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

Fourth Edition, April 2012
Fifth Edition, July 2014
Sixth Edition, March 2017

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## CLINICAL PRACTICE GUIDELINES

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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 Zelie 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.

Mr Tom Mooney, Chair, Pre-Hospital Emergency Care Council (June 2008 - June 2016)
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
Cardiopulmonary Resuscitation ........................................ CPR
Cervical Spine .................................................................... C-spine
Chronic Obstructive Pulmonary Disease ............................. COPD
Clinical Practice Guideline ................................................ CPG
Continuous Positive Airway Pressure ............................... CPAP
Degree ................................................................................ ºC
Degrees Centigrade ........................................................... º
Dextrose 10% in water ........................................................ D10W
Dextrose 5% in water ............................................................ D5W
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

<table>
<thead>
<tr>
<th>Term</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Arterial Pressure</td>
<td>MAP</td>
</tr>
<tr>
<td>Milligram</td>
<td>mg</td>
</tr>
<tr>
<td>Millilitre</td>
<td>mL</td>
</tr>
<tr>
<td>Millimole</td>
<td>mmol</td>
</tr>
<tr>
<td>Minute</td>
<td>min</td>
</tr>
<tr>
<td>Modified Early Warning Score</td>
<td>MEWS</td>
</tr>
<tr>
<td>Motor Vehicle Collision</td>
<td>MVC</td>
</tr>
<tr>
<td>Myocardial Infarction</td>
<td>MI</td>
</tr>
<tr>
<td>Milliequivalent</td>
<td>mEq</td>
</tr>
<tr>
<td>Millimetres of mercury</td>
<td>mmHg</td>
</tr>
<tr>
<td>Nasopharyngeal airway</td>
<td>NPA</td>
</tr>
<tr>
<td>Nebulised</td>
<td>NEB</td>
</tr>
<tr>
<td>Negative decadic logarithm of the H+ ion concentration</td>
<td>pH</td>
</tr>
<tr>
<td>Orally (per os)</td>
<td>PO</td>
</tr>
<tr>
<td>Oropharyngeal airway</td>
<td>OPA</td>
</tr>
<tr>
<td>Oxygen</td>
<td>O₂</td>
</tr>
<tr>
<td>Paramedic</td>
<td>P</td>
</tr>
<tr>
<td>Peak Expiratory Flow Rate</td>
<td>PEFR</td>
</tr>
<tr>
<td>Per rectum</td>
<td>PR</td>
</tr>
<tr>
<td>Per vagina</td>
<td>PV</td>
</tr>
<tr>
<td>Percutaneous Coronary Intervention</td>
<td>PCI</td>
</tr>
<tr>
<td>Personal Protective Equipment</td>
<td>PPE</td>
</tr>
<tr>
<td>Pulseless Electrical Activity</td>
<td>PEA</td>
</tr>
<tr>
<td>Pulseless Ventricular Tachycardia</td>
<td>pVT</td>
</tr>
<tr>
<td>Registered Medical Practitioner</td>
<td>RMP</td>
</tr>
<tr>
<td>Registered Psychiatric Nurse</td>
<td>RPN</td>
</tr>
<tr>
<td>Respiration rate</td>
<td>RR</td>
</tr>
<tr>
<td>Return of Spontaneous Circulation</td>
<td>ROSC</td>
</tr>
<tr>
<td>Revised Trauma Score</td>
<td>RTS</td>
</tr>
<tr>
<td>Saturation of arterial Oxygen</td>
<td>SpO₂</td>
</tr>
<tr>
<td>ST Elevation Myocardial Infarction</td>
<td>STEMI</td>
</tr>
<tr>
<td>Subcutaneous</td>
<td>SC</td>
</tr>
<tr>
<td>Sublingual</td>
<td>SL</td>
</tr>
<tr>
<td>Supraventricular Tachycardia</td>
<td>SVT</td>
</tr>
<tr>
<td>Systolic Blood Pressure</td>
<td>SBP</td>
</tr>
<tr>
<td>Therefore</td>
<td>:</td>
</tr>
<tr>
<td>Total body surface area</td>
<td>TBSA</td>
</tr>
<tr>
<td>Ventricular Fibrillation</td>
<td>VF</td>
</tr>
<tr>
<td>Ventricular Tachycardia</td>
<td>VT</td>
</tr>
<tr>
<td>When necessary (pro re nata)</td>
<td>prn</td>
</tr>
</tbody>
</table>
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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Mr Ray Carney, Advanced Paramedic
Mr David Finnegan, Advanced Paramedic
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)
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

<table>
<thead>
<tr>
<th>Adult</th>
<th>A patient of 16 years or greater, unless specified on the CPG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child</td>
<td>A patient between 1 and less than or equal to (≤) 15 years old, unless specified on the CPG</td>
</tr>
<tr>
<td>Infant</td>
<td>A patient between 4 weeks and less than 1 year old, unless specified on the CPG</td>
</tr>
<tr>
<td>Neonate</td>
<td>A patient less than 4 weeks old, unless specified on the CPG</td>
</tr>
<tr>
<td>Paediatric patient</td>
<td>Any child, infant or neonate</td>
</tr>
</tbody>
</table>

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,
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.
<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Care Principles</td>
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<tr>
<td>2</td>
<td>Patient Assessment</td>
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<tr>
<td>3</td>
<td>Respiratory Emergencies</td>
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<tr>
<td>4</td>
<td>Medical Emergencies</td>
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<td>5</td>
<td>Obstetric Emergencies</td>
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<tr>
<td>6</td>
<td>Trauma</td>
</tr>
<tr>
<td>7</td>
<td>Paediatric Emergencies</td>
</tr>
<tr>
<td>8</td>
<td>Operations</td>
</tr>
</tbody>
</table>
# Clinical Practice Guidelines for First Aid Responder

## Codes Explanation

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFR</td>
<td>Cardiac First Responder (Level 1) for which the CPG pertains</td>
</tr>
<tr>
<td>FAR</td>
<td>First Aid Responder (Level 2) for which the CPG pertains</td>
</tr>
<tr>
<td>EFR</td>
<td>Emergency First Responder (Level 3) for which the CPG pertains</td>
</tr>
</tbody>
</table>

### Sequence Step

- **A sequence (skill) to be performed**
- **A mandatory sequence (skill) to be performed**
- **A parallel process** (which may be carried out in parallel with other sequence steps)
- **A cyclical process** (in which a number of sequence steps are completed)
- **First Aid Responder or lower clinical levels not permitted this route**

### Instructions

- **Ring ambulance control**
- **Request an AED from local area**
- **A decision process** (the Responder must follow one route)
- **Consider treatment options**
- **Reassess the patient following intervention**

### Special Instructions

- **Special instructions** (which the Responder must follow)
- **A skill or sequence that only pertains to EFR or higher clinical levels**
- **Special authorisation** (this authorises the Responder to perform an intervention under specified conditions)

### Finding following clinical assessment, leading to treatment modalities

### CPG Numbering System

1/2/3.1

<table>
<thead>
<tr>
<th>Version</th>
<th>Description</th>
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<tbody>
<tr>
<td>V 2</td>
<td>07/11</td>
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</table>

1/2/3.x.y

<table>
<thead>
<tr>
<th>Version</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V 2</td>
<td>mm/yy</td>
</tr>
</tbody>
</table>

### Medication, dose & route

- **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

### Start from

- **A clinical condition that may precipitate entry into the specific CPG**
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 predetermined 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.
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.


15. Identify the clinical lead on scene.
SECTION 2 - Patient Assessment

Primary Survey - Adult

- Take standard infection control precautions
- Consider pre-arrival information
- Scene safety
  - Scene survey
  - Scene situation
- Control catastrophic external haemorrhage
- Mechanism of injury suggestive of spinal injury
  - Yes → C-spine control
  - No → Scene situation
- Assess responsiveness
  - Responsive
  - Unresponsive

Responsive
- Airway patent
  - Yes → Maintain
  - No → Airway obstructed
- Breathing
  - Yes → Maintain
  - No → Go to BLS CPG

Unresponsive
- 112 / 999

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
9 Over 35 years– Chest Pain? Yes/no
10 Trauma – Severe bleeding? Yes/no

Reference: ILCOR Guidelines 2015
SECTION 2 - Patient Assessment

Secondary Survey Medical – Adult

**Primary Survey**

- Record vital signs
- **Patient acutely unwell**
  - Yes
  - No
- Focused medical history of presenting complaint
- SAMPLE history
- Check for medications carried or medical alert jewellery
- Formulate RED card information
- Maintain care until handover to appropriate Practitioner
- Go to appropriate CPG

**Markers identifying acutely unwell**
- Cardiac chest pain
- Systolic BP < 90 mmHg
- Respiratory rate < 10 or > 29
- AVPU = P or U on scale
- Acute pain > 5

**Identify positive findings and initiate care management**

**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
9. If over 35 years – Chest Pain? Yes/no
10. If trauma – Severe bleeding? Yes/no

**APPENDIX 1: SAMPLE**

- Analogue Pain Scale
  - 0 = no pain………10 = unbearable

**APPENDIX 2: Appropriate Practitioner**
- Registered Medical Practitioner
- Registered Nurse
- Registered Advanced Paramedic
- Registered Paramedic
- Registered EMT

SECTION 2 - Patient Assessment

Secondary Survey Trauma – Adult

Primary Survey

Obvious minor injury

Yes

Follow organisational protocols for minor injuries

No

Examination of obvious injuries

Record vital signs

SAMPLE history

Complete a head to toe survey as history dictates

Check for medications carried or medical alert jewellery

Formulate RED card information

Maintain care until handover to appropriate Practitioner

Go to appropriate CPG

Identify positive findings and initiate care management

Abnormal Work of Breathing – Adult

1. Consider SpO₂
2. Oxygen therapy
3. Position patient
4. Respiratory assessment
5. Airway compromised?
   - Yes: Go to BLS CPG
   - No: Respiratory rate < 10 with cyanosis or ALoC?
     - Yes: Go to CPG
     - No: Respiratory rate < 10 with cyanosis or ALoC?
       - Yes: Go to CPG
       - No: Respiratory assessment

- Cough
  - History of Fever/chills
    - Check cardiac history
- Audible Wheeze
  - Known asthma
    - Yes: Go to Asthma CPG
    - No: Signs of Allergy
      - Yes: Go to Anaphylaxis CPG
      - No: Maintain care until handover to appropriate Practitioner
- Other
  - Consider shock, cardiac/neurological/systemic illness, pain or psychological upset

100% O₂ initially to patients with abnormal WoB, airway difficulties, cyanosis or ALoC or SpO₂ < 94%
SECTION 3 - Respiratory Emergencies

Wheeze/bronchospasm

All asthma incidents are treated as an emergency until proven otherwise.

1. **History of Asthma**
   - Yes
   - Prescribed Salbutamol previously
     - Yes
     - Assist patient to administer own inhaler
       - Salbutamol 1 puff (0.1 mg) metered aerosol
     - Repeat up to 11 times if no improvement
   - No

2. **Oxygen therapy**
   - Maintain care until handover to appropriate Practitioner

3. **Life threatening asthma:**
   - Inability to complete sentences in one breath
   - Respiratory rate > 25 or < 10/ min
   - Heart rate > 110/ min
   - and any one of the following:
     - Feeble respiratory effort
     - Exhaustion
     - Confusion
     - Unresponsive
     - Blueish colour (cyanosis)

4. **During an asthma attack:**
   - Do use a spacer device if one is available
   - Do listen to what the patient is saying – they may have had attacks before.
   - Don’t put your arm around the patient or lie them down - this will restrict their breathing.
   - Don’t worry about giving too much Salbutamol, during an asthma attack extra puffs of medication are safe.

SECTION 4 - Medical Emergencies

Basic Life Support – Adult

1. Collapse
   - Unresponsive and breathing abnormally or gasping (agonal breaths)
     - Yes
     - Shout for help
     - Commence chest Compressions
       - Continue CPR (30:2) until AED is attached or patient starts to move
     - Switch on AED
     - Follow instructions from AED and Ambulance Call Taker
   - No
     - If physically unable to ventilate perform compression only CPR
     - Continue CPR until an appropriate Practitioner takes over or patient starts to move

2. Breathing normally?
   - Yes
     - Go to Post Resuscitation Care CPG
   - No
     - Commence CPR
       - Rate: 100 to 120/min
       - Depth: 5 to 6 cm
     - Minimum interruptions of chest compressions
     - Maximum hands off time 10 seconds
     - Chest compressions
       - Rate: 100 to 120/min
       - Depth: 5 to 6 cm
     - Ventilations
       - Two ventilations each over 1 second

Reference: ILCOR Guidelines 2015
SECTION 4 - Medical Emergencies

Foreign Body Airway Obstruction – Adult

- Are you choking?
- Severe (ineffective cough) → FBAO Severity
- Mild (effective cough)
- Conscious
- No
- Yes
- Encourage cough
- If patient becomes unresponsive
  - 1 to 5 back blows
  - 1 to 5 abdominal thrusts (or chest thrusts for obese or pregnant patients)
  - Effective
  - No
  - Yes
- Open Airway
- 112 / 999
- One cycle of CPR
- Effective
- No
- Yes
- Go to BLS Adult CPG
- CFR-A
- Consider
- Oxygen therapy
- 112 / 999
- Maintain care until handover to appropriate Practitioner

Reference: ILCOR Guidelines 2015
SECTION 4 - Medical Emergencies

Post-Resuscitation Care

1/2/3.4.7
Version 4, 03/2016

Return normal spontaneous breathing

Maintain Oxygen therapy

Conscious

Yes

112 / 999 if not already contacted

No

Recovery position (if no trauma)

Maintain patient at rest

Monitor vital signs

Maintain care until handover to appropriate Practitioner

If registered healthcare professional, and pulse oximetry available, titrate oxygen to maintain SpO₂; Adult: 94% to 98%; Paediatric: 96% to 98%

Avoid warming

Reference: ILCOR Guidelines 2015
SECTION 4 - Medical Emergencies

Recognition of Death – Resuscitation not Indicated

Apparent dead body

Signs of Life

- Yes → Go to BLS CPG
- No → Definitive indicators of Death

Definitive indicators of Death

- Yes → It is inappropriate to commence resuscitation
- No → Complete all appropriate documentation

Await arrival of appropriate Practitioner and / or Gardaí

Definitive indicators of death:
1. Decomposition
2. Obvious rigor mortis
3. Obvious pooling (hypostasis)
4. Incineration
5. Decapitation
6. Injuries totally incompatible with life

Inform Ambulance Control

Complete all appropriate documentation

112 / 999
**Cardiac Chest Pain – Acute Coronary Syndrome**

1. **Cardiac chest pain**
   - 112 / 999 if not already contacted

2. Oxygen therapy
   - If registered healthcare professional, and pulse oximetry available, titrate oxygen to maintain SpO₂; Adult: 94% to 98%

3. Aspirin 300 mg PO

4. Monitor vital signs
   - Monitor chest pain ongoing

5. Patient prescribed GTN
   - Yes: Assist patient to administer GTN 0.4 mg SL
   - No: Maintain care until handover to appropriate Practitioner

Reference: ILCOR Guidelines 2015
SECTION 4 - Medical Emergencies

Altered Level of Consciousness – Adult

V, P or U on AVPU scale

Maintain airway

Trauma

Yes

Consider Cervical Spine

No

Airway maintained

Yes

No

Recovery Position

Complete a FAST assessment

Obtain SAMPLE history from patient, relative or bystander

Check for medications carried or medical alert jewellery

Maintain care until handover to appropriate Practitioner

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**

**Anaphylaxis – Adult**

**Anaphylaxis**

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

**Oxygen therapy**

1. Place in semi-recumbent position
2. Monitor vital signs
3. Assist patient to administer own
   - Epinephrine (1:1000) 300 mcg IM
   - Salbutamol 1 puff (0.1 mg) metered aerosol
4. Maintain care until handover to appropriate Practitioner

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

Check Airway and Breathing (A & B)

Call 112 / 999

A or B issue identified

Yes

Go to BLS CPG

No

Check for obvious injuries (Primary survey)

Haemorrhage identified

Yes

Go to Haemorrhage CPG

No

Ensure patient is lying down

Elevate lower limbs (higher than body)

Prevent chilling

Monitor vital signs

Encourage patient to gradually return to sitting position

Check for underlying medical conditions

Maintain care until handover to appropriate Practitioner

Advising patient to attend a medical practitioner regardless of how simple the faint may appear

Reference: Schoenwetter, David J. Fainting/ Syncope, Emergency Medicine
SECTION 4 - Medical Emergencies

Glycaemic Emergency – Adult

Known diabetic with confusion or altered levels of consciousness

- A or V on AVPU scale
  - Yes
  - No

- Sweetened drink and/or Glucose gel 10-20 g buccal

Allow 5 minutes to elapse following administration of sweetened drink or Glucose gel

Improvement in condition

- Yes
  - Advise a carbohydrate meal (sandwich)
  - Maintain care until handover to appropriate Practitioner

- No

**Hypothermia**

**Query hypothermia**

- Immersion
  - Yes
  - Remove patient horizontally from liquid (Provided it is safe to do so)

- No
  - Protect patient from wind chill
  - Complete primary survey (Commence CPR if appropriate)

- Remove wet clothing by cutting
- Place patient in dry blankets/sleeping bag with outer layer of insulation

- Yes
  - Alert and able to swallow
  - Give hot sweet drinks
  - If Cardiac Arrest follow CPGs but - no active re-warming
  - Hot packs to armpits & groin

- No
  - Maintain care until handover to appropriate Practitioner

**Transport**
- Head down position
  - Helicopter: head forward
  - Boat: head aft

*References:
- European Resuscitation Council Guidelines for Resuscitation 2015
- Pennington M, et al, 1994, Wilderness EMT, Wilderness EMS Institute*
SECTION 4 - Medical Emergencies

Poisons

- Poisoning
- Inhilation, ingestion or injection
- Absorption
- Site burns
- Yes: Cleanse/clear/decontaminate
- No: For decontamination follow local protocol
  - A on AVPU
  - Recovery Position

- Monitor vital signs
- Maintain poison source package for inspection by EMS
- Maintain care until handover to appropriate Practitioner

If suspected tablet overdose locate tablet container and hand it over to appropriate practitioner

Reference: ILCOR Guidelines 2015
Seizure/Convulsion – Adult

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

Oxygen therapy

Seizing currently

Support head

Seizure status

Alert

Yes

No

Recovery position

Airway management

Maintain care until handover to appropriate Practitioner

Protect from harm

112 / 999

Post seizure

Consider other causes of seizures

Yes

Seizure status

No
**Stroke**

1. **Acute neurological symptoms**
   - Complete a FAST assessment

2. **Maintain airway**
   - CFR-A
   - Oxygen therapy

3. **Maintain care until handover to appropriate Practitioner**

- **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 now if FAST positive

If registered healthcare professional, and pulse oximetry available, titrate oxygen to maintain SpO₂
- Adult: 94% to 98%

Reference: ILCOR Guidelines 2015
SECTION 6 - Trauma

Burns

**Burn or Scald**

- Cease contact with heat source

**Isolated superficial injury (excluding FHFP)**

  - Yes
  - No

**Minimum 15 minutes cooling of area is recommended. Caution with hypothermia**

**Airway management**

  - Yes
  - No

**Respiratory distress**

  - Yes
  - No

**Consider humidified Oxygen therapy**

**Inhalation and or facial injury**

  - Yes
  - No

**Commence local cooling of burn area**

**Dressing/covering of burn area**

  - Yes
  - No

**Remove burnt clothing (unless stuck) & jewellery**

**Dressing/covering of burn area**

**Prevent chilling (monitor body temperature)**

**Ensure ambulance control has been notified**


ILCOR Guidelines 2015

**Caution blisters should be left intact**

**Caution with the elderly, very young, circumferential & electrical burns**

**Follow organisational protocols for minor injuries**

**Maintain care until handover to appropriate Practitioner**

**F: face**

**H: hands**

**F: feet**

**F: flexion points**

**P: perineum**
SECTION 6 - Trauma

External Haemorrhage

Open wound → Active bleeding
- Yes: Pressure, Elevation, Examination, Pressure
- No: Apply sterile dressing

Apply sterile dressing

Haemorrhage controlled
- Yes: Apply additional pressure dressing(s)
- No: Monitor vital signs

Prevent chilling and elevate lower limbs (if possible)

Consider Oxygen therapy

Maintain care until handover to appropriate Practitioner

Reference: ILCOR Guidelines 2015
**Harness Induced Suspension Trauma**

**Fall arrested by harness/rope**

- **No**
  - Patient still suspended
  - Elevate lower limbs if possible during rescue
  - Advise patient to move legs (to encourage blood flow back to the heart)
  - Monitor vital signs
  - Oxygen therapy
  - Go to appropriate CPG

- **Yes**
  - 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

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

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

**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
doi: 10.1136/emj.2008.064931
SECTION 6 - Trauma

Heat Related Emergency

Collapse from heat related condition

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

Alert and able to swallow

- Yes
- No

Give cool fluids to drink

Recovery position (maintain airway)

Cool patient

Monitor vital signs

Maintain care until handover to appropriate Practitioner

Reference:
- ILCOR Guidelines 2015
- RFDS, 2009, Primary Clinical Care Manual

Cooling may be achieved by:
- Removing clothing
- Fanning
- Tepid sponging

112 / 999
SECTION 6 - Trauma

Limb Injury

- Expose and examine limb
- Dress open wounds
- Haemorrhage controlled?
  - Yes: Provide manual stabilisation for injured limb
  - No: Go to Haemorrhage Control CPG
- Check CSMs distal to injury site
- Injury type:
  - Fracture: Apply appropriate splinting device /sling
  - Soft tissue injury: Rest, Ice, Compression, Elevation
  - Dislocation: Splint/support in position found
- Recheck CSMs
- Maintain care until handover to appropriate Practitioner

Equipment list:
- Dressings
- Triangular bandages
- Splinting devices
- Compression bandages
- Ice packs

2/3.6.7
Version 3, 02/14
112 / 999
SECTION 6 - Trauma

Spinal Injury Management

If in doubt, treat as spinal injury

1. Return head to neutral position unless on movement there is an increase in Pain, Resistance or Neurological symptoms

2. Stabilise cervical spine
   - Remove helmet (if worn)
   - Apply cervical collar

3. Active spinal motion restriction
   - Consider use of undamaged child seat for appropriate age groups

4. Maintain care until handover to appropriate Practitioner

5. Advise patient to remain still until arrival of a higher level of care

High risk factors:
- any of the following:
  - 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
  - age 2 years or younger incapable of verbal communication

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 past 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

Unlikely to have a clinically significant spinal injury
- any two or more of:
  - involved in a minor rear-end motor vehicle collision
  - comfortable in a sitting position
  - ambulatory at any time since the injury
  - no midline cervical spine tenderness
  - no spinal column/ midline pain

And are able to actively rotate their neck 45 degrees to the left and right

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

Reference: PHECC Pre-hospital spinal injury management standard STN 024 Version 2
SECTION 6 - Trauma

Submersion Incident

- Spinal injury indicators:
  - History of:
    - diving
    - trauma
    - water slide use
    - alcohol intoxication

- Ventilations may be commenced while the patient is still in water by trained rescuers

Submerged in liquid

Remove patient from liquid
(Provided it is safe to do so)

Remove horizontally if possible
(consider C-spine injury)

Ensure Ambulance Control is informed 112 / 999

Unresponsive & not breathing

Yes

Go to BLS CPG

Higher pressure may be required for ventilation because of poor compliance resulting from pulmonary oedema

No

Oxygen therapy

Monitor Respiration & Pulse

No

Patient is hypothermic

Yes

Go to Hypothermia CPG

Maintain care until handover to appropriate Practitioner

Transportation to Emergency Department is required for investigation of secondary drowning insult

Abnormal Work of Breathing – Paediatric (≤ 15 years)

**Respiratory difficulties**

- **EFR**
  - Consider SpO₂
  - Oxygen therapy
  - Position patient

  **Airway compromised**
  - Yes
    - Go to BLS CPG
  - No
    - **Respiratory rate < 10 with cyanosis or ALoC**
      - Yes
        - Go to ELS CPG
      - No
        - **Respiratory assessment**

  **History of Fever/chills**
  - Check cardiac history

  **Cough**
  - History of Fever/chills
  - Check cardiac history

  **Audible Wheeze**
  - Known asthma
    - Yes
      - Go to Asthma CPG
    - No
      - Signs of Allergy
        - Yes
          - Go to Anaphylaxis CPG
        - No
          - **Maintain care until handover to appropriate Practitioner**

  **Other**
  - Consider shock, cardiac/ neurological/systemic illness, pain or psychological upset

100% O₂ initially to patients with abnormal WOB, airway difficulties, cyanosis or ALoC or SpO₂ < 96%
**SECTION 7 - Paediatric Emergencies**

### Wheeze/bronchospasm

All asthma incidents are treated as an emergency until shown otherwise.

1. **History of Asthma**
   - Yes
     - Prescribed Salbutamol previously
       - Yes
         - Assist patient to administer own inhaler
           - Salbutamol 1 puff (0.1 mg) metered aerosol
           - Oxygen therapy
           - Maintain care until handover to appropriate Practitioner
     - No
       - Reassess
       - If no improvement repeat
         - For < 5 year olds up to 5 times
         - For ≥ 5 year olds up to 11 times as required

2. **Oxygen therapy**

3. **Life threatening asthma:**
   - Inability to complete sentences in one breath
   - Respiratory rate > 25 or < 10/ min
   - Heart rate > 110/ min
   - and any one of the following:
     - Feeble respiratory effort
     - Exhaustion
     - Confusion
     - Unresponsive
     - Bluish colour (cyanosis)

4. **During an asthma attack:**
   - Do use a spacer device if one is available
   - Do listen to what the patient is saying – they may have had attacks before.
   - Don't put your arm around the patient or lie them down - this will restrict their breathing.
   - Don't worry about giving too much Salbutamol, during an asthma attack extra puffs of medication are safe.

SECTION 7 - Paediatric Emergencies

Basic Life Support – Paediatric (≤ 15 Years)

Collapse

Unresponsive and breathing abnormally or gasping (agonal breaths)

Yes

Shout for help

No

Switch on AED

Breathing normally?

Commence chest Compressions
Continue CPR (30:2) until AED is attached or patient starts to move

Follow instructions from AED and Ambulance Call Taker

Continue CPR until an appropriate Practitioner takes over or patient starts to move

Go to Post Resuscitation Care CPG

Reference: ILCOR Guidelines 2015

If unable or unwilling to ventilate perform compression only CPR

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.

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)
SECTION 7 – Paediatric Emergencies

Foreign Body Airway Obstruction – Paediatric (≤ 15 years)

Are you choking?

Severe (ineffective cough)

Conscious

No

1 to 5 back blows

Effective

Yes

Encourage cough

If patient becomes unresponsive

Open Airway

112 / 999

one cycle of CPR

Effective

Yes

Consider Oxygen therapy

Maintain care until handover to appropriate Practitioner

No

1 to 5 thrusts (child – abdominal thrusts) (infant – chest thrusts)

No

Effective

Yes

Mild (effective cough)

Yes

Encourage cough

112 / 999

Go to BLS Paediatric CPG

After each cycle of CPR open mouth and look for object. If visible attempt once to remove it.
SECTION 7 - Paediatric Emergencies

Anaphylaxis – Paediatric (≤ 15 years)

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

**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.

**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.

SECTION 7 - Paediatric Emergencies

Seizure/Convulsion – Paediatric (≤ 15 years)

- **Seize currently**
- **Seize status**
- **Post seizure**

- **Protect from harm**
- **Oxygen therapy**
- **Call 112 / 999**

- **Alert**
- **Support head**

- **Oxygen therapy**
- **Seizure status**
- **Post seizure**

- **Alert**
- **No**

- **Recovery position**
- **Airway management**

- **If pyrexial – cool child**

- **Reassess**

- **Maintain care until handover to appropriate Practitioner**

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

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. Positive exchange of Team Leader
2. Position ALS bag (AP)
3. Take handover from P1
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.

Identification: P5
Role: Family & Team Support
Position: Outside the BLS triangle
1. Family Liaison
2. Patient HV/meds
3. Manage Equipment
4. Plan removal (if transporting)

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

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 First Aid 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 provided:

1. The First Aid Responder complies with the CPGs published by PHECC.
2. The First Aid Responder is privileged, by the organisation on whose behalf he/she is acting, to administer the medications.
3. The First Aid 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 First Aid Responder administration of medications. The principle of titrating the dose to the desired effect shall be applied.

The onus rests on the First Aid Responder to ensure that he/she is using the latest versions of CPGs which are available on the PHECC website www.phecc.ie

The route of administration should be as specified by the CPG.

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 one medication for First Aid Responders

Please visit www.phecc.ie for the latest edition/version
Amendments to the First Aid Responder 2014 Edition:

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</table>
APPENDIX 1 - Medication Formulary

Index of medication formulary (Adult $\geq$ 16 and Paediatric $\leq$ 15 unless otherwise stated)

<table>
<thead>
<tr>
<th>Medication</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirin</td>
<td>52</td>
</tr>
</tbody>
</table>
### Clinical Practice Guidelines - 2017 Edition (Updated February 2018)

#### APPENDIX 1 - Medication Formulary

<table>
<thead>
<tr>
<th>Medication</th>
<th>Aspirin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class</strong></td>
<td>Platelet aggregation inhibitor.</td>
</tr>
<tr>
<td><strong>Descriptions</strong></td>
<td>Anti-inflammatory agent and an inhibitor of platelet function. Useful agent in the treatment of various thromboembolic diseases such as acute myocardial infarction.</td>
</tr>
<tr>
<td><strong>Presentation</strong></td>
<td>300 mg dispersible tablet.</td>
</tr>
<tr>
<td><strong>Administration</strong></td>
<td>Orally (PO) - dispersed in water, or to be chewed - if not dispersible form. <em>(\text{CPG}: 5/6.4.10, 4.4.10, 1/2/3.4.10).</em></td>
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<tr>
<td><strong>Indications</strong></td>
<td>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).</td>
</tr>
<tr>
<td><strong>Contra-Indications</strong></td>
<td>Active symptomatic gastrointestinal (GI) ulcer / Bleeding disorder (e.g. haemophilia) / Known severe adverse reaction / Patients &lt; 16 years old (risk of Reye’s syndrome).</td>
</tr>
<tr>
<td><strong>Usual Dosages</strong></td>
<td><strong>Adult:</strong> 300 mg tablet. <strong>Paediatric:</strong> Contraindicated.</td>
</tr>
<tr>
<td><strong>Pharmacology / Action</strong></td>
<td><strong>Antithrombotic:</strong> Inhibits the formation of thromboxane A2, which stimulates platelet aggregation and artery constriction. This reduces clot/thrombus formation in an MI.</td>
</tr>
<tr>
<td><strong>Side effects</strong></td>
<td>Epigastric pain and discomfort / Bronchospasm / Gastrointestinal haemorrhage / Increased bleeding time / Skin reactions in hypersensitive patients.</td>
</tr>
<tr>
<td><strong>Long term effects</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Additional information</strong></td>
<td>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.</td>
</tr>
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## New Medications and Skills for 2017

<table>
<thead>
<tr>
<th>CLINICAL LEVEL</th>
<th>CFR-C</th>
<th>CFR-A</th>
<th>FAR/OFA</th>
<th>EFR</th>
<th>EMT</th>
<th>P</th>
<th>AP</th>
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<tbody>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Epinephrine (1:1,000) IM</td>
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<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
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<tr>
<td>Chest auscultation</td>
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<td>✓</td>
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<td>✓</td>
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<tr>
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<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
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</table>

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.
<table>
<thead>
<tr>
<th>CLINICAL LEVEL</th>
<th>CFR-C</th>
<th>CFR-A</th>
<th>FAR/OFA</th>
<th>EFR</th>
<th>EMT</th>
<th>P</th>
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### APPENDIX 2 - Medications & Skills Matrix

<table>
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<th>CFR-C</th>
<th>CFR-A</th>
<th>FAR/OFA</th>
<th>EFR</th>
<th>EMT</th>
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<tbody>
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### AIRWAY & BREATHING MANAGEMENT

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### TRAUMA

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## APPENDIX 2 - Medications & Skills Matrix

### TRAUMA (contd.)

| Clinical Level | CFR-C | CFR-A | FAR/OFA | EFR | EMT | P | AP
|----------------|--------|--------|---------|-----|-----|---|---
| Pelvic Splinting device |         |        |         |     |     |   |   |
| Move and secure patient into a vacuum mattress |         |        | BTEC   |     |     |   |   |
| Move and secure a patient to a paediatric board |         |        | BTEC   |     |     |   |   |
| Traction splint application |         |        |         |     |     |   |   |
| Lateral dislocation of patella – reduction |         |        | APO    |     |     |   |   |
| 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
### PATIENT ASSESSMENT (contd.)

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</table>
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.
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.
New FAR CPGs in 2017 Edition

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

<table>
<thead>
<tr>
<th>New CPGs</th>
<th>The new skills and medications incorporated into the CPGs are:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPG 1/2/3.8.6 Team Resuscitation</td>
<td>This CPG outlines the team approach to resuscitation and defines specific roles for team members.</td>
</tr>
<tr>
<td>(New section in this edition: Section 8 Operations)</td>
<td></td>
</tr>
<tr>
<td>CPG 2/3.3.4 Asthma – Adult</td>
<td>This CPG outlines the management of asthma for an adult.</td>
</tr>
<tr>
<td>CPG 2/3.6.4 Harness Induced Suspension Trauma</td>
<td>This CPG outlines the management for a patient following harness induced suspension trauma.</td>
</tr>
<tr>
<td>CPG 1/2/3.6.10 Submersion Incident</td>
<td>This CPG outlines the management for a patient following a submersion incident.</td>
</tr>
<tr>
<td>CPG 2/3.7.12 Asthma – Paediatric</td>
<td>This CPG outlines the management of asthma for a paediatric patient.</td>
</tr>
</tbody>
</table>

Deleted FAR CPGs in 2017 Edition

<table>
<thead>
<tr>
<th>CPG Deleted</th>
<th></th>
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<tbody>
<tr>
<td>2/3.4.20 Heat-Related Illness</td>
<td>This CPG has been deleted. Both Heat-Related Illness and Heat-Related Emergency CPGs have been incorporated into one CPG 2/3.6.6.</td>
</tr>
<tr>
<td>3.7.52 Spinal Immobilisation – Paediatric</td>
<td>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.</td>
</tr>
</tbody>
</table>
Updated FAR CPGs from 2014 version

To support upskilling of the 2017 CPGs, the CPGs that have content changes are outlined below. Changes in blue text relate to the 2018 updates.

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

<table>
<thead>
<tr>
<th>CPGs</th>
<th>The principal differences are:</th>
</tr>
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<tbody>
<tr>
<td>CPG 2/3.3.2 Abnormal Work of Breathing – Adult</td>
<td>Deleted FAR restriction for entry to the Asthma CPG</td>
</tr>
<tr>
<td>CPG 1/2/3.4.1 Basic Life Support – Adult</td>
<td>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</td>
</tr>
<tr>
<td>CPG 1/2/3.4.7 Post-Resuscitation Care</td>
<td>Deleted Special authorisation for CFR-As to actively cool patient Added Avoid warming</td>
</tr>
<tr>
<td>CPG 2/3.4.15 Anaphylaxis – Adult</td>
<td>Medication update Salbutamol updated from ‘2 puffs metered aerosol’ to ‘1 puff metered aerosol and repeated up to 11 times’ prn</td>
</tr>
<tr>
<td>CPG 2/3.4.19 Glycaemic Emergency – Adult</td>
<td>Added Advise carbohydrate meal Medication update Sweetened drink AND/OR Glucose gel</td>
</tr>
<tr>
<td>CPG 2/3.6.6 Heat Related Emergency</td>
<td>Deleted Exercise related dehydration should be treated with oral fluids (caution with overhydration with water)</td>
</tr>
<tr>
<td>CPG 2/3.6.9 Spinal Injury Management</td>
<td>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 <a href="http://www.phecc.ie">www.phecc.ie</a></td>
</tr>
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### APPENDIX 4 - CPG Updates for First Aid Responder

<table>
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<tr>
<th>CPGs</th>
<th>The principal differences are:</th>
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<td></td>
<td><strong>Deleted</strong>&lt;br&gt;‘with any of the above’ after both age 65 years and age 2 years in the high risk factors.</td>
</tr>
<tr>
<td>CPG 2/3.7.11 Abnormal Work of Breathing – Paediatric (≤ 15 years)</td>
<td>Deleted&lt;br&gt;FAR restriction for entry to the Asthma CPG</td>
</tr>
<tr>
<td>CPG 1/2/3.7.20 Basic Life Support – Paediatric (≤ 15 years)</td>
<td>Deleted&lt;br&gt;Responsive patient – decision diamond&lt;br&gt;Chest compression depth ‘at least 5 cm’&lt;br&gt;Ventilations rate: 10/min&lt;br&gt;Added&lt;br&gt;Unresponsive and breathing abnormally or gasping (agonal breaths) – decision diamond&lt;br&gt;Call for help, phone 112/999 and request an AED combined into one step&lt;br&gt;Chest compression depth ‘Child 5 cm, small child 4 cm and infant 4 cm’&lt;br&gt;‘or unable’ added to ‘if unwilling to ventilate - instruction box for compression only CPR</td>
</tr>
<tr>
<td>CPG 2/3.7.31 Anaphylaxis – Paediatric (≤ 15 years)</td>
<td><strong>Medication update</strong>&lt;br&gt;Salbutamol updated from ‘2 puffs metered aerosol’ to ‘1 puff metered aerosol’ and (age specific) repeats if no improvement</td>
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</table>
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 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.
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.
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 FARs. The full details are published in STN024 and are available on the PHECC website www.phecc.ie.

Recommendations
First Aid 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
- age 2 years or younger incapable of verbal communication,

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 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 23

While waiting for the arrival of a practitioner, responders shall provide active spinal motion restriction for all patients if 'high risk' or 'low risk' factors are present.

The aim of recommendation 23 is to outline the rationale for responders in relation to spinal motion restriction.

Recommendation 24

Responders at FAR/OFA level should maintain the patient with suspected spinal injury in the position found while maintaining active spinal motion restriction.

The aim of recommendation 24 is to ensure that both 'high risk' and 'low risk' patients have minimised movement until a practitioner clinical assessment occurs.
FIRST AID RESPONDER

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