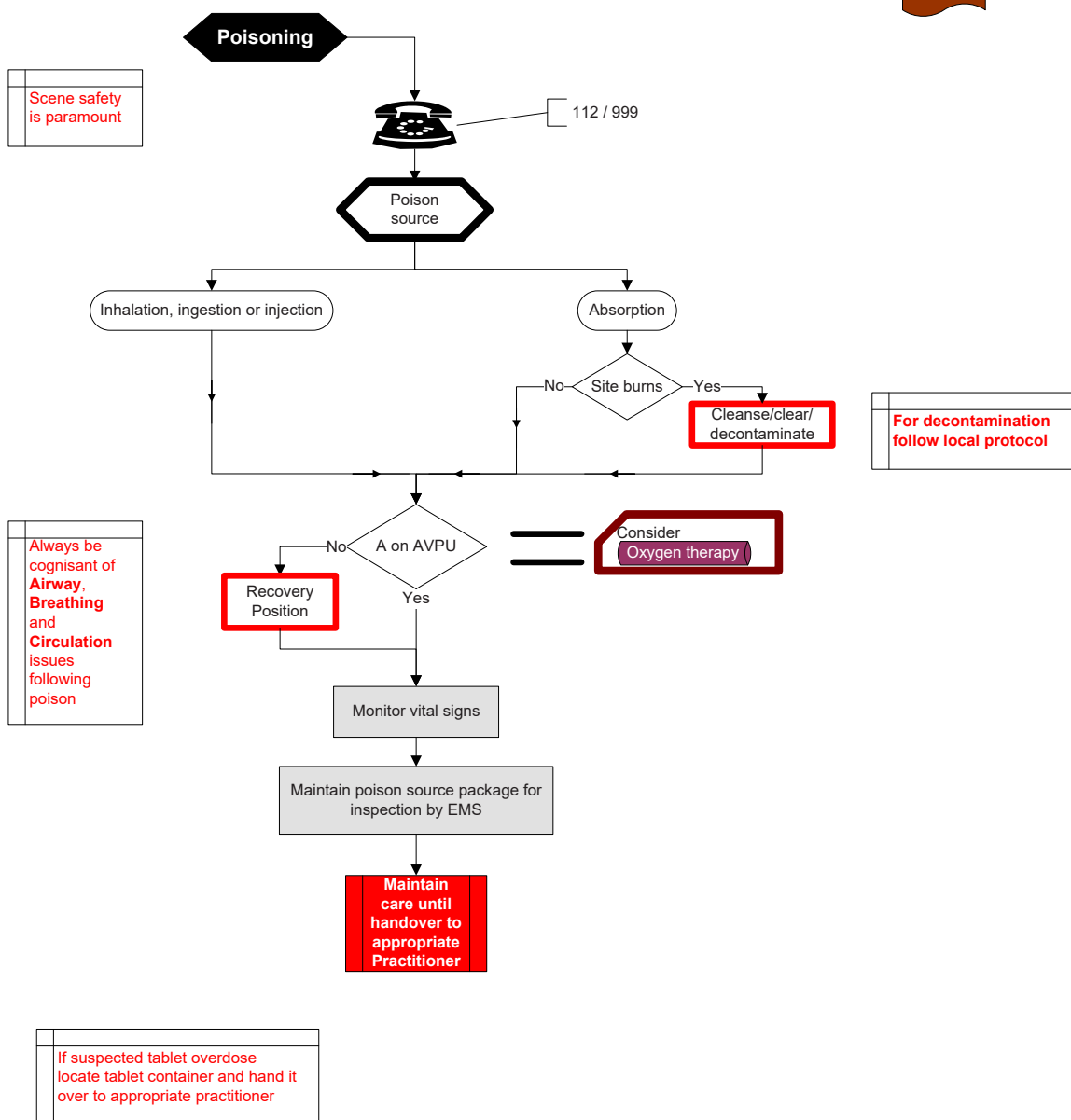
SECTION 4 - Medical Emergencies

2/3.4.22
Version 2, 03/2016

Poisons

FAR
OFA

EFR



Reference: ILCOR Guidelines 2015

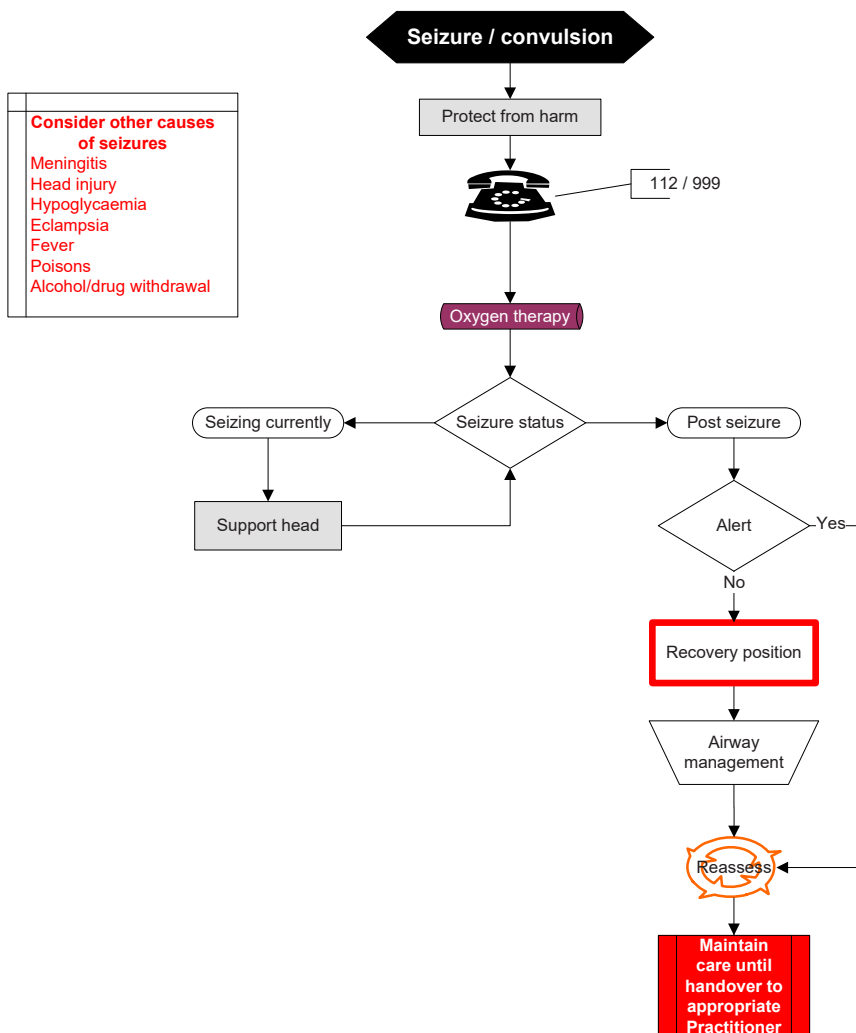
SECTION 4 - Medical Emergencies

2/3.4.23
Version 2, 07/11

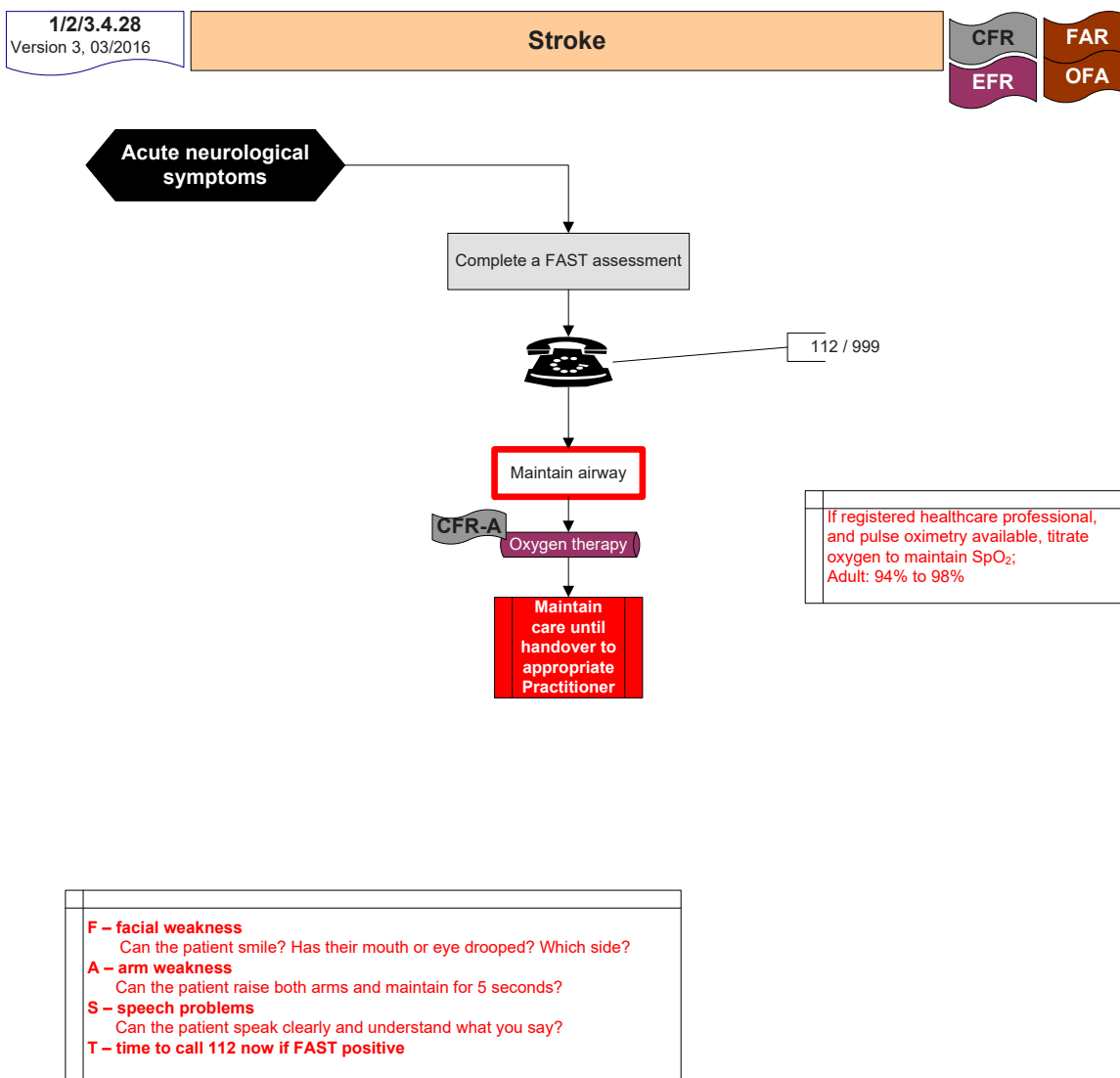
Seizure/Convulsion – Adult

FAR
OFA

EFR



SECTION 4 – Medical Emergencies

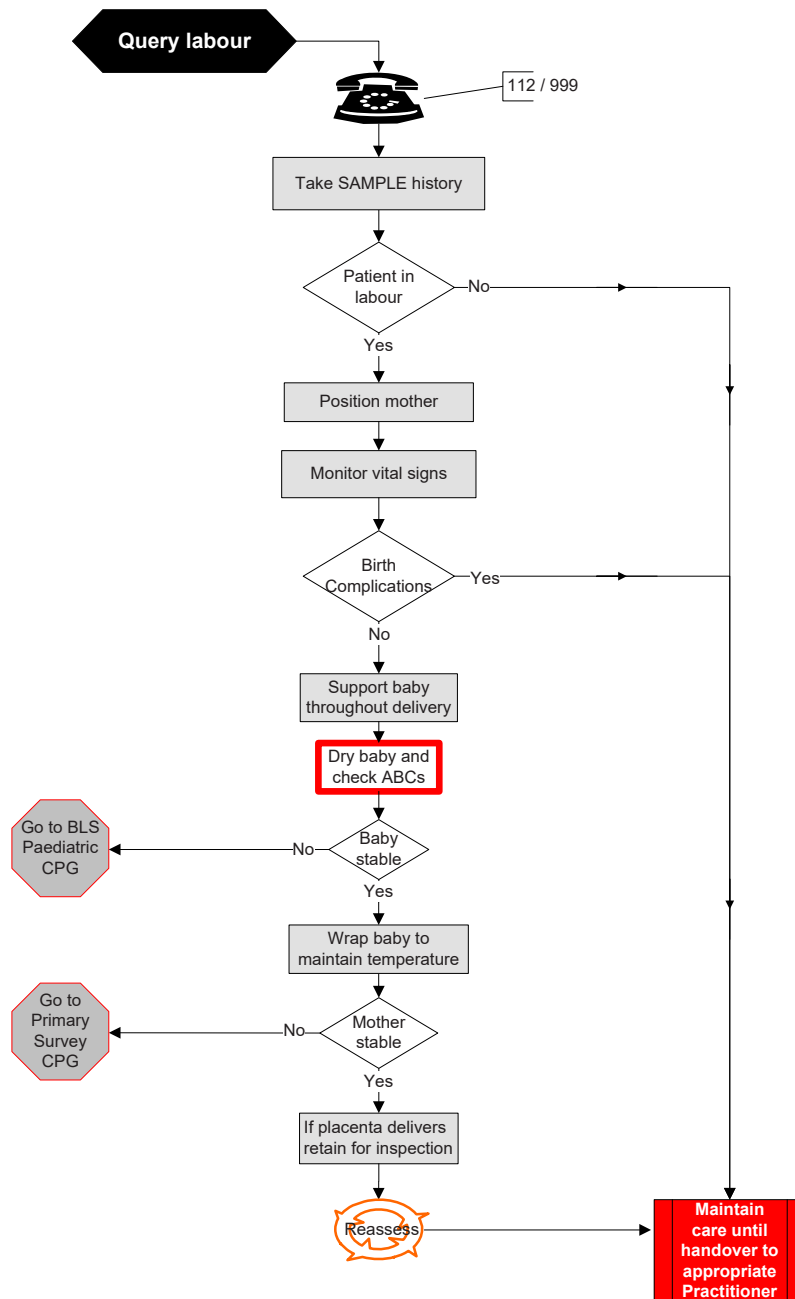


SECTION 5 - Obstetric Emergencies

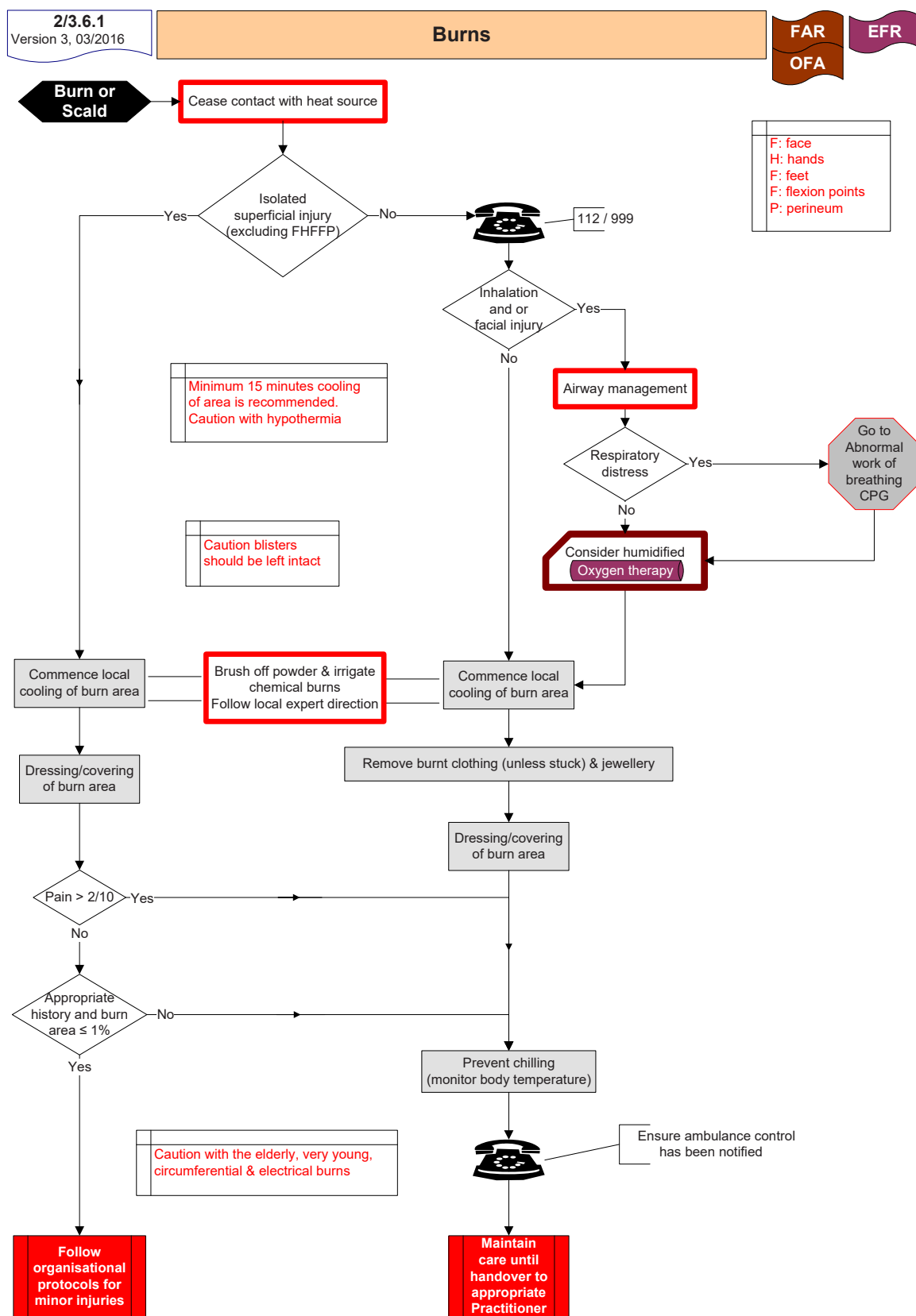
3.5.1
Version 1, 05/08

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 2015

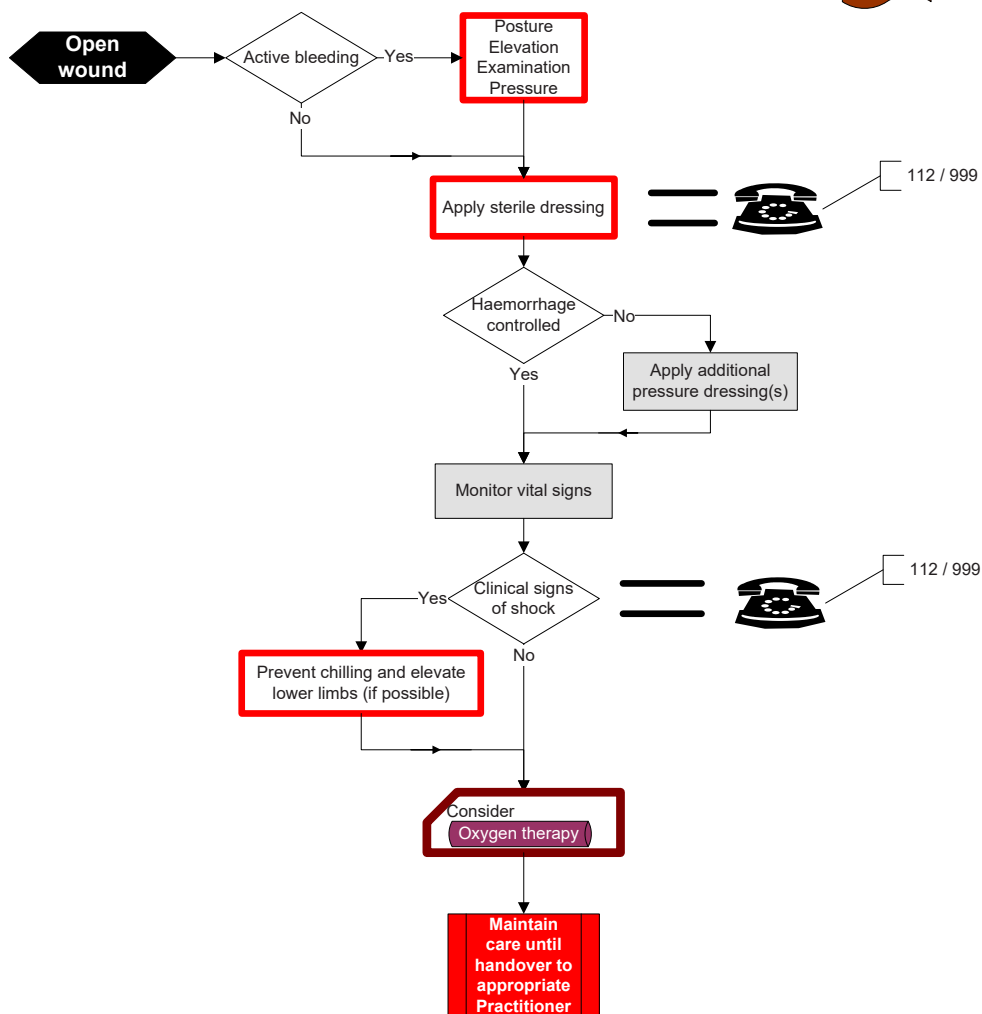
SECTION 6 - Trauma

2/3.6.3
Version 4, 03/2016

External Haemorrhage

FAR
OFA

EFR



SECTION 6 - Trauma

2/3.6.4
Version 2, 05/14

Harness Induced Suspension Trauma

FAR
OFA

EFR

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



**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**



112 / 999

Yes
Patient still
suspended

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

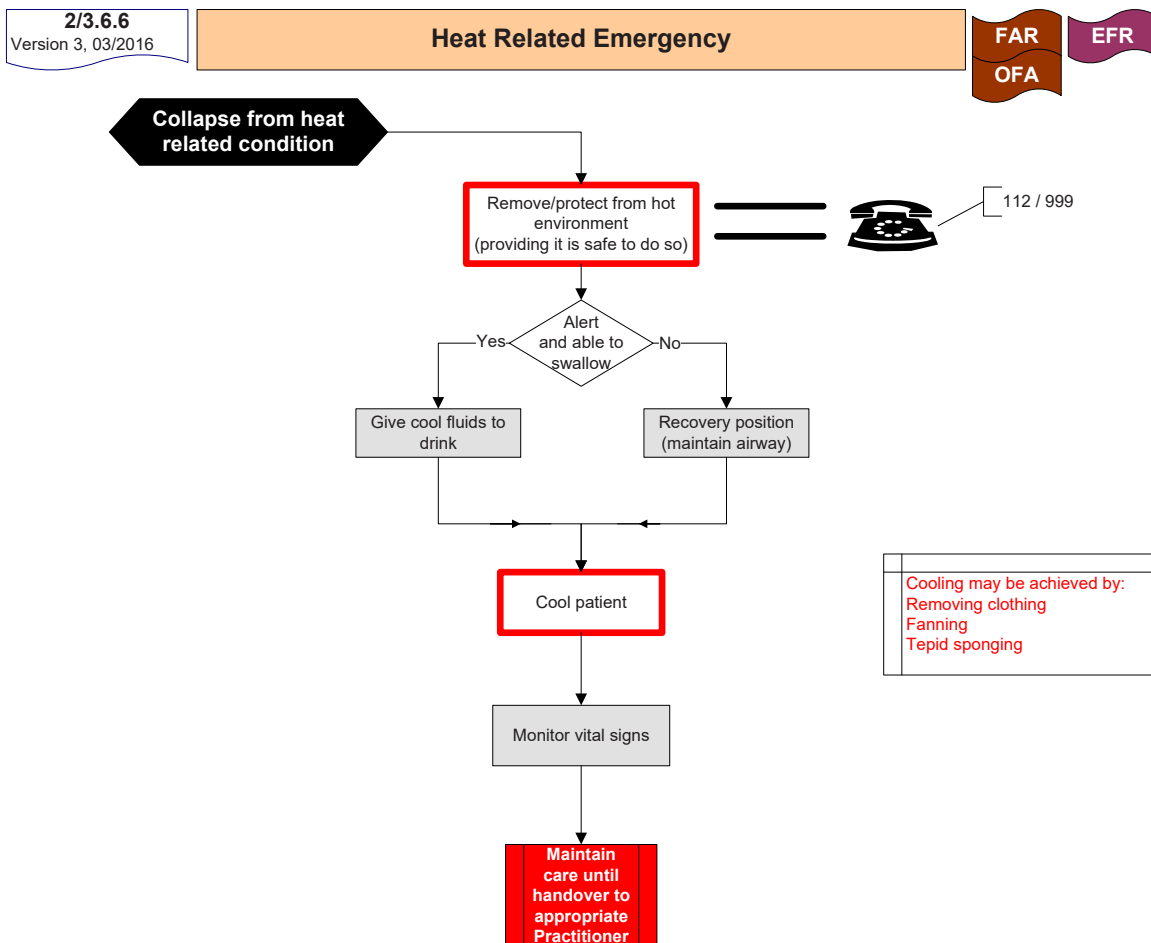
Go to
appropriate
CPG

**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



SECTION 6 - Trauma

2/3.6.7
Version 3, 02/14

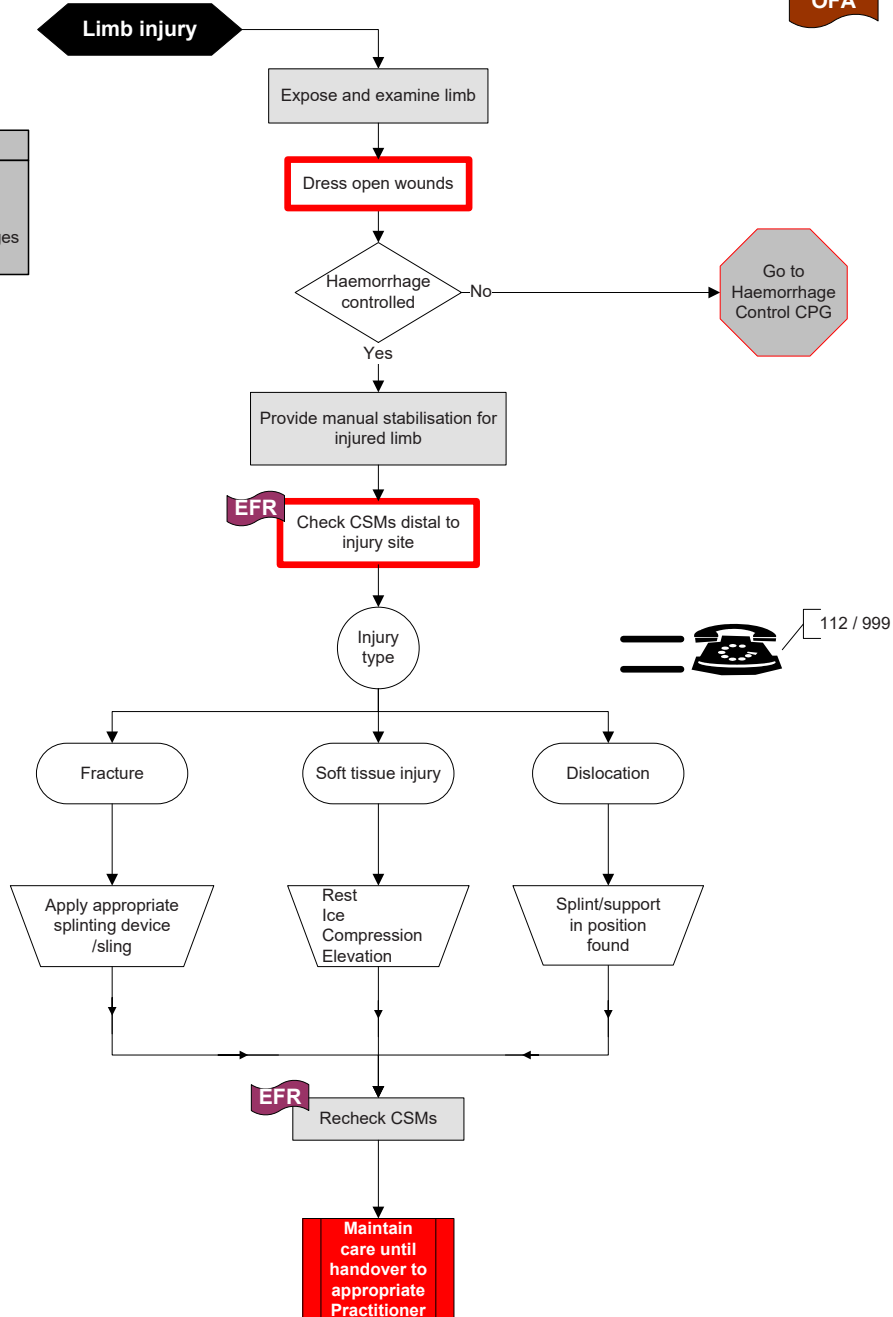
Limb Injury

FAR

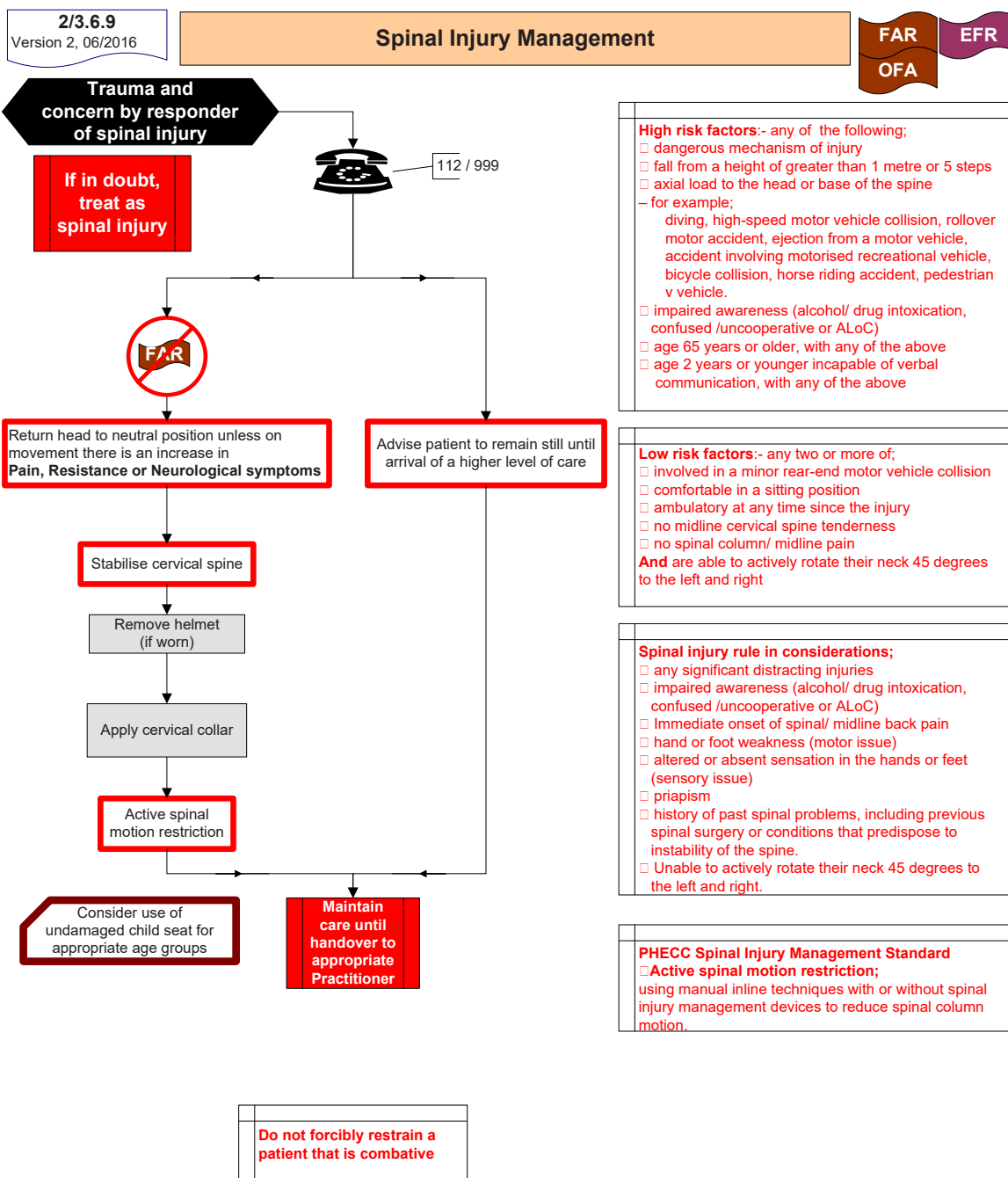
EFR

OFA

Equipment list
Dressings
Triangular bandages
Splinting devices
Compression bandages
Ice packs



SECTION 6 - Trauma



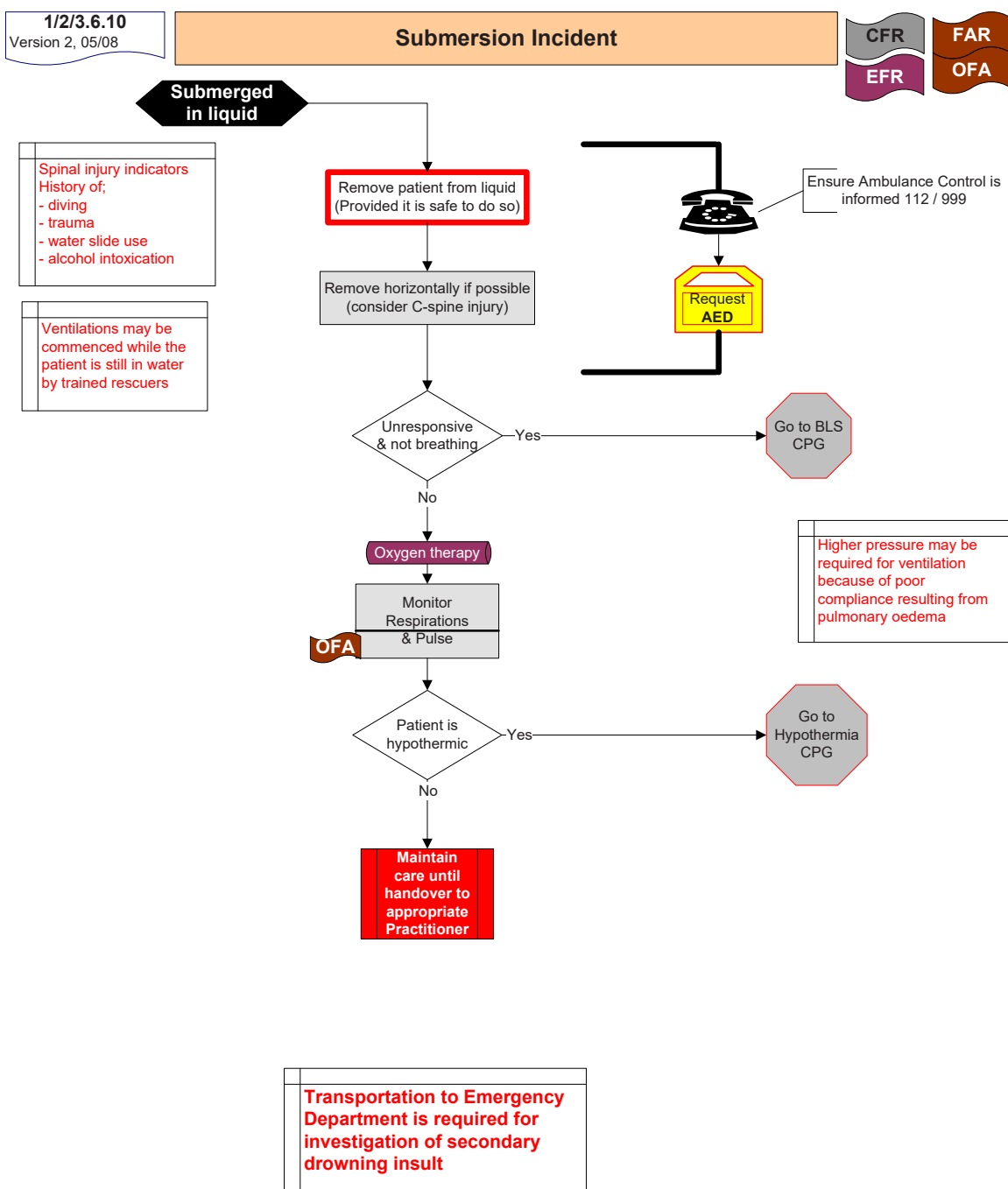
EFR

Special Authorisation:

EFR's who are operating on behalf of a licensed CPG provider may extricate a patient using appropriate equipment 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, and
- 3 the care is recorded on an ACR/PCR which is presented to the transporting Practitioner

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

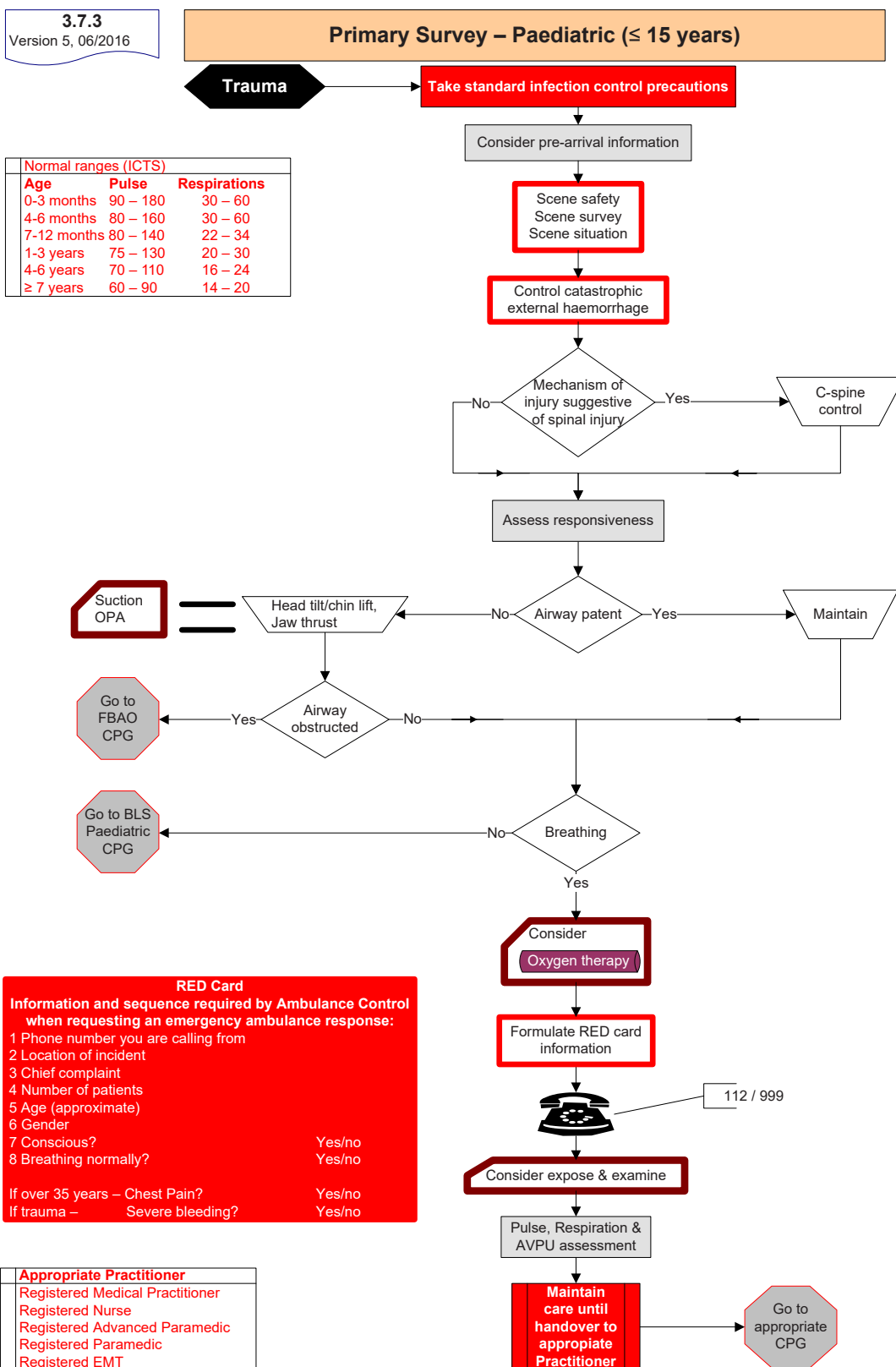
SECTION 7 - Paediatric Emergencies

3.7.3
Version 5, 06/2016

Primary Survey – Paediatric (≤ 15 years)

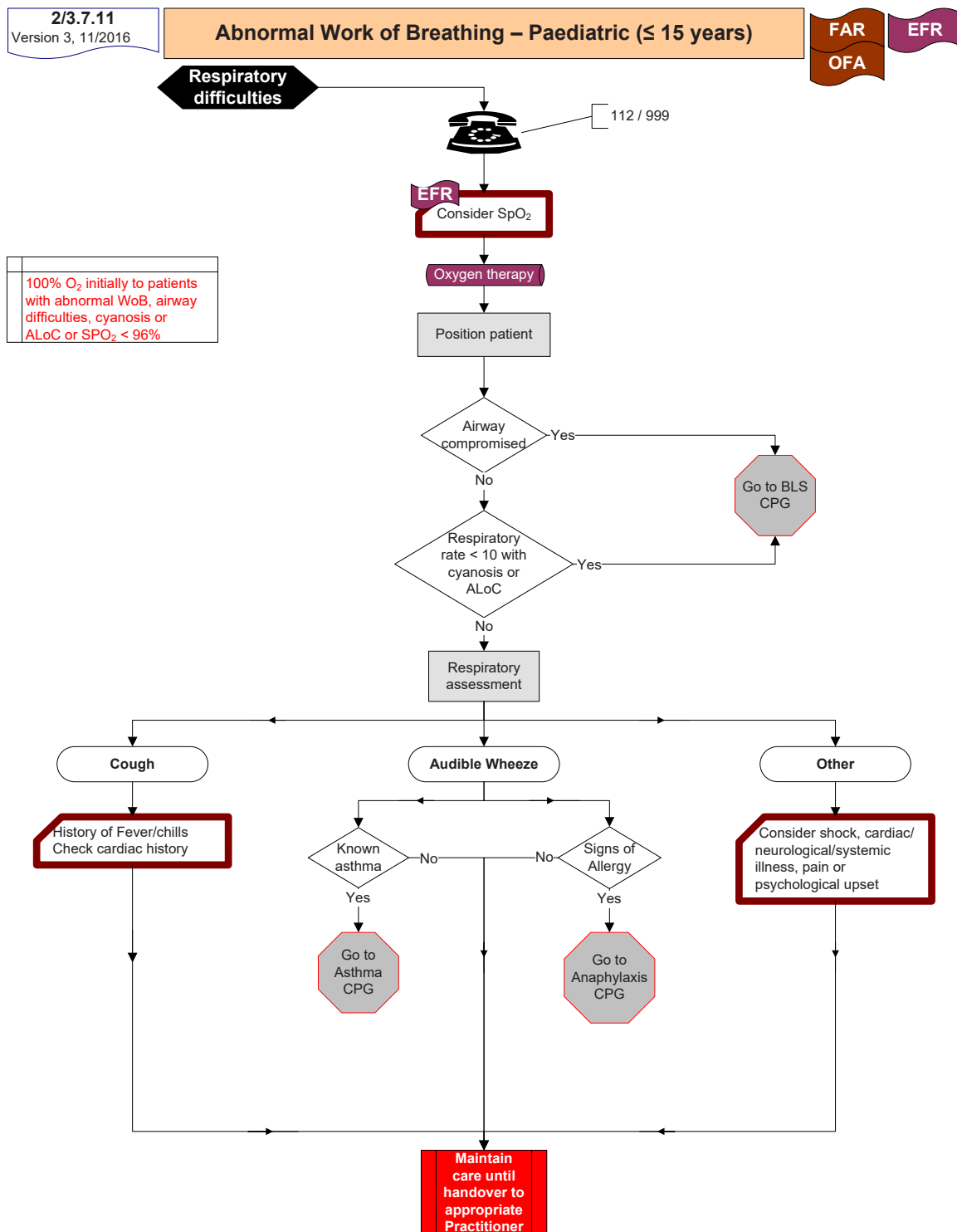
EFR

Normal ranges (ICTS)		
Age	Pulse	Respirations
0-3 months	90 – 180	30 – 60
4-6 months	80 – 160	30 – 60
7-12 months	80 – 140	22 – 34
1-3 years	75 – 130	20 – 30
4-6 years	70 – 110	16 – 24
≥ 7 years	60 – 90	14 – 20



Reference: ILCOR Guidelines 2015, American Academy of Pediatrics, 2000, Pediatric Education for Prehospital Professionals
Irish Children's Triage System: National Emergency Medicine Programme, 2015

SECTION 7 - Paediatric Emergencies



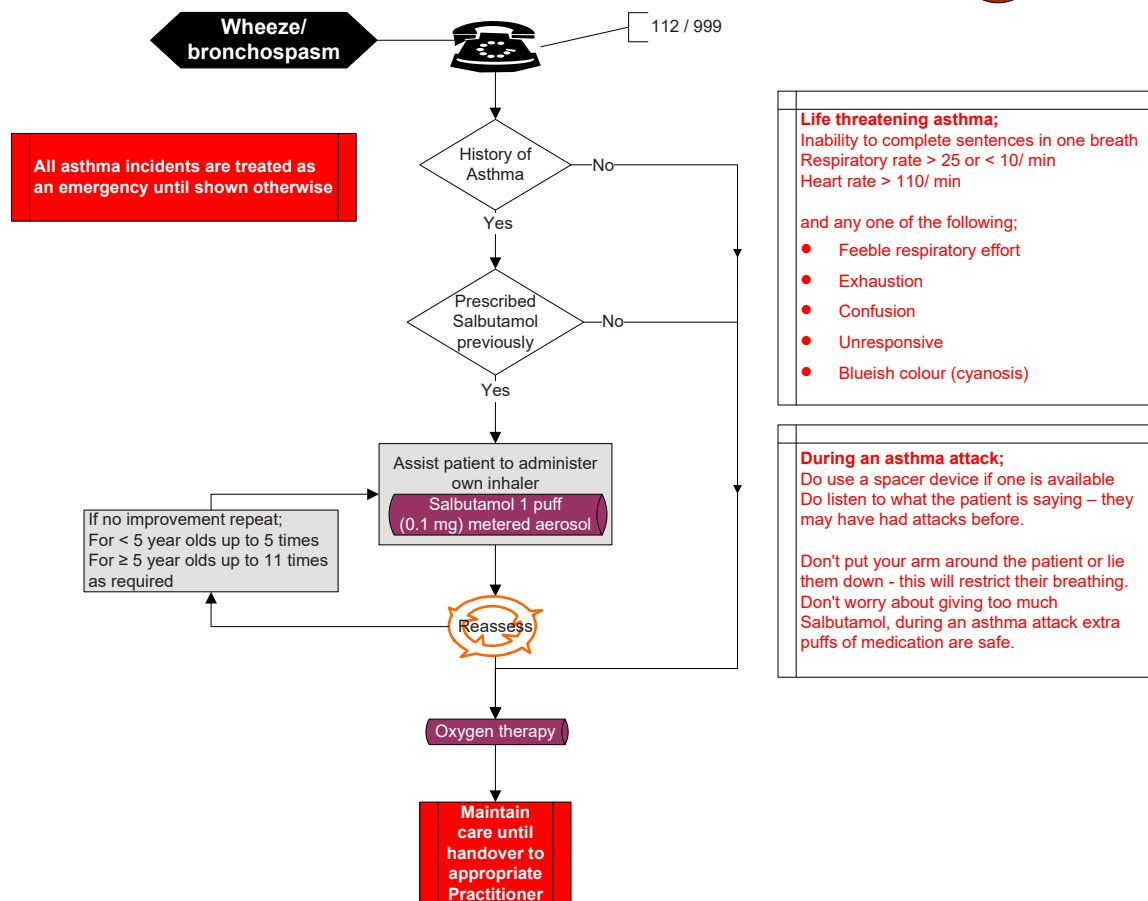
SECTION 7 - Paediatric Emergencies

2/3.7.12
Version 3, 11/2016

Asthma - Paediatric (≤ 15 years)

FAR
OFA

EFR

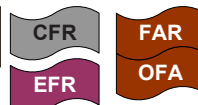


Reference: HSE National Asthma Programme 2012, Emergency Asthma Guidelines, British Thoracic Society, 2008, British Guidelines on the Management of Asthma, a national clinical guideline

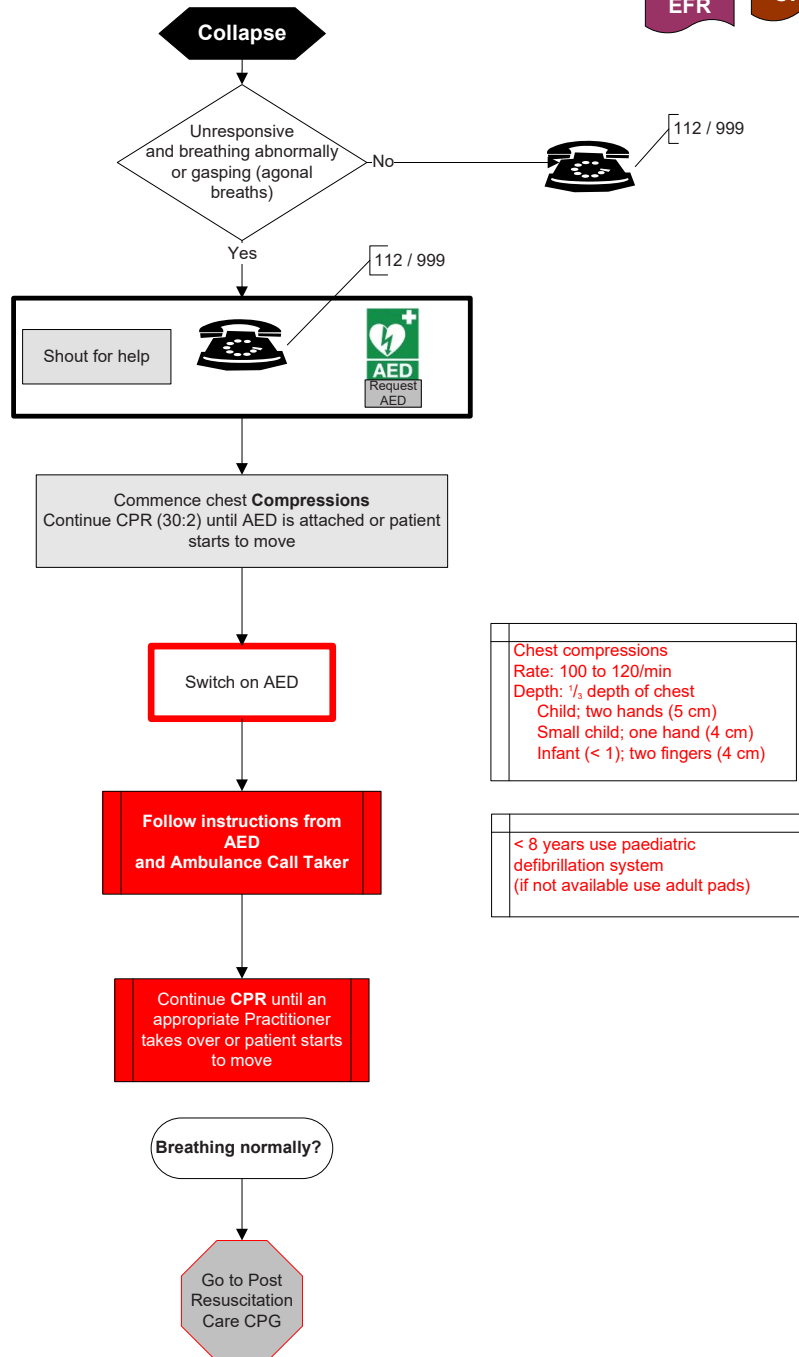
SECTION 7 - Paediatric Emergencies

1/2/3.7.20
Version 7, 11/2016

Basic Life Support – Paediatric (≤ 15 Years)



If unable or unwilling to ventilate
perform compression only CPR



Chest compressions
Rate: 100 to 120/min
Depth: 1/3 depth of chest
Child; two hands (5 cm)
Small child; one hand (4 cm)
Infant (< 1); two fingers (4 cm)

< 8 years use paediatric
defibrillation system
(if not available use adult pads)

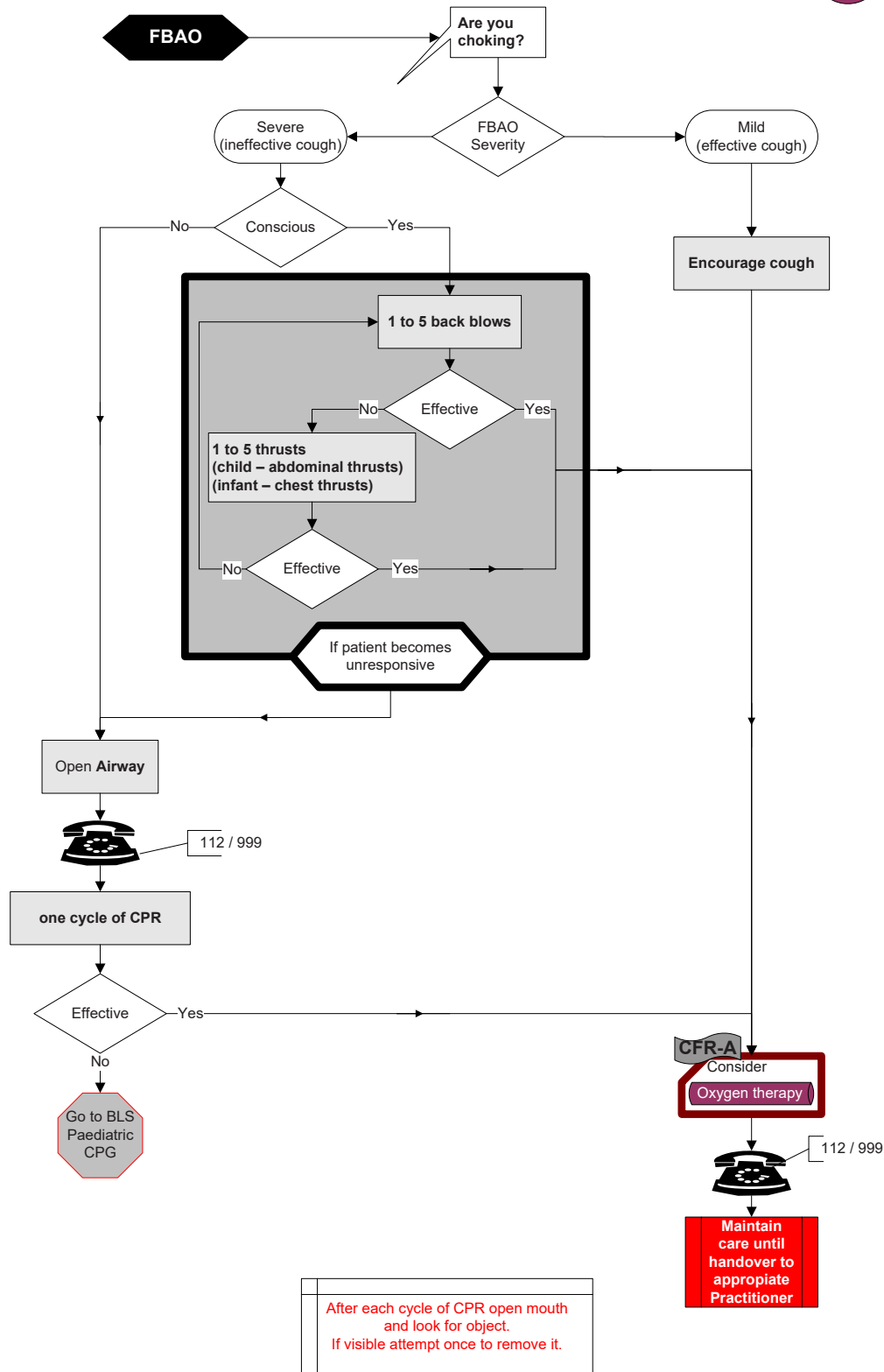
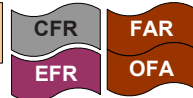
Infant AED

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 (front) and posterior (back), because of the infant's small size.

SECTION 7 - Paediatric Emergencies

1/2/3.7.21
Version 5, 03/2016

Foreign Body Airway Obstruction – Paediatric (≤ 15 years)



Reference:
ILCOR Guidelines 2015

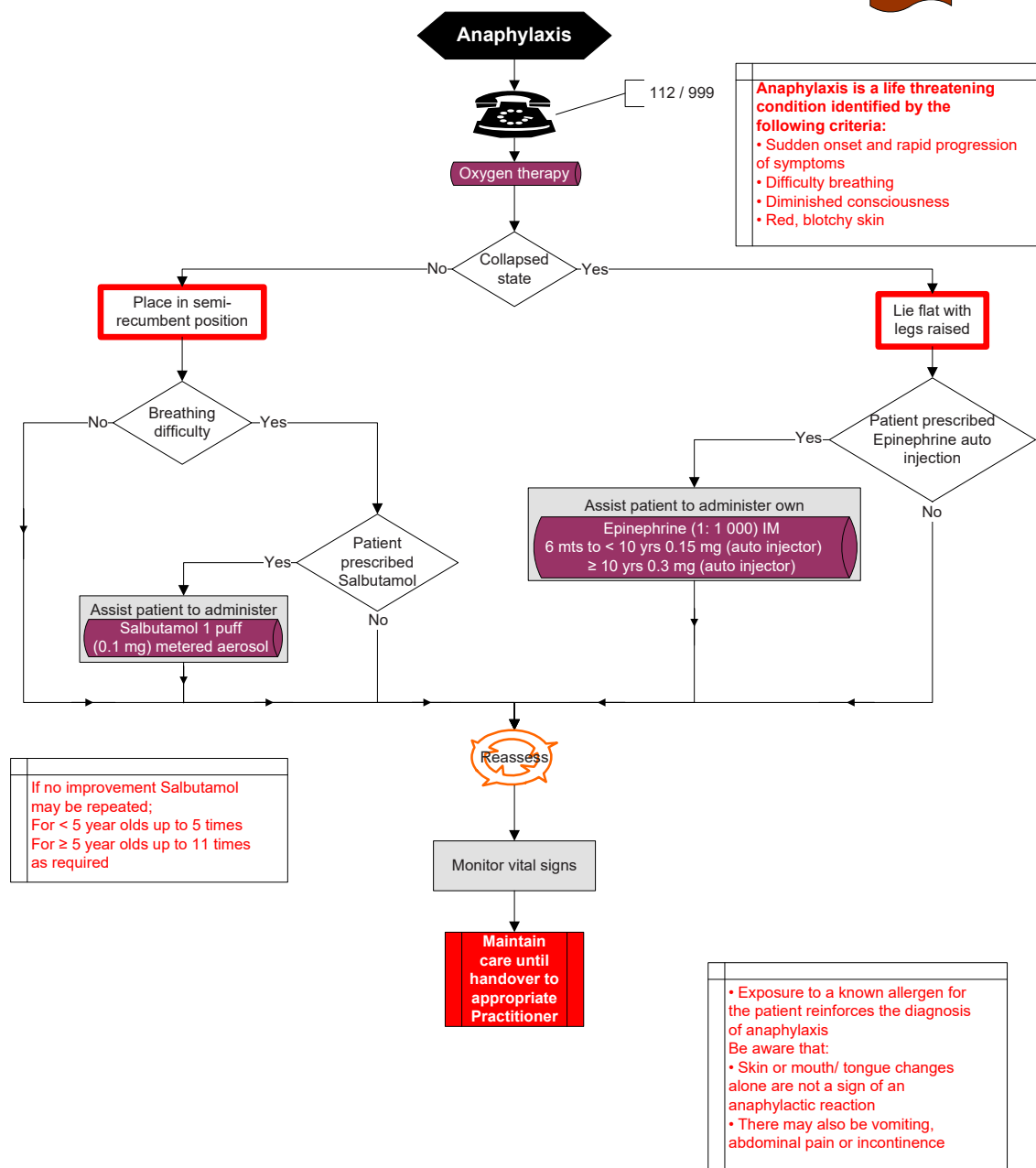
SECTION 7 - Paediatric Emergencies

2/3.7.31
Version 3, 03/2016

Anaphylaxis – Paediatric (≤ 15 years)

FAR
OFA

EFR



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.

Reference: Immunisation Guidelines for Ireland 2008 RCPI,
ILCOR Guidelines 2015

SECTION 7 – Paediatric Emergencies

2/3.7.33
Version 3, 12/13

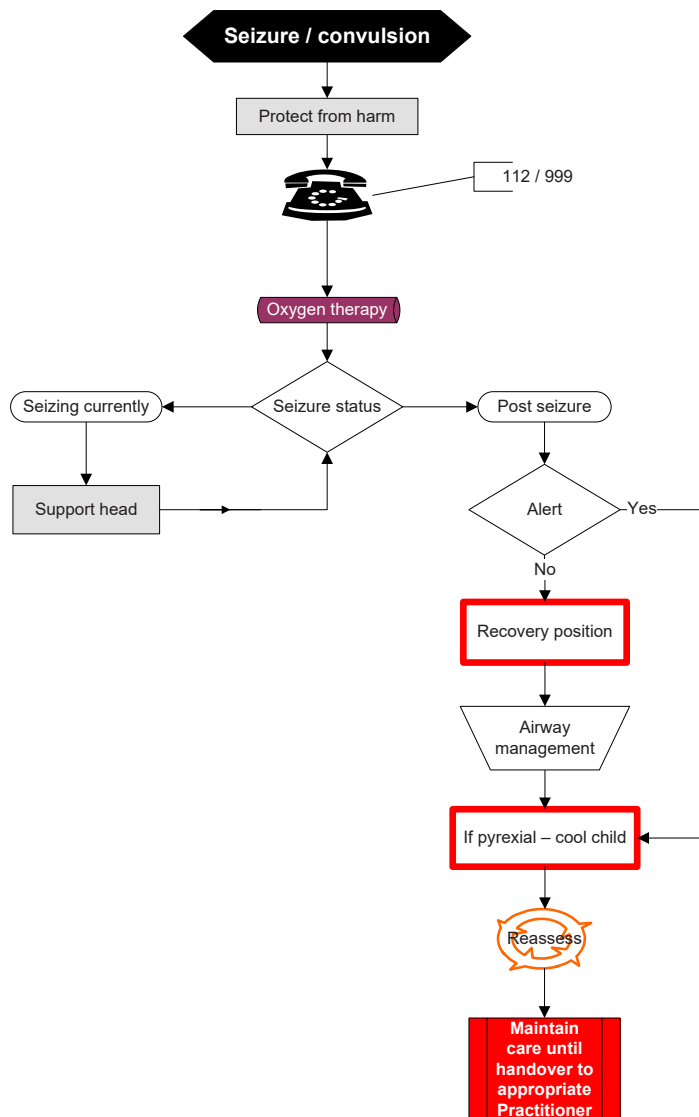
Seizure/Convulsion – Paediatric (≤ 15 years)

FAR
OFA

EFR

Consider other causes of seizures

Meningitis
Head injury
Hypoglycaemia
Fever
Poisons
Alcohol/drug withdrawal



SECTION 8 - Operations

1/2/3.8.6
Version 1, 03/2016

Team Resuscitation

CFR

FAR

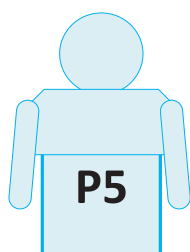
EFR

Identification: P5

Role: Family & Team Support

Position: Outside the BLS triangle

1. Family Liaison
2. Patient Hx/meds
3. Manage Equipment
4. Plan removal (if transporting)



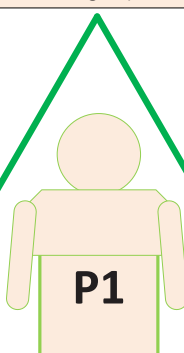
Identification: P1

Role: Airway and ventilatory support & initial team leader

Location: Inside BLS Triangle at patient's head

Tasks:

1. Position defibrillator.
2. Attach defib pads and operate defibrillator (If awaiting arrival of P3)
3. Basic airway management (manoeuvre, suction & adjunct)
4. Assemble ventilation equipment and ventilate
5. Team leader (until P4 assigned)



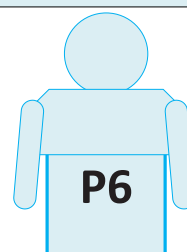
Identification: P6

Role: Team Support

Location: Outside BLS Triangle

Tasks:

1. Support P1 with airway and ventilation.
2. Support P2/P3 with chest compressions and defibrillation
3. Documentation
4. Support tasks assigned by P4



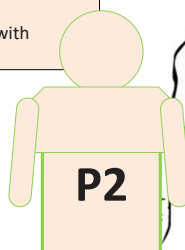
Identification: P2

Role: Chest compressor

Location: Inside BLS Triangle at patient's side

Tasks:

1. Position BLS response bag.
2. Initiate patient assessment.
3. Commence CPR
4. Alternate chest compressions with P3 (P1 until P3 arrival)



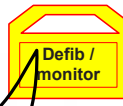
Identification: P3

Role: Chest compressor & AED operator

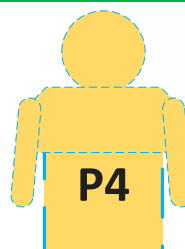
Location: Inside BLS Triangle at patient's side

Tasks:

1. Alternate compressions with P2
2. Operate AED/monitor
3. Turn on metronome (if available)
4. Monitor time/cycles



BLS Triangle



Identification: P4

Role: Cardiac Arrest Team Leader (practitioner)

Location: Outside the BLS Triangle (ideally at the patient's feet with a clear view of the patient, team and Monitor)

Tasks:

1. Position exchange of Team Leader
2. Position ALS bag (AP)
3. Take Handover from P1
4. Monitor BLS quality.
5. Initiate IV/IO access & administers medications (AP)
6. Intubate if clinically warranted (AP)
7. Communicate with family/Family Liaison.
8. Identify and treat reversible causes (Hs + Ts)
9. Provide clinical leadership.
10. Conduct post event debrief.

Positions and roles are as laid out, however a Responder may change position thus taking on the role of that position.

Responders must operate within their scope of practice, regardless of position, during team resuscitation

Reference: ILCOR Guidelines 2015

APPENDIX 1 – Medication Formulary

The Medication Formulary is published by the Pre-Hospital Emergency Care Council (PHECC) to support Emergency First Responders 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 or patients may be assisted to administer the medications herein provided:

1. The Emergency First Responder 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 is privileged, by the organisation on whose behalf he/she is acting, to administer the medications.
4. The Emergency First Responder 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 administration of medications. The principle of titrating the dose to the desired effect shall be applied. The onus rests on the Emergency First Responder 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 as specified by the CPG.

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 =	(age x 2) + 8 Kg
Greater than 5 years =	(age x 3) + 7 Kg

Pregnancy caution:

Medications should be administered in pregnancy only if the expected benefit to the mother is thought to be greater than the risk to the foetus, and all medications should be avoided if possible during the first trimester.

Responders therefore should avoid using medications in early pregnancy unless absolutely essential, and where possible, medical oversight should be sought prior to administration.

This edition contains 6 medications for Emergency First Responder.

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

APPENDIX 1 – Medication Formulary

Amendments to the Emergency First Responder 2014 Edition:

Aspirin		
Heading	Add	Delete
Indications	Management of unstable angina and non ST-segment elevation myocardial infarction (NSTEMI) Management of ST-segment elevation myocardial infarction (STEMI)	
Contra-Indicated	(risk of Reye's syndrome)	
Side Effects	Increased bleeding time. Skin reactions in hypersensitive patients.	

Salbutamol		
Heading	Add	Delete
Administration	(CPG: 4/5/6.7.12)	(CPG: 4.4.15, 2/3.4.16, 4.7.31, 3.7.12)
Usual Dosages	EFR: assist patient – Asthma/Anaphylaxis = 0.1 mg metered aerosol spray (repeat x 11 prn) Paediatric: EFR: assist patient – Asthma/Anaphylaxis < 5 yrs – 0.1 mg metered aerosol spray (repeat x 5 prn) > 5 yrs – 0.1 mg metered aerosol spray (repeat x 11 prn)	5 mg NEB or (0.1 mg metered aerosol spray x 5) EFRs: (0.1 mg metered aerosol spray x 2) 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)

APPENDIX 1 – Medication Formulary

Index of medication formulary EFR (Adult ≥ 16 and Paediatric ≤ 15 unless otherwise stated)

	Page No.
Aspirin	54
Epinephrine 1 mg/1 mL (1:1,000)	55
Glucose gel	56
Glyceryl trinitrate	57
Oxygen.	58
Salbutamol	59

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. Management of unstable angina and non ST-segment elevation myocardial infarction (NSTEMI). Management of ST-segment elevation myocardial infarction (STEMI).
Contra-Indications	Active symptomatic gastrointestinal (GI) ulcer / Bleeding disorder (e.g. haemophilia) / Known severe adverse reaction / Patients < 16 years old (risk of Reye's syndrome).
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 / Increased bleeding time / Skin reactions in hypersensitive patients.
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 anti-coagulants 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:



Medication	Epinephrine (1:1,000)
Class	Sympathetic agonist.
Descriptions	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), Intravenous (IV) and nebulisation (Neb). (<i>CPG</i> : 2/3.4.15, 2/3.7.31, 5/6.4.7, 4/5/6.4.11, 4/5/6.4.15, 4/5/6.7.13, 4/5/6.7.31).
Indications	Severe anaphylaxis, Stridor, Symptomatic Bradycardia and Cardiogenic shock.
Contra-Indications	None known.
Usual Dosages	<p>Anaphylaxis Adult: 0.5 mg (500 mcg) IM (0.5 mL of 1:1,000). EFR assist patient - 0.3 mg (Auto injector). (repeat every 5 minutes prn).</p> <p>Anaphylaxis 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)</p> <p>EFR assist patient - 6 Months < 10 years: 0.15 mg (Auto injector) (repeat every 5 minutes prn). ≥ 10 years: 0.3 mg (Auto injector) (repeat every 5 minutes prn).</p> <p>Stridor (AP): < 1 Year: 2.5 mg NEB ≥ 1 year: 5 mg NEB (repeat after 30 minutes prn) (AP).</p> <p>Adult (AP): Symptomatic Bradycardia/Cardiogenic shock: 0.01 mg IV/IO repeat prn. (Dilute 1 mg Epinephrine in 100 mL NaCl and draw up in 1 mL syringe, administer the dose over 1 minute).</p>
Pharmacology / Action	<p>Alpha and beta adrenergic stimulant: Reversal of laryngeal oedema and bronchospasm in anaphylaxis. Antagonises the effects of histamine.</p>
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.
Descriptions	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: 2/3.4.19, 4/5/6.4.19, 4/5/6.7.32).
Indications	Hypoglycaemia. Blood glucose < 4 mmol/L. EFR - Known diabetic with confusion or altered levels of consciousness.
Contra-Indications	Known severe adverse reaction.
Usual Dosages	Adult: 10 – 20 g buccal (repeat prn). Paediatric: ≤ 8 years: 5 – 10 g buccal (repeat prn). > 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 5 years 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.
Descriptions	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 of 0.4 mg (400 mcg).
Administration	Sublingual: 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, 5/6.4.10, 4.4.10, 1/2/3.4.10).
Indications	Angina / suspected myocardial infarction (MI). EMT: Angina / suspected myocardial infarction (MI) with systolic BP \geq 110 mmHg. EFR: may assist with administration. Advanced Paramedics and Paramedics - Pulmonary oedema.
Contra-Indications	SBP < 90 mmHg / Viagra or other phosphodiesterase type 5 inhibitors (Sildenafil, Tadalafil and Vardenafil) used within previous 24 hours / Severe mitral stenosis / 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). EFR: assist administration - 0.4 mg sublingual max. Pulmonary oedema: 0.8 mg (800 mcg) sublingual (repeat x 1 prn) (P & AP). 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	Caution with inferior wall MI with right ventricular involvement as this may lead to profound hypotension. If the pump is new or it 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.
Descriptions	Odourless / Tasteless / Colourless gas necessary for life.
Presentation	Medical gas: D, E or F cylinders, coloured black with white shoulders. CD cylinder: White cylinder.
Administration	Inhalation via: High concentration reservoir (non-rebreather) mask / Simple face mask / Venturi mask / Tracheostomy mask / Nasal cannulae / CPAP device / 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. SpO ₂ < 90% for patients with acute onset of Pulmonary Oedema.
Contra-Indications	Bleomycin lung injury.
Usual Dosages	Adult: Cardiac and respiratory arrest or sickle cell crisis; 100%. Life threats identified during primary survey; 100% until a reliable SpO ₂ measurement obtained then titrate O ₂ to achieve SpO ₂ of 94% - 98%. For patients with acute exacerbation of COPD, administer O ₂ titrate to achieve SpO ₂ 92% or as specified on COPD Oxygen Alert Card. All other acute medical and trauma titrate O ₂ to achieve SpO ₂ 94% - 98%. Paediatric: Cardiac and respiratory arrest or sickle cell crisis; 100%. Life threats identified during primary survey; 100% until a reliable SpO ₂ measurement obtained then titrate O ₂ to achieve SpO ₂ of 96% - 98%. Neonatal resuscitation (< 4 weeks) consider supplemental O ₂ (≤ 30%). All other acute medical and trauma titrate O ₂ to achieve SpO ₂ of 96% - 98%.
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 minutes 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.
Descriptions	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. <i>Aerosol inhaler:</i> Metered dose 0.1 mg (100 mcg).
Administration	NEB. Inhalation via aerosol inhaler. (CPG: 4/5/6.3.3, 3.3.4, 4/5/6.3.4, 2/3.4.15, 4/5/6.4.15, 4/5/6.6.10, 4/5/6.7.12, 2/3.7.31, 4/5/6.7.31).
Indications	Bronchospasm / Exacerbation of COPD / Respiratory distress following submersion incident.
Contra-Indications	Known severe adverse reaction.
Usual Dosages	Adult: 5 mg NEB or 0.1 mg metered aerosol spray (repeat aerosol x 11). repeat at 5 minute intervals prn. EFR assist patient with Asthma/Anaphylaxis. - 0.1 mg metered aerosol spray (repeat aerosol x 11 prn). Paediatric: < 5 yrs - 2.5 mg NEB or 0.1 mg metered aerosol spray (repeat aerosol x 5). ≥ 5 yrs - 5 mg NEB or 0.1 mg metered aerosol spray (repeat aerosol x 11). (repeat at 5 minute intervals prn). EFR: assist patient with Asthma/Anaphylaxis – < 5 yrs - 0.1 mg metered aerosol spray (repeat aerosol x 5 prn). ≥ 5 yrs - 0.1 mg metered aerosol spray (repeat aerosol x 11 prn).
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 volumiser 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 Medications and Skills for 2017

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
Active Spinal Motion Restriction				✓	✓	✓	✓
Epinephrine (1:1,000) IM					✓		
Chest auscultation					✓		
Wound closure clips					BTEC	✓	✓
Methoxyflurane INH					✓	✓	✓
Chlorphenamine PO IM					✓	✓	✓
Passive Spinal Motion Restriction						✓	✓
Lateral dislocation of patella – reduction						✓	
Cyclizine IM						✓	
Ondansetron IM						✓	
Oxytocin IM						✓	
Management of presenting umbilical cord (finger control)						✓	
Adenosine IV							✓
Chlorphenamine IV							✓
Ceftriaxone IV/IO/IM							✓
Glycopyrronium Bromide SC							✓
Hyoscine Butylbromide SC							✓
Haloperidol SC PO							✓
Paracetamol IV							✓
Ketamine IV							✓

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

Paramedic authorisation for IV continuation

Practitioners should note that PHECC registered paramedics are authorised to continue an established IV infusion in the absence of an advanced paramedic or doctor during transportation.

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	✓	✓	✓
Epinephrine (1:1,000) auto injector				✓ SA	✓	✓	✓
Salbutamol Aerosol				✓ SA	✓	✓	✓
Chlorphenamine PO IM					✓	✓	✓
Epinephrine (1:1,000) IM					✓	✓	✓
Glucagon IM					✓	✓	✓
Ibuprofen PO					✓	✓	✓
Methoxyflurane INH					✓	✓	✓
Naloxone IN					✓	✓	✓
Nitrous Oxide & Oxygen (Entonox®)					✓	✓	✓
Paracetamol PO					✓	✓	✓
Salbutamol nebule					✓	✓	✓
Clopidogrel PO						✓	✓
Cyclizine IM						✓	✓
Hydrocortisone IM						✓	✓
Ipratropium Bromide nebule						✓	✓
Midazolam IM/Buccal/IN						✓	✓
Naloxone IM/SC						✓	✓
Ondansetron IM						✓	✓
Oxytocin IM						✓	✓
Ticagrelor						✓	✓
Sodium Chloride 0.9% IV/IO						✓ SA	✓
Adenosine IV							✓
Amiodarone IV/IO							✓
Atropine IV/IO							✓
Ceftriaxone IV/IO/IM							✓
Chlorphenamine IV							✓
Cyclizine IV							✓
Dextrose 10% IV							✓
Dextrose 5% IV							✓
Diazepam IV/PR							✓
Epinephrine (1:10,000) IV/IO							✓
Fentanyl IN/IV							✓
Furosemide IV/IM							✓
Glycopyrronium Bromide SC							✓
Haloperidol SC PO							✓
Hartmann's Solution IV/IO							✓
Hydrocortisone IV							✓

APPENDIX 2 – Medications & Skills Matrix

Hyoscine Butylbromide SC							✓
Ketamine IV							✓
Lorazepam PO							✓
Magnesium Sulphate IV							✓
Midazolam IV							✓
Morphine IV/PO/IM							✓
Naloxone IV/IO							✓
Nifedipine PO							✓
Ondansetron IV							✓
Paracetamol IV/PR							✓
Sodium Bicarbonate IV/IO							✓
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		✓		✓ SA	✓	✓	✓
Venturi mask		✓		✓	✓	✓	✓
BVM		✓		✓	✓	✓	✓
SpO ₂ monitoring				✓	✓	✓	✓
Jaw thrust				✓	✓	✓	✓
Nasal cannula		✓		✓	✓	✓	✓
Oxygen humidification				✓	✓	✓	✓
NPA				BTEC	BTEC	✓	✓
Supraglottic airway adult (uncuffed)		✓			✓	✓	✓
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						✓	✓
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	✓	✓	✓	✓	✓	✓	✓
Neonate resuscitation					✓	✓	✓
ECG monitoring (lead II)					✓	✓	✓
Mechanical assist CPR device					✓	✓	✓
Cease resuscitation - adult					✓ SA	✓	✓
12 lead ECG						✓	✓
Manual defibrillation						✓	✓
Right sided ECG in ACS						✓	✓

HAEMORRHAGE CONTROL

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
Direct pressure			✓	✓	✓	✓	✓
Nose bleed			✓	✓	✓	✓	✓
Haemostatic agent				BTEC	✓	✓	✓
Tourniquet use				BTEC	BTEC	✓	✓
Wound closure clips					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						✓	✓
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			✓	✓	✓	✓	✓
Application of a sling			✓	✓	✓	✓	✓
Soft tissue injury			✓	✓	✓	✓	✓
Active Spinal Motion Restriction			✓	✓	✓	✓	✓
Hot packs for active rewarming (hypothermia)			✓	✓	✓	✓	✓
Cervical collar application				✓	✓	✓	✓
Helmet stabilisation/removal				✓	✓	✓	✓
Splinting device application to upper limb				✓	✓	✓	✓
Splinting device application to lower limb				✓	✓	✓	✓
Log roll				APO	✓	✓	✓
Move patient with a carrying sheet				APO	✓	✓	✓
Extrication using a long board				✓ SA	✓	✓	✓
Rapid Extrication				✓ SA	✓	✓	✓
Secure and move a patient with an extrication device				✓ SA	✓	✓	✓
Move a patient with a split device (Orthopaedic stretcher)				✓ SA	✓	✓	✓
Passive Spinal Motion Restriction						✓	✓

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	✓	✓	✓
Move and secure a patient to a paediatric board					✓	✓	✓
Traction splint application					APO	✓	✓
Lateral dislocation of patella – reduction						✓	✓
Taser gun barb removal						✓	✓

OTHER

CLINICAL LEVEL	CFR-C	CFR-A	FAR/OFA	EFR	EMT	P	AP
Use of Red Card	✓	✓	✓	✓	✓	✓	✓
Assist in the normal delivery of a baby				APO	✓	✓	✓
De-escalation and breakaway skills					✓	✓	✓
ASHICE radio report					✓	✓	✓
IMIST-AMBO handover					✓	✓	✓
External massage of uterus						✓	✓
Broselow tape						✓	✓
Management of presenting umbilical cord (finger control)						✓	✓
Verification of Death						✓	✓
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			✓	✓	✓	✓	✓
Pulse check			✓	✓	✓	✓	✓
Breathing & pulse rate		✓SA	✓	✓	✓	✓	✓

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					✓	✓	✓
Chest auscultation					✓	✓	✓
Glucometry					✓	✓	✓
Paediatric Assessment Triangle					✓	✓	✓
Pain assessment					✓	✓	✓
Patient Clinical Status					✓	✓	✓
Temperature °C					✓	✓	✓
Triage sieve					✓	✓	✓
Glasgow Coma Scale (GCS)						✓	✓
Pre-hospital Early Warning Score						✓	✓
Treat and referral						✓	✓
Triage sort						✓	✓

APPENDIX 3 – Critical Incident Stress Management

Your Psychological Well-Being

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 traumas 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.

How do I know when I am adversely affected by a critical incident(s)?

Listed below are some common ways in which people react to incidents like this:

- Feeling of distress
- Feeling of sadness
- Strong feeling of anger
- Feeling of disillusionment
- Feeling of guilt
- Feeling of apprehension/anxiety/fear of:
 - losing control/breaking down or
 - something similar happening again
 - not having done all I think I could have done
- Avoidance of the scene of incident/trauma or of anything that reminds you of it
- Bad dreams or nightmares
- Distressing memories or 'flashbacks' of the incident
- Feeling 'on edge', irritable, angry, under threat/pressure
- Feeling emotionally fragile – unable to experience your normal range of emotions
- Feeling cut off from your family or close friends – "I can't talk to them" or "I don't want to upset them"

SOME DOS AND DON'TS

- DO** express your emotions
- DO** talk about what has happened as often as you need to
- DO** find opportunities to review the experience
- DO** discuss what happened with colleagues
- DO** look to friends and colleagues for support
- DO** listen sympathetically if a colleague wants to speak with you, unless it is too distressing
- DO** advise colleagues who need more help where they can get appropriate help
- DO** try to keep your life as normal as possible
- DO** keep to daily routines
- DO** drive more carefully
- DO** be more careful around the home
- DON'T** use alcohol, nicotine or other drugs to hide your feelings
- DON'T** simply stay away from work – seek help and support
- DON'T** allow anger and irritability to mask your feelings
- DON'T** bottle up feelings
- DON'T** be afraid to ask for help
- DON'T** think your feelings are signs of weakness

Everyone may have these feelings. Experience has shown that they may vary in intensity according to circumstance. Nature heals through allowing these feelings to come out. This will not lead to loss of control, but stopping these feelings may lead to other and possibly more complicated problems.

WHEN TO FIND HELP

1. If you feel you cannot cope with your reactions or feelings.
2. If your stress reactions do not lessen in the two or three weeks following the event.
3. If you continue to have nightmares and poor sleep.
4. If you have no-one with whom to share your feelings when you want to do so.
5. If your relationships seem to be suffering badly, or sexual problems develop.
6. If you become clumsy or accident prone.
7. If, in order to cope after the event, you smoke, drink or take more medication, or other drugs.
8. If your work performance suffers.
9. If you are tired all the time.
10. If things get on top of you and you feel like giving up.
11. If you take it out on your family.
12. If your health deteriorates.

APPENDIX 3 – Critical Incident Stress Management

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 seek support and help.

Where to find help?

Your own licensed CPGs provider 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 and CISM Network published a booklet called 'Critical Incident Stress Management for Emergency Personnel'.

It can be purchased by emailing:

info@cismnetworkireland.ie

- Consult your own GP or see a health professional who specialises in traumatic stress.
- The NAS CISM Committee in partnership with PHECC developed an eLearning CISM Stress Awareness Training (SAT) module. It can be accessed by the following personnel:
 - PHECC registered practitioners at all levels
 - National Ambulance Service-linked community first responders
 - NAS non-PHECC registered personnel
- SAT modules in development for CISM Network member organisations.

APPENDIX 4 – CPG Updates for Emergency First Responder

New EFR CPGs in 2017

To support upskilling of the 2017 CPGs new CPGs are identified below.

New CPGs	The new skills and medications incorporated into the CPGs are:
CPG 1/2/3.8.6 Team Resuscitation (New section in this edition: Section 8 Operations)	This CPG outlines the team approach to resuscitation and defines specific roles for team members.

Deleted EFR CPGs in 2017

CPGs Deleted	
2/3.4.20 Heat-Related Illness	This CPG has been deleted. Both Heat-Related Illness and Heat-Related Emergency CPGs have been incorporated into one CPG 2/3.6.6.
3.7.52 Spinal Immobilisation – Paediatric	This CPG has been deleted. Both Adult and Paediatric Spinal Injury Management CPGs have been incorporated into one Spinal Injury Management CPG 2/3.6.9.

APPENDIX 4 – CPG Updates for Emergency First Responder

Updated EFR CPGs from the 2014 version

To support upskilling of the 2017 CPGs, the CPGs that have content changes are outlined below.

Responders should also be advised that there are updated care principles in this edition.

CPGs	The principal differences are:
CPG 2/3.3.2 Abnormal Work of Breathing – Adult	Deleted FAR restriction for entry to the Asthma CPG
CPG 3.3.4 Asthma – Adult	Added Life-threatening asthma – instruction box Dos and Don'ts for asthma attack – instruction box Medication update Salbutamol updated from '2 puffs metered aerosol and repeat up to 5 times' to '1 puff metered aerosol and repeated up to 11 times' if no improvement
CPG 1/2/3.4.1 Basic Life Support – Adult	Deleted Responsive patient – decision diamond Chest compression depth 'at least 5 cm' Ventilations rate: 10/min Added Unresponsive and breathing abnormally or gasping (agonal breaths) – decision diamond Call for help, phone 112/999 and request an AED combined into one step Chest compression depth '5 to 6 cm' Two ventilations each over 1 second 'or unable' added to 'if unwilling to ventilate - instruction box for compression only CPR' Initiate mobilisation of 3 to 4 practitioners/responders – instruction box
CPG 1/2/3.4.7 Post-Resuscitation Care	Deleted Special authorisation for CFR-As to actively cool patient Added Avoid warming
CPG 2/3.4.15 Anaphylaxis – Adult	Medication update Salbutamol updated from '2 puffs metered aerosol' to '1 puff metered aerosol and repeated up to 11 times' prn
CPG 2/3.4.19 Glycaemic Emergency – Adult	Added Advise carbohydrate meal Medication update Sweetened drink AND/OR Glucose gel

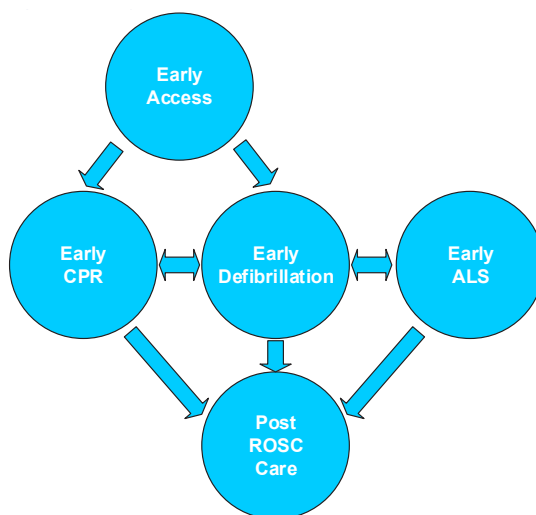
APPENDIX 4 – CPG Updates for Emergency First Responder

CPGs	The principal differences are:
CPG 2/3.6.6 Heat Related Emergency	Deleted 'Exercise related dehydration should be treated with oral fluids (caution with over-hydration with water)'
CPG 2/3.6.9 Spinal Injury Management	Renamed from 'Spinal Immobilisation – Adult' to 'Spinal Injury Management' incorporating both adult and paediatric patients This CPG has had significant alterations with a change in philosophy Responders are referred to Appendix 6 – Spinal Injury Management Recommendations for supporting information Full PHECC policy statement available at www.phecc.ie
CPG 3.7.3 Primary Survey – Paediatric (≤ 15 years)	Added Irish Children's Triage System normal range of vital signs
CPG 2/3.7.11 Abnormal Work of Breathing – Paediatric (≤ 15 years)	Deleted FAR restriction for entry to the Asthma CPG
CPG 3.7.12 Asthma – Paediatric (≤ 15 years)	Added Life-threatening asthma – instruction box Dos and Don'ts for asthma attack – instruction box Medication update Salbutamol updated from '2 puffs metered aerosol' to '1 puff metered aerosol' and (age specific) repeats if no improvement
CPG 1/2/3.7.20 Basic Life Support – Paediatric (≤ 15 years)	Deleted Responsive patient – decision diamond Chest compression depth 'at least 5 cm' Ventilations rate: 10/min Added Unresponsive and breathing abnormally or gasping (agonal breaths) – decision diamond Call for help, phone 112/999 and request an AED combined into one step Chest compression depth 'Child 5 cm, small child 4 cm and infant 4 cm' 'or unable' added to 'if unwilling to ventilate - instruction box for compression only CPR
CPG 2/3.7.31 Anaphylaxis – Paediatric (≤ 15 years)	Medication update Salbutamol updated from '2 puffs metered aerosol' to '1 puff metered aerosol' and (age specific) repeats if no improvement

APPENDIX 5 – 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 2015 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 Paramedics, advanced paramedics, and health care professionals whose scope of practice permits, should use defibrillators in manual mode for all age groups.
- 1.2 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 5 – 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 360 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. If the defibrillation pads are oblong the pad should be placed in the horizontal line of the body.
- 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 tachyarrhythmia greater than 150.
- 8.2 For narrow complexes commence cardioversion at 50 joules.
- 8.3 For wide complexes commence cardioversion at 100 joules.
- 8.4 If unsuccessful with cardioversion escalate energy by 50 joules.

APPENDIX 6 – Spinal Injury Management Recommendations

Pre-Hospital Spinal Injury Management – PHECC standard

Introduction

The Pre-Hospital Emergency Care Council (PHECC) has a unique position internationally in pre-hospital emergency care as it sets not only practitioner standards but also responder standards. A seminar was hosted by PHECC in 2015 at which international and national speakers gave their perspective on pre-hospital spinal injury management. The Centre for Prehospital Research (C.P.R.) at the University of Limerick (UL) was tasked to complete a systematic literature review on pre-hospital spinal injury management, the results of which were presented at the seminar. The seminar was followed by surveys of PHECC Facilitators, Tutors, Assistant Tutors, Consultants in Emergency Medicine and Chief Fire Officers on pre-hospital spinal injury management. The information collated helped to inform the Medical Advisory Committee in making the recommendations on pre-hospital spinal injury management to Council.

The recommendations set out in this Appendix are for EFRs. The full details are published in STN024 and are available on the PHECC website www.phecc.ie

Recommendations

Emergency First Responders and Spinal Injury Management

Recommendation 1

Change terminology from 'spinal immobilisation' to 'spinal motion restriction' when referring to the management of pre-hospital spinal injuries.

The aim of this recommendation is to instigate a change of culture and allow practitioners to consider alternative methods of patient extrication and packaging.

Recommendation 2

Following trauma should any of the following factors be present:

- dangerous mechanism of injury
- fall from a height of greater than 1 metre or 5 steps
- axial load to the head or base of the spine – for example diving, high-speed motor vehicle collision, rollover motor accident, ejection from a motor vehicle, accident involving motorised recreational vehicle, bicycle collision, horse riding accident, pedestrian v vehicle
- impaired awareness (alcohol/drug intoxication, confused/uncooperative or ALoC)
- age 65 years or older, with any of the above
- age 2 years or younger, incapable of verbal communication, with any of the above

the patient should be regarded as 'high risk' and have active spinal motion restriction applied until assessment is complete.

There are two aims to this recommendation: the first is to ensure that 'high risk' patients minimise movement until a detailed assessment occurs: the second allows an informed decision about the most appropriate method of patient extrication and packaging, even though the patient has initially presented as 'high risk'.

APPENDIX 6 – Spinal Injury Management Recommendations

Recommendation 4

Following a trauma assessment, should a patient present with any of the following 'spinal injury rule in' considerations:

- any significant distracting injuries
- impaired awareness (alcohol/drug intoxication, confused/uncooperative or ALoC)
- immediate onset of spinal/midline back pain
- hand or foot weakness (motor issue)
- altered or absent sensation in the hands or feet (sensory issue)
- priapism
- history of spinal problems, including previous spinal surgery or conditions that predispose to instability of the spine
- unable to actively rotate their neck 45 degrees to the left and right (P & AP only)

or an appropriate assessment cannot be completed, a 'spinal injury rule in' shall apply.

Active spinal motion restriction shall thereafter be implemented until arrival at ED.

The aims of recommendation 4 are to identify the 'spinal injury rule in' considerations for active spinal motion restriction and to increase awareness that appropriate patient assessment may not be feasible in all circumstances when making the decision on spinal motion restriction.

Recommendation 5

Uncooperative patients shall not be forced into active spinal motion restriction as this is a greater risk to the patient.

The aim of recommendation 5 is to ensure that additional unnecessary motion is not applied to a potentially unstable injury through forced spinal motion restriction.

Recommendation 11

Supine patients with suspected spinal injuries, where active spinal motion restriction is being continued, should be lifted with a split device in preference to a log roll.

The aim of recommendation 11 is to minimise unnecessary patient movement, particularly on multisystem trauma/pelvic injury patients to avoid clot disruption, for packaging.

Recommendation 12

A long board is primarily an extrication device and should be used primarily for this purpose.

The aim of recommendation 12 is to minimise secondary injury and discomfort for patients by strongly discouraging the practice of transport on long board.

Recommendation 14

Patients presenting with penetrating trauma and without neurological signs should not have spinal motion restriction applied. Rapid transport to ED is essential to reduce mortality.

The aim of recommendation 14 is to minimise on-scene times for treatment and packaging of penetrating trauma patients.

APPENDIX 6 – Spinal Injury Management Recommendations

Recommendation 15

For patients with non-standard spinal anatomy, e.g. ankylosing spondylitis, permit them to find a position where they are comfortable with manual spinal motion restriction. Non-standard methods such as rolled blankets may be utilised to accomplish spinal motion restriction.

The aim of recommendation 15 is to enable practitioners to use their judgement to package the patient appropriately for the patient's individual needs and particularly to reduce the incidence of inappropriate use of rigid cervical collars and other spinal injury devices on patients with non-standard spinal anatomy.

Recommendation 17

Paediatric patients following trauma should be assessed for spinal injury using the 'spinal injury rule in' considerations.

The aim of recommendation 17 is to enable the practitioner to assess and package the paediatric trauma patient using the adult criteria for spinal motion restriction. However, clinical judgement should err on the side of caution due to difficulties with assessment of paediatric trauma.

Recommendation 19

Uncooperative paediatric patients shall not be forced into active spinal motion restriction as this is a greater risk to the patient.

The aim of recommendation 19 is to ensure that distressed or uncooperative paediatric patients are supported in a position of comfort and not have forced active spinal motion restriction applied.

Recommendation 20

Very young conscious paediatric patients with suspected spinal injury may have spinal motion restriction applied using the child's own car seat if it is intact following a collision. However, they should not be forced into this position.

The aim of recommendation 20 is to enable undamaged child car seats to be used for spinal motion restriction for appropriately aged paediatric patients.

Recommendation 25

Responders at EFR level should consider returning the head to neutral position (unless pain or resistance increases) and maintaining active spinal motion restriction if spinal injury is suspected.

The aim of recommendation 25 is to ensure that both 'high risk' and 'low risk' patients have minimised movement until a practitioner clinical assessment occurs.

Recommendation 26

Responders at EFR level, who are operating on behalf of a licensed CPG provider, may apply a cervical collar while maintaining active spinal motion restriction to facilitate extraction.

The aim of recommendation 26 is to ensure that responders extricating both 'high risk' and 'low risk' patients will be assisted to minimise movement during extrication. It is understood that in some circumstances rescue from inaccessible areas and vehicle extrication may occur prior to a thorough spinal assessment.

APPENDIX 6 – Spinal Injury Management Recommendations

Recommendation 27

Responders at EFR level, who are operating on behalf of a licensed CPG provider, may extricate a patient on an appropriate device in the absence of a practitioner if:

- (i) an unstable environment prohibits the attendance of a practitioner, or
- (ii) while awaiting the arrival of a practitioner the patient requires rapid extrication to initiate emergency care

The aim of recommendation 27 is to authorise responders at EFR level to extricate patients with suspected spinal injury in the absence of a practitioner.

Recommendation 28

Responders at EFR level, who are operating on behalf of a licensed CPG provider, if waiting for an ambulance response may remove an extricated patient from an extrication device and secure into a transport device.

The aim of recommendation 28 is to enable the responder at EFR level to appropriately package a patient while awaiting ambulance transport to minimise discomfort/secondary injury and reduce on-scene time.

Recommendation 29

Responders at EFR level, who are operating on behalf of a licensed CPG provider may request a patient with a suspected spinal injury, who is ambulatory following trauma, to lie down on a trolley stretcher or other device if he/she is able to do so. If unable to comply consider alternative methods.

The aim of recommendation 29 is to remove 'standing take down' as the standard of care for ambulatory patients.

Recommendation 30

Responders at EFR level, who are operating on behalf of a licensed CPG provider following the provision of spinal injury management, shall complete an Ambulatory Care Report (ACR) or Patient Care Report (PCR) and present the top copy to the practitioner transporting the patient to ED.

The aim of recommendation 30 is to ensure that all clinical interventions are documented and become part of the patient care record.

EMERGENCY FIRST RESPONDER

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