



Sports First Aid

There's no harm in hoping for the best as long as you've prepared for the worst.

By

Waleed Saber Ahmed

Orthopedic physical therapy lecturer

S.V.U.



FIFA Emergency Care Bag

Sequence of events for emergency care

- 1. Preparation**
- 2. Triage**
- 3. Primary survey**
- 4. Resuscitate and stabilize**
- 5. Focused history**
- 6. Secondary survey**
- 7. Frequent reassessment**
- 8. Definitive care**

Preparation

pre-situation preparation

- emergency medical knowledge
- emergency medical skills
- emergency medical equipment/adjuncts
- clinical team rehearsal
- ensuring the clinical team, athletes and officials are aware of emergency response procedures, exit points and assembly points at the venues where they train and participate.

situation preparation

- survey the scene for safety
- ensure all medical team members adopt universal precautions
- organize the clinical team.

Triage

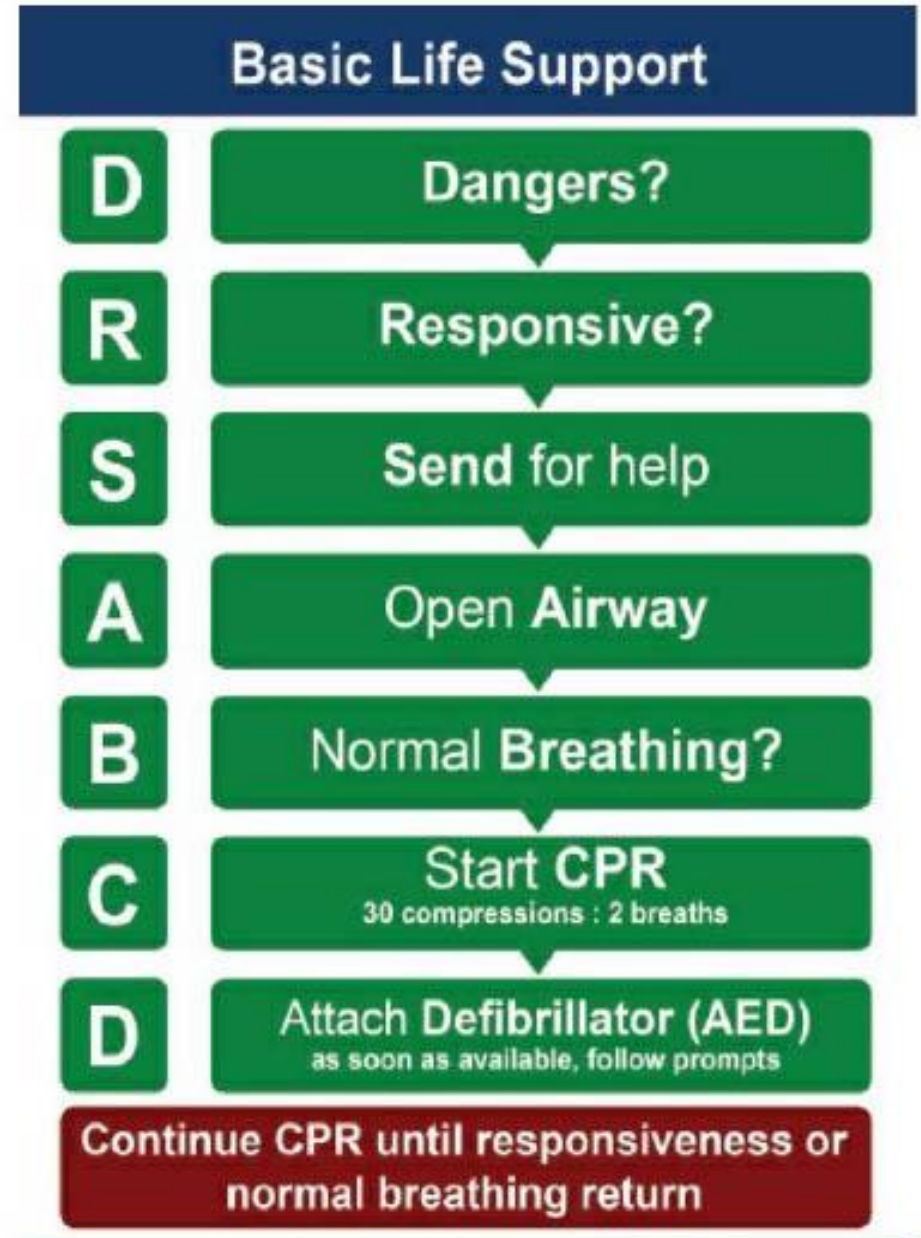
- Triage is the sorting of patients based on their need for treatment and the resources available.
- Even when there are multiple casualties, the triage priorities remain: Airway, Breathing, Circulation and Disability.

Primary survey & Basic life support

identify and treat life-threatening conditions

Basic life support BLS

- Each member of the clinical team should be familiar with, skilled and practiced in basic life support techniques.
- An essential component of basic life support is the immediate management of a cardiac arrest and the effective performance of cardiopulmonary resuscitation (CPR).



Adult CPR Protocol

- Compression:
 - optimal number: 30
 - optimal depth: 5-6cm
 - optimal rate: 100/ min
- Maintain open airway / observe chest rise and fall
- Unless certain of a return of spontaneous circulation (ROSC) continue CPR “cycle” 30(compressions):2(breaths) until AED arrival and thereafter.

- Automated: automatically detects and analyses cardiac electrical activity to establish if cardiac rhythm is abnormal (or normal) and if a shock can/needs to be administered
- External: shock is delivered through AED pads applied externally to casualty's chest
- Defibrillator: designed to stop heart from 'fibrillating'



Automated external defibrillator (AED).

- AED facilitates fast assessment of cardiac rhythm and directs subsequent management
- Defibrillation is the only effective treatment for VF/VT(ventricular fibrillation, ventricular tachycardia) allowing heart to reset itself and resume normal rhythm and output
- Defibrillated within first minute of collapse -chance of survival 90 per cent
- Delayed more than 10 minutes -chance of survival less than 5 per cent

AED Use

as simple as 1. 2. 3.

Athlete unconscious, not breathing normally, absent pulse:

1. switch defibrillator on immediately when it arrives
2. follow the audible prompts
3. press shock button (if/when instructed).

Signs of return to life

- breathe spontaneously / chest rises and falls (but may be less than normal 12-20 breaths per minute and require supplemented breathing)
- vomit
- open their eyes
- attempt to cough
- make purposeful voluntary movements

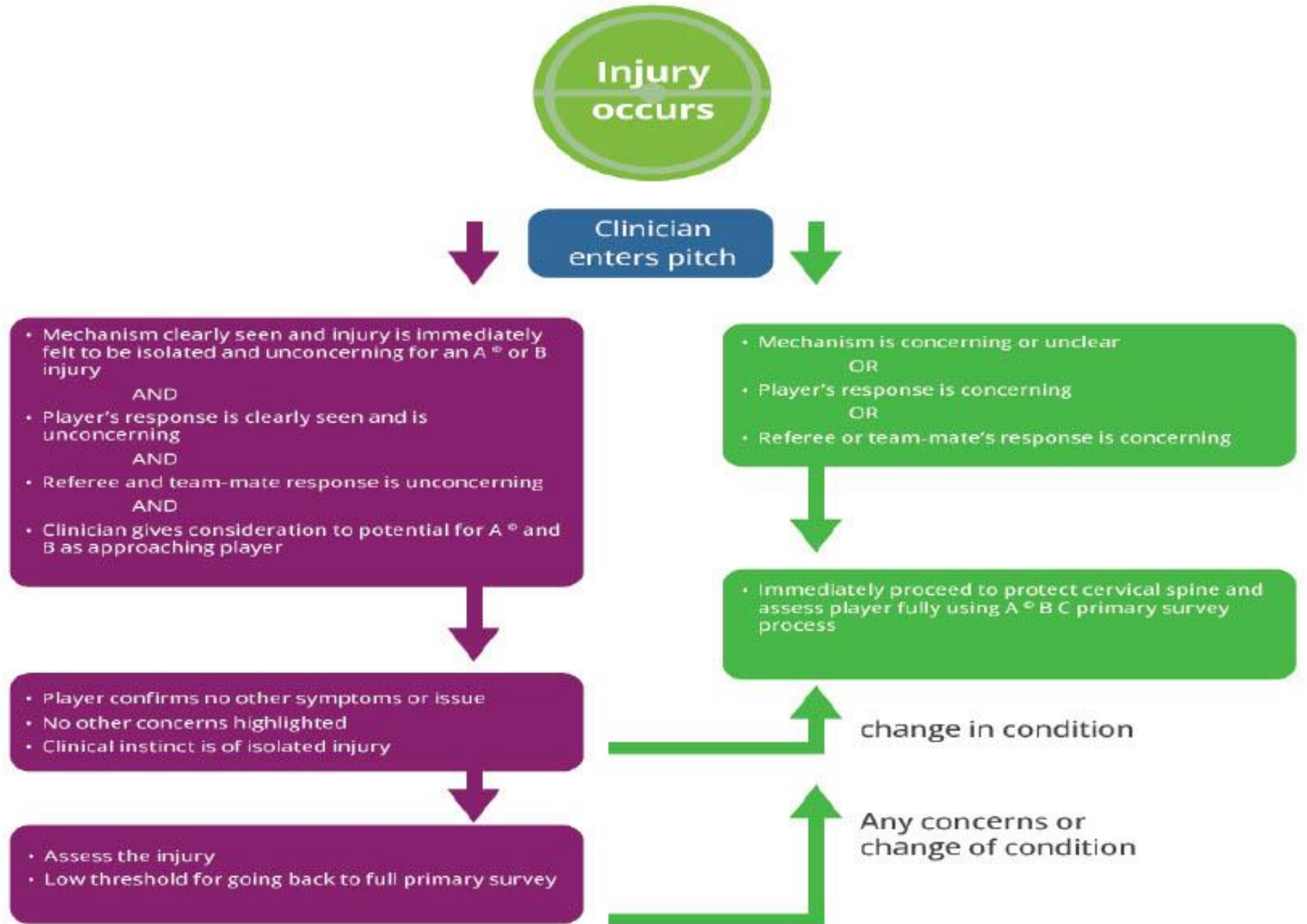
Recheck carotid pulse

When Should CPR be Stopped?

Once CPR started do not stop to reassess athlete unless:

- AED rhythm being checked / shock being administered
- athlete responds / shows 'signs of life': attempts to breathe / coughs / moves purposely / opens eyes
- paramedics arrive and take over
- you are too exhausted and unable to carry on
- situation becomes dangerous and need to move

**FLOW CHART
FOR INITIAL
ASSESSMENT
(primary
survey)
PATHWAY**



Primary survey

A **C** BCDE assessment

AIRWAY C B C D E

- An immediate assessment of the airway is always the initial consideration and the clinical priority when managing a potentially critical injury.
- Hearing a player shouting is distressing, but it indicates a patent airway

There are two types of airway injuries

1. Primary airway injury

This is an injury that directly affects the airway. It will usually result from an injury to the face, head or neck. It might be bleeding, broken teeth or direct trauma to the larynx. Any associated swelling will compound the issue. There is a physical obstruction to the airway.

2. Secondary airway injury

This is a loss of protective airway reflexes that is caused by decreased conscious level. The softer structures of the airway lose their tone and fall backwards, creating an obstruction to the airway

Symptoms and signs

What can you see? What can you hear?

- Gurgling noises
- Snoring noises
- Choking
- Stridor
- Cyanosis
- Absence of respiratory effort

The management of a player with an airway obstruction

1. Airway-opening manoeuvres
2. Airway adjuncts. Basic, Advanced
3. Advanced airway skills – intubation
4. Surgical airway skills

Airway-opening manoeuvres

Airway opening – head-tilt and chin-lift

Indications

- Evidence of airway obstruction
- Apnea (prior to ventilation)

Contraindications

- Airway obstruction with suspected trauma



Technique

- Place the palm of one hand on the player's forehead and use your other hand to gently lift the chin up so that the player's neck is extended into a "sniffing" position.
- The easiest way to do this is to place the index and middle fingers underneath the chin in the midline, and then extend the head slightly. The thumb can also be placed on the chin just under the lower lip and this can help to open the mouth if it is closed. This movement again pulls the soft tissues of the oropharynx forward and lifts them away from the posterior pharyngeal wall, allowing air to flow through the pharynx into the lungs.

Airway opening – jaw-thrust

Indications

- Evidence of airway obstruction from either primary or secondary injury
- Decreased GCS assessment of response to painful stimulus (relative indication)

Contraindications

- Nothing specific, but use with caution if there is a suspected mandibular fracture

Technique

- By lifting the mandible forward, the soft-tissue structures are also moved forward and away from the posterior pharyngeal wall.
- The middle and ring fingers are placed under the angle of the mandible and pulled in an upwards movement. Only the jaw itself should be moved; the head and midface do not move and the neck should not move.



Airway adjuncts

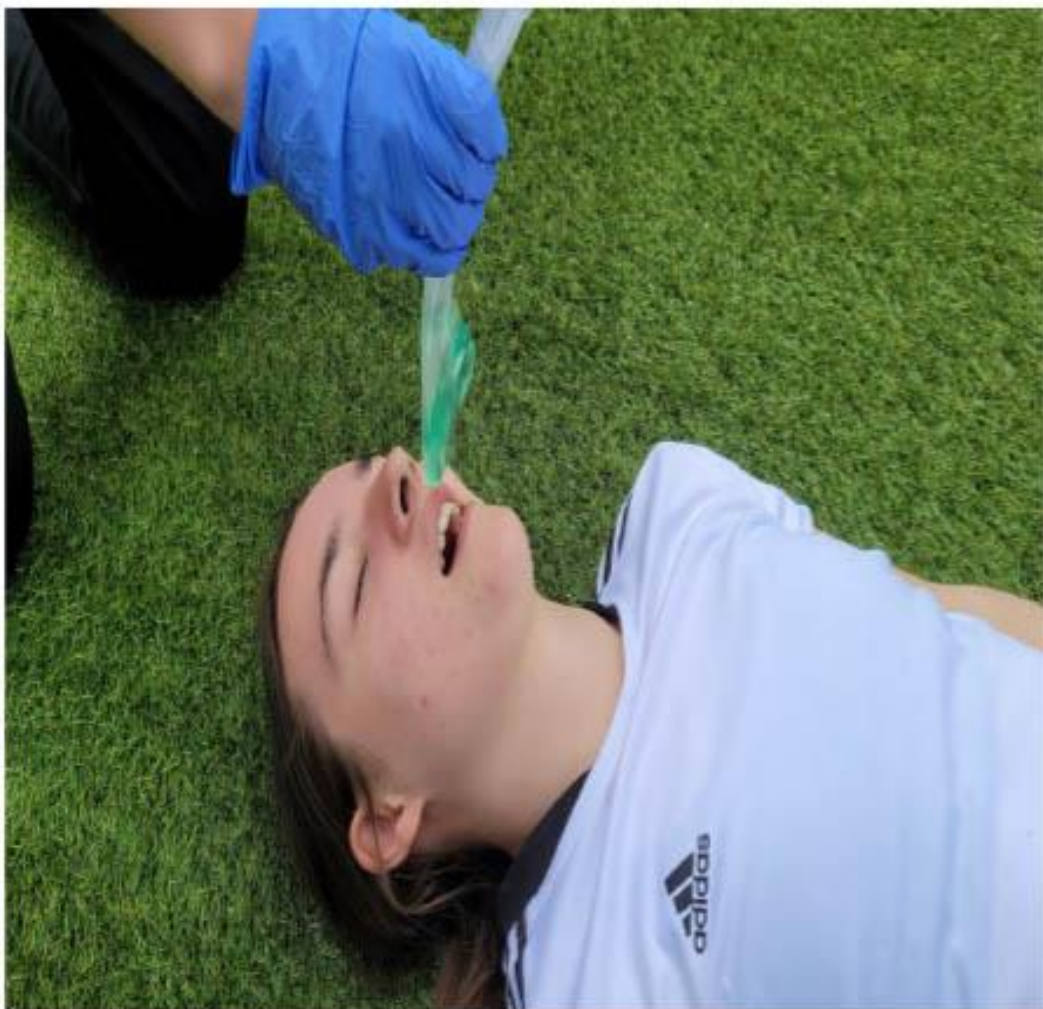
Nasopharyngeal airway



oropharyngeal airway (OPA)



i-gel laryngeal mask airway



Suction and oxygen



A C CERVICAL SPINE B C D E

- In any trauma, it is important to consider the potential for a cervical spine injury. This is mandatory in any injury above the clavicles
- you should assume that there is a spinal and/or cord injury until you can prove otherwise.
- if there is any doubt at all, spinal protection should be put in place and maintained with the player being safely removed from the field of play
- if the mechanism is either concerning or unclear, immediate protection of the cervical spine is required.
- Thankfully, the incidence of cervical spine injury in football is very low.

Clearing the cervical spine

In order to assess and clear the cervical spine, a number of assessments and considerations should be made:

- No concerning mechanism – fall from height onto head, causing axial loading
- No midline tenderness
- GCS 15
- No distracting injury
- No neurological signs
- Active range of movement of 45° lateral rotation

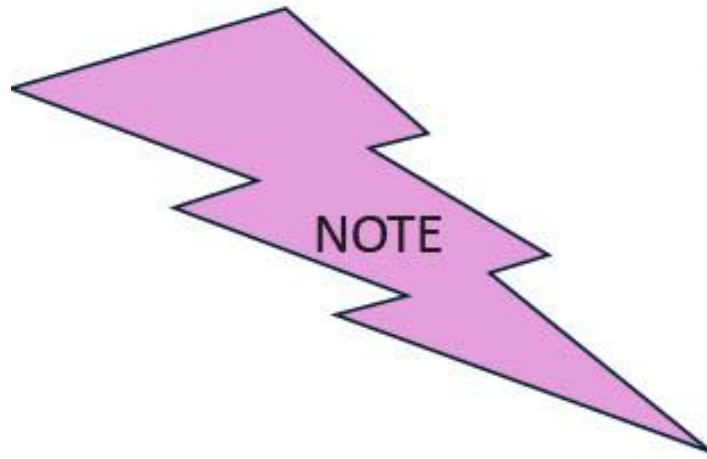
How to size and fit a semi-rigid cervical collar

Indications

- Suspected or confirmed cervical spine injury

Contraindications

- Airway obstruction: the application of a cervical collar brings the potential for worsening or causing an airway obstruction.



There is growing concern that even a well-fitted cervical collar may not confer added protection to the cervical spine and may instead cause other significant issues such as raised intracranial pressure, for example. Being aware of the guidance locally is important as cervical collars are being removed from trauma management in some countries



Laerdal®-style adjustable semi-rigid cervical collar

1. Draw a line from the chin to bisect the sternomastoid



2. Measure from this point down to the bulk of trapezius in fingerbreadths



Using the sizing marker, place your fingers on the collar and find the sizing point closest to your fingers



4. Slide the collar underneath the player – do not slide too far



Positioning and securing of cervical collar



A C Breathing Circulation D E

1 observation then 2 hands on 3 places”

Breathing

1 observation = **respiratory rate**.

2 hands on 3 places:

- The neck
- The chest wall anteriorly
- The chest wall posterolaterally

observation

- accessory muscle use
- rate, effort and symmetry of breathing
- the presence of wounds or bruising to the chest or neck, which may suggest significant underlying airway or lung damage

palpation

- palpate the trachea to ensure it is midline
- Palpate the face, neck and chest for evidence of subcutaneous emphysema
- Palpate the anterior chest to check for symmetry and degree of expansion.

circulation

1 observation = pulse

2 hands on 3 places:

- Abdomen
- Pelvis
- Long bones

- Assess the abdomen in four quadrants, feeling for sites of tenderness.
- Assess the long bones by feeling the femurs and progressing down to the ankle. A fractured femur can lose up to 1.5 litres of blood
- Simple circulation treatments include applying direct pressure to a wound, splinting a fracture, where internal bleeding is a concern

A C B C DISABILITY E

It involves an assessment of:

1. conscious level;
2. pupil size
3. lateralising/localising signs, i.e. unilateral neurological signs or symptoms.

Conscious level

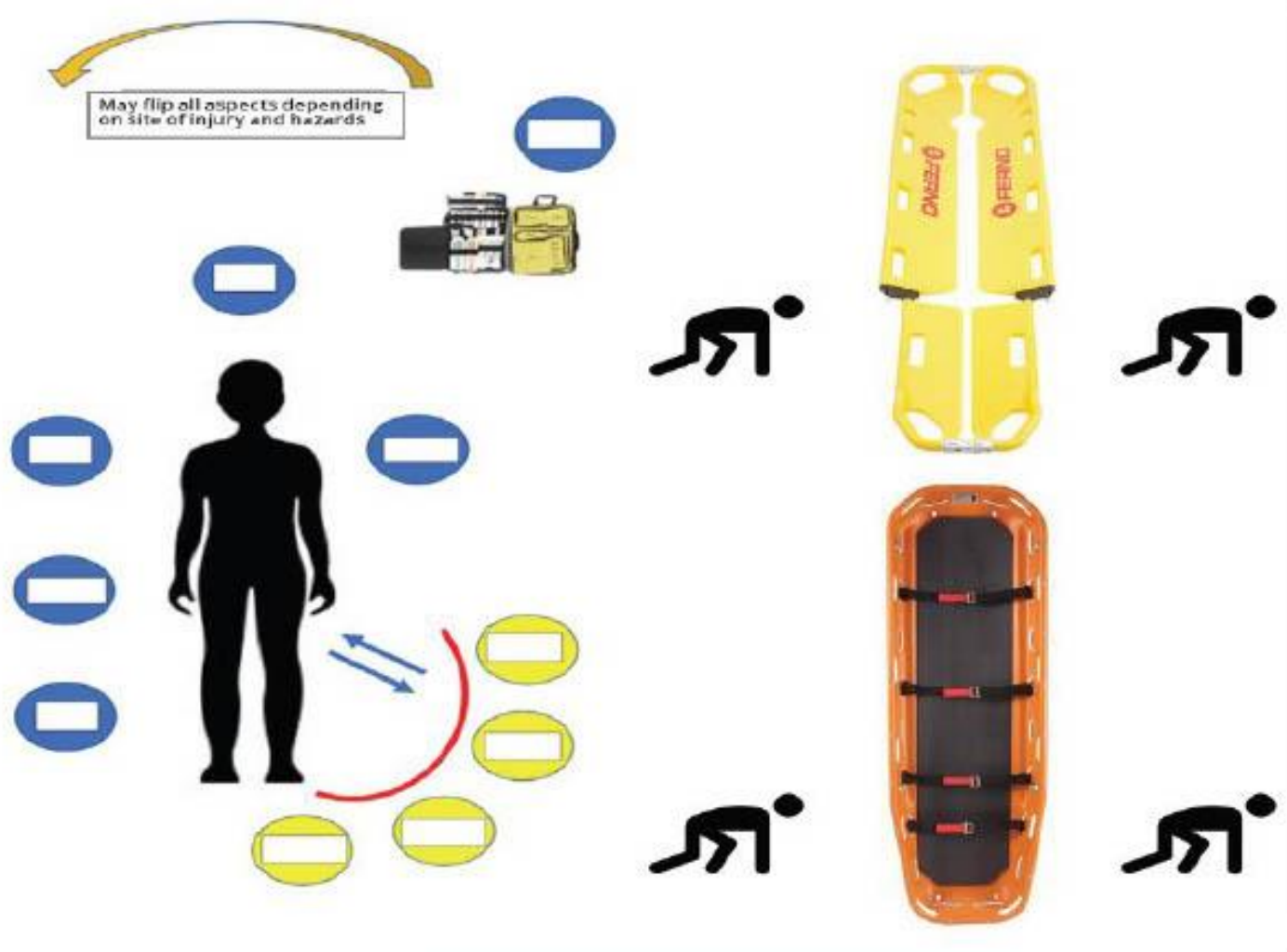
Glasgow Coma Scale

Eyes	Score	Motor	Score	Verbal	Score
Open	4	Obeys commands	6	Alert	5
Responds to voice	3	Localises to pain	5	Confused	4
Responds to pain	2	Withdraws to pain	4	Inappropriate	3
No verbal response	1	Flexes to pain	3	Incomprehensible	2
		Extends to pain	2	No response	1
		No response	1		

AVPU	Roughly equivalent GCS
Alert	15
Voice	13
Pain	8
Unresponsive	3

- score ranging from 3 to 15 (not 0 to 15).
- A GCS score of anything less than 15 mandates immediate removal from the field of play.
- A patient is usually unable to maintain or protect their airway with a GCS score of 8 or less.

A C B C D EXTRICATION



FIFA extrication "set piece"



THANK

YOU

FOR

YOUR

ATTENTION