



**L F B**

LONDON FIRE BRIGADE

# Casualty Care

**AXIELPD**



## **WARNING :**

This document is owned by AxielPD and should **not** be shared outside of this community.



# Introduction

This document will talk through the steps to follow through a scenario at scenes, when it comes to injuries.

This can come through a METHANE job, RTC, ambulance assist or if ambulance are not on scene yet and you have to start doing casualty care.

Each scenario will be different, so different way of assessing the casualty will vary from job to job



- D** Danger
- C** Catastrophic Hemorrhage
- R** Response
- Ac** Airway with C-Spine Considerations
- B** Breathing
- C** Cardiovascular
- D** Disability
- E** Environment, examine, everything else



**D**

**C**

**R**

**Ac**

**B**

**C**

**D**

**E**

## Danger

- To be aware if safety considerations to be considered when approaching a scene
- To be able to apply **METHANE** and triage when necessary
- To be able to conduct an initial assessment
- To gather information form scene survey



**D**

**C**

**R**

**Ac**

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**C**

**D**

**E**

# Danger

Initial scene assessment - S.M.A.R.T

- Scene safety & send for help
- Mechanism of injury
- Access and egress
- Resources Required
- Triage



**D**  
**C**  
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**E**

# Danger

## Methane

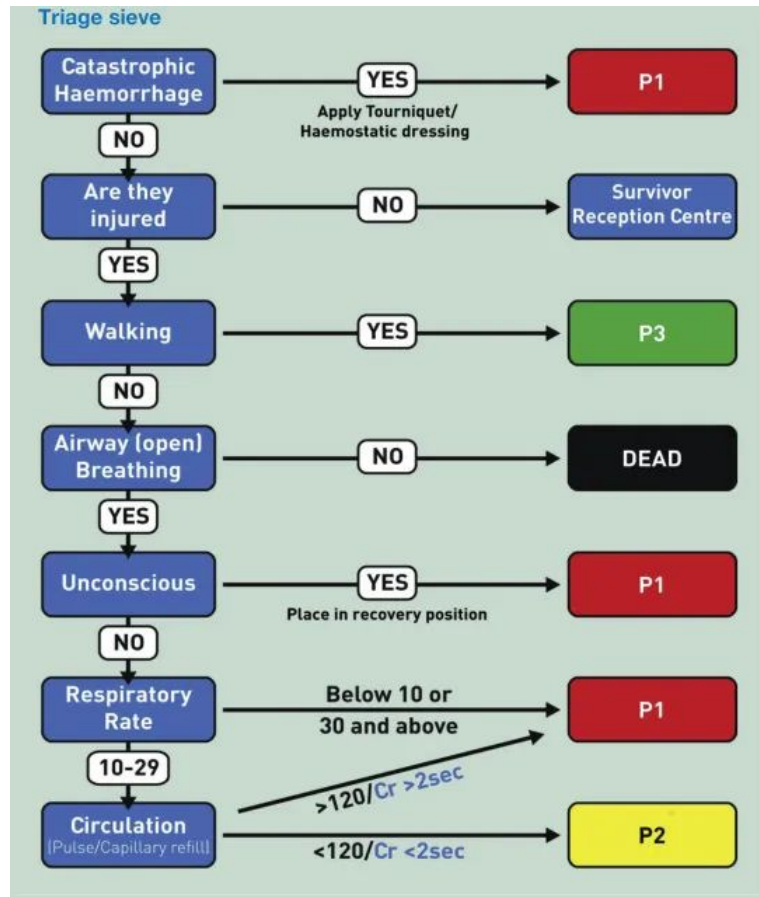
|          |                             |                                                                                                     |                                                                                                                                                                 |
|----------|-----------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>M</b> | <b>MAJOR INCIDENT</b>       | Has a major incident or standby been declared? (Yes / No - if no, then complete ETHANE message)     | <i>Include the date and time of any declaration.</i>                                                                                                            |
| <b>E</b> | <b>EXACT LOCATION</b>       | What is the exact location or geographical area of the incident?                                    | <i>Be as precise as possible, using a system that will be understood by all responders.</i>                                                                     |
| <b>T</b> | <b>TYPE OF INCIDENT</b>     | What kind of incident is it?                                                                        | <i>For example, flooding, fire, utility failure or disease outbreak.</i>                                                                                        |
| <b>H</b> | <b>HAZARDS</b>              | What hazards or potential hazards can be identified?                                                | <i>Consider the likelihood of a hazard and the potential severity of any impact.</i>                                                                            |
| <b>A</b> | <b>ACCESS</b>               | What are the best routes for access and egress?                                                     | <i>Include information on inaccessible routes and rendezvous points (RVPs). Remember that services need to be able to leave the scene as well as access it.</i> |
| <b>N</b> | <b>NUMBER OF CASUALTIES</b> | How many casualties are there, and what condition are they in?                                      | <i>Use an agreed classification system such as 'P1', 'P2', 'P3' and 'dead'.</i>                                                                                 |
| <b>E</b> | <b>EMERGENCY SERVICES</b>   | Which, and how many, emergency responder assets and personnel are required or are already on-scene? | <i>Consider whether the assets of wider emergency responders, such as local authorities or the voluntary sector, may be required.</i>                           |



**D**  
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**R**  
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**E**

**Danger**

**Triage**





D  
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## Catastrophic Hemorrhage

- To understand the reason why catastrophic haemorrhage control takes priority over other interventions
- To treat catastrophic hemorrhage with urgency and without delay
- Become familiar with the equipment available to treat catastrophic hemorrhage
- To ascertain consciousness level using **AVPU** scale



# D C R Ac B C D E

## Catastrophic Hemorrhage

The reason why catastrophic haemorrhages take priority over other interventions before any other thing, if someone is bleeding very heavily as a result of a stabbing, shooting, or road traffic collision. Your help is crucial as a patient can die in just five minutes. The main aim is to prevent further blood loss and minimise the effects of shock as it can be life threatening.

**D****C****R****Ac****B****C****D****E**

## Catastrophic Hemorrhage

- Apply and maintain pressure to the wound with your gloved hand, using a clean pad or dressing if possible. Continue to apply pressure until the bleeding stops
- Use a clean dressing to bandage the wound firmly
- If bleeding continues through the pad, apply pressure to the wound until the bleeding stops, and then apply another pad over the top and bandage it in place, Do not remove the original pad or dressing, but continue to check that the bleeding has stopped

D  
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# Catastrophic Hemorrhage

Equipment available

Tourniquet

A device for stopping the flow of blood through a vein or artery, typically by compressing a limb with a cord or tight bandage



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# Catastrophic Hemorrhage

## Equipment available

### Gauze

Gauze forms an adhesive gel that seals the wound to stop the flow of blood, speeding up compression time.



**D**  
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# Catastrophic Hemorrhage

Equipment available

**Dressing band-aid**

A dressing is used to protect a wound and prevent infection, but also allows healing. A dressing should be large enough to totally cover the wound.



D  
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# Responses

AVPU

This is used to determine the response level of the casualty.

**A** = Alert

- Alert and Conscious

**V** = Verbal

- Responds to **Verbal** stimulus

**P** = Pain

- Responds to **Painful** stimulus

**U** = Unresponsive

- **Unresponsive** to any form of stimulus



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# Airway with C-Spine Considerations

- To demonstrate how to assess the airways
- To demonstrate effective management if the airways
- Perform effective manual inline stabilisation of the S-Spine where required





D

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C

D

E

# Airway with C-Spine Considerations

What to expect when airways are blocked

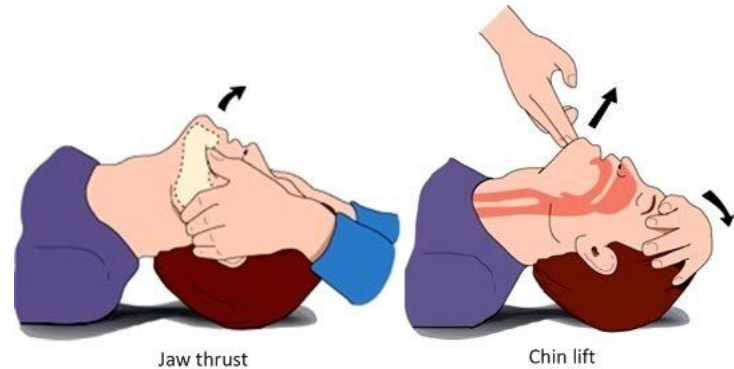
- Tongue
- Blood / Vomit
- Anaphylaxis
- Burns
- Swelling from trauma
- Foreign body
- Teeth

D  
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# Airway with C-Spine Considerations

Interventions which can be used to open up the airways

- Suction and postural drainage - remember C-Spine when postural drainage
- Manual maneuver - Head tilt - chin lift for non C-Spine. Jaw thrust for C-Spine patients
- Airway Adjuncts



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# Airway with C-Spine Considerations

## Equipment available

### Nasopharyngeal Airway (NPA)

Is a thin, clear, flexible tube that is inserted into a patient's nostril. The purpose of the NPA is to bypass upper airway obstruction at the level of the nose, nasopharynx or base of the tongue. It also prevents the tongue falling backwards



D  
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# Airway with C-Spine Considerations

Equipment available

## Oropharyngeal Airway (OPA)

This is an airway adjunct used to maintain or open the airway by stopping the tongue from converting the epiglottis, In this position, the tongue may prevent an individual from breathing





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# Airway with C-Spine Considerations

## C-Spine considerations

Mechanisms of injury would create a high suspicion of C-Spine damage

- Vehicle collisions
- Falls From Height
- Penetrating or blunt trauma
- Sport injuries
- Diving injuries



D  
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E

## Breathing

Normal breathing - RVE

- Rate
- Volume
- Effort
- Put on oxygen
  
- 10-20/min & Regular
- Normal chest rise and fall
- Effortless, easy respirations

D  
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B  
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E

# Breathing

Equipment available

Bag and Valve mask (BVM)

A bag and Valve mask is use for rescue breaths when unconscious



D  
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D  
E

# Breathing

Equipment available

## Chest Seal

This is used for the compression of the lungs if it's a chest injury





D  
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E

## Breathing

If the casualty's breathing is not within normal ranges

- Feel - Chest / Neck
- Look - Chest / Neck
- Armpits - Hidden Wounds
- Search - Chest / Neck / back
- Holes - Seal any Holes



D  
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E

## Breathing

### Oxygen Administration

- Normal room air - 21% O<sub>2</sub>
- Nasal Cannula - 28% at 2 litres per minute, 40% at 5 L/min
- Simple face mask - 40 -60% at 6 - 10 L/min
- Non-rebreather mask - 60 -90% at 8 - 15 L/min



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## Breathing

### Pulse oximeters

- Led probe shines light through the body towards the receiver which measures the intensity
- Oxygenated blood absorbs different amount of light compared to deoxygenated blood
- The percentage of of oxygenation is expressed on the machine.
- Normal range - 94 / 98 %

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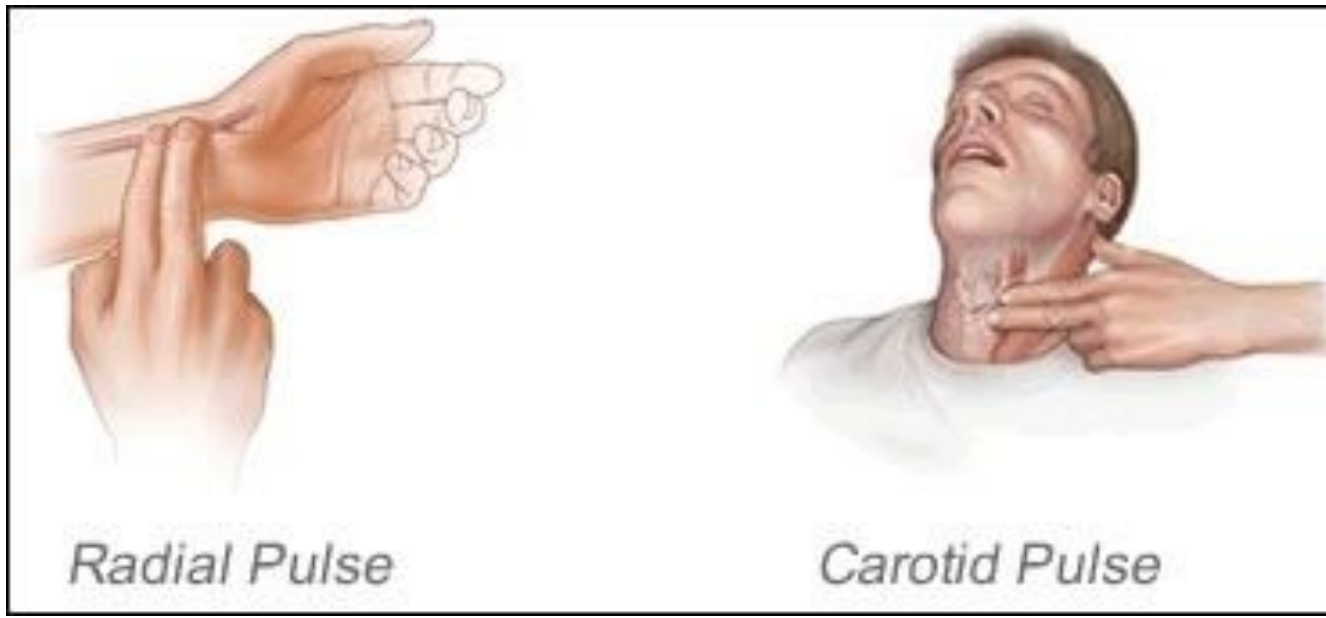
## Circulation

- Where to check for a pulse
- How to recognise the pulse rate, rhythm and quality
- How to check central and peripheral capillary refill time
- How to recognise further bleeding and management with appropriate dressings
- How to assess the chest, abdomen, pelvis and long bones for internal bleeding or fractures

D  
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# Circulation

Taking a pulse





D  
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D  
E

# Circulation

## Understanding the pulse

- Rate - Normal is **60 - 100** beats per minute
- Rhythm -
  - Regular \* \* \* \* \*
  - Irregular \*\* \*\*\* \* \* \*\* \* \*\*\* \*\*
- Quality - Weak / barely able to feel
- Bounding - High pressure



D  
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## Circulation

### Capillary refill time

- Fingernail bed – Raise hand above heart. Compress for 5 seconds then release.
- Forehead (Central) <2 Seconds return to normal colour = Good .  
>2 Seconds return to normal colour = Bad
- Look for clinical shock.
- Capillary refill time.



**D**  
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**C**  
**D**  
**E**

## Circulation

Blood on the floor and 4 more

- Control of bleeding- Reassess your catastrophic haemorrhage interventions, then control more minor external bleeding with bandages.
- 1) Chest
- 2) Abdomen
- 3) Pelvis- A pelvic binder should be applied if a fracture is obvious or suspected.
- 4) Long bones- Splinting controls bleeding.



D  
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D  
E

# Circulation

Equipment available

## Pelvic Binder

A pelvic Binder is a device used to compress the pelvis in people with a pelvic fracture in an effort to stop bleeding





D  
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## Disability

- We need to reassess the patients level of consciousness (AVPU)
- Checking the pupils and a basic understanding of conditions that cause abnormal results
- Perform a FAST test and recognize Stroke

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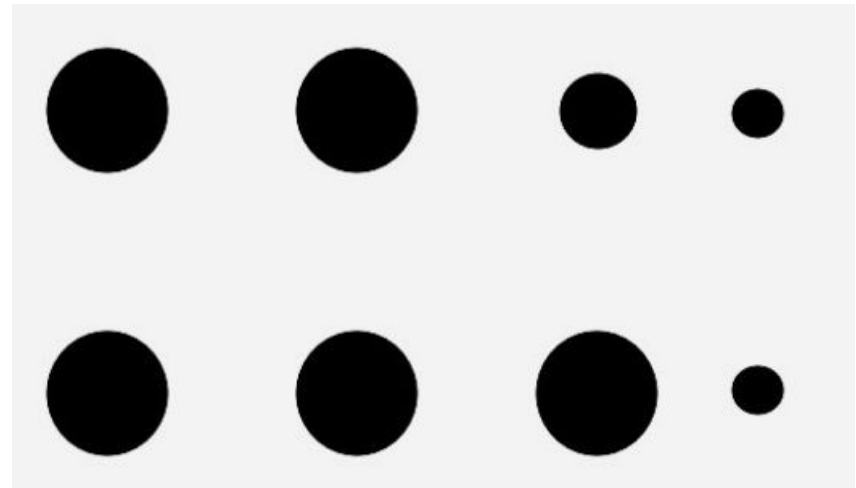
# Disability

Assessing the level of consciousness

Reassess level of consciousness- are they at the same category of the AVPU scale?

Pupil assessment

- Equal and react to light
- Fixed
- Unequal
- Pinpoint



Glucose- is there a history of or clues to diabetes

D  
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# Disability

## Recognising a stroke

Diabetes can often be mistaken for stroke or alcohol intoxication, however, without a blood glucose monitor you should air on the side of caution. Ask the patient if they are diabetic

# F A S T

The poster is divided into four horizontal sections, each with a close-up image of a person's face or hand. The top section is labeled 'FACE' and asks 'Has their face fallen on one side? Can they smile?'. The second section is labeled 'ARMS' and asks 'Can they raise both arms and keep them there?'. The third section is labeled 'SPEECH' and asks 'Is their speech slurred?'. The bottom section is labeled 'TIME' and says 'To call 999 If you see any single one of these signs'. On the right side, there is a yellow vertical banner with the NHS logo at the top, the text 'WHEN STROKE STRIKES, Act F.A.S.T.', and at the bottom, a black box with 'Act F.A.S.T.' and the text 'help us help you'.



D  
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## Examine / Extricate

- Use Documentation to record a SAMPLE history if possible
- Use Documentation to record an ATMIST handover





**D**  
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# Examine / Extricate

## Handover Tool (ATMIST)

This information can be crucial for ambulance or hospital workers as it gives them all the information they need to further treat the patient

### A.T.M.I.S.T. Handover tool

|                              |                                                                                                                                                                                                                                                                                                                                           |                                                                                      |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>A</b> <sub>GE</sub>       | Age and sex of casualty (demographic).                                                                                                                                                                                                                                                                                                    |   |
| <b>T</b> <sub>IME</sub>      | Estimated Time of Arrival and the time of incident.                                                                                                                                                                                                                                                                                       |   |
| <b>M</b> <sub>.o.I.</sub>    | Mechanism of incident. This should include: <ul style="list-style-type: none"> <li>o The gross mechanism of injury (e.g. motor vehicle crash or stab wound to the chest) and,</li> <li>o Details of other factors known to be associated with major injuries e.g. entrapment, vehicle rollover, occupant ejected from vehicle.</li> </ul> |   |
| <b>I</b> <sub>NJURIES</sub>  | Seen or suspected.                                                                                                                                                                                                                                                                                                                        |   |
| <b>S</b> <sub>IGNS</sub>     | <ul style="list-style-type: none"> <li>o Vital signs including heart rate, blood pressure, respiratory rate, oxygen saturation and Glasgow Coma Score.</li> <li>o An indication as to whether the physiological state of the patient has improved or deteriorated since first seen.</li> </ul>                                            |   |
| <b>T</b> <sub>REATMENT</sub> | Treatment given.                                                                                                                                                                                                                                                                                                                          |  |



D

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## Examine / Extricate

### History Taking Tool (SAMPLE)

- Signs and Symptoms
- Allergies
- Medication
- Past medical history
- Last meal
- Events of incident