

Trauma Resuscitation Algorithm

1 Recognize



Recognize a seriously injured patient using the **Interagency Integrated Triage Tool (IITT)**.



Move patient to red or resuscitation area.

2 Resuscitate



Use the **ABCDE approach** to systematically evaluate the patient, identify and correct immediate life threats.



Remember special considerations in paediatric, elderly or pregnant patients.

ABCDE Approach

AIRWAY AND CERVICAL SPINE IMMOBILIZATION



A

Is the patient talking normally with no signs of obstruction?

LOOK FOR:

- Not speaking, with limited or no air movement
- Signs of possible airway injury (neck haematoma or wound, crepitus, stridor)
- Signs of possible airway burns (soot around the mouth or nose, burned facial hair, facial burns)

ACT:

- Use jaw thrust with c-spine protection.
- Suction if needed, remove visible foreign objects.
- Place OPA to keep the airway open.
- Give oxygen. Monitor closely – swelling can rapidly block the airway.
- Arrange for urgent advanced airway management.

CHECK:
Is airway clear?

- Re-evaluate Airway
- Re-intervene
- Reach out to advanced provider

Does the patient have increased work of breathing, abnormal breathing pattern, abnormal breath sounds, cyanosis, chest wounds? *Check oxygen saturation.

BREATHING



B

LOOK FOR:

- Signs of tension pneumothorax (hypotension with absent breath sounds/hyperresonance on one side, distended neck veins)
- Open (sucking) chest wound
- Breathing not adequate
- Large burns of chest or abdomen (or circumferential burn to limb)
- Signs of flail chest (section of chest wall moving in opposite direction with breathing)
- Signs of haemothorax (decreased breath sounds on one side, dull sounds with percussion)

ACT:

- Perform needle decompression.
- Give oxygen, IV fluids.
- Arrange for urgent chest tube.
- Give oxygen, place 3-sided dressing, monitor for tension pneumothorax.
- Arrange for urgent chest tube.
- Give oxygen, assist ventilation with BVM.
- Give IV fluids per burn size, give oxygen, remove constricting clothing/jewellery.
- May need escharotomy.
- Give oxygen and provide pain medication.
- May need advanced airway management and assisted ventilation.
- Give oxygen, IV fluids.
- Arrange for urgent chest tube.

CHECK:
Is breathing adequate?

- Re-evaluate Airway and Breathing
- Re-intervene
- Reach out to advanced provider

Does the patient have external or internal bleeding, distended neck veins, muffled heart sounds or poor perfusion? *Check BP, HR, capillary refill.

CIRCULATION



C

LOOK FOR:

- Signs of shock (capillary refill >3 sec, hypotension, tachycardia)
- Uncontrolled external bleeding
- Signs of tamponade (poor perfusion, distended neck veins, muffled heart sounds)

ACT:

- Give oxygen, IV fluids, control external bleeding, splint femur/pelvis as indicated.
- Apply pressure, deep wound packing or tourniquet as indicated.
- Give IV fluids, oxygen. Urgently refer to surgeon.

CHECK:
Is perfusion adequate?

- Re-evaluate Airway, Breathing and Circulation
- Re-intervene
- Reach out to advanced provider

Does the patient have head trauma, convulsions, unequal or fixed pupils, movement in all extremities? *Check AVPU. *Always check blood glucose.

DISABILITY



D

LOOK FOR:

- Signs of brain injury (AMS with wound, deformity or bruising of head/face)
- Signs of open skull fracture (as above, with blood or fluid from the ears/nose)

ACT:

- Immobilize cervical spine, check glucose, give nothing by mouth.
- Will need neurosurgical care
- As above, and give IV antibiotics per local protocol.

CHECK:
Is mental status improved?

- Re-evaluate Airway, Breathing, Circulation and Disability
- Re-intervene
- Reach out to advanced provider

EXPOSURE



E

Does the patient have hidden injuries, rashes or other lesions? *Expose and examine the entire body.

LOOK FOR:

- Wet or constrictive clothing
- Snake bite

ACT:

- Remove wet clothing and dry skin thoroughly.
- Remove jewellery, watches & constrictive clothing.
- Prevent hypothermia and protect dignity.
- Immobilise extremity. Arrange for early anti-venom if relevant and available.

3 Review



Review patient status and interventions using the **WHO Trauma Care Checklist**.

- Recheck vital signs.
- If patient condition changes, repeat **ABCDE**.
- If no further interventions needed, take a **SAMPLE** history and perform a **SECONDARY** exam.
- Document care in a WHO Standardised Clinical Form or locally available option.

4 Refer



If health facility unable to provide on going care, arrange for safe transfer to appropriate facility as soon as possible.

REMEMBER: PREPARATION is key. Use the elements of the WHO Emergency Care Toolkit to prepare your unit to better manage emergencies.



Basic Emergency Care



Interagency Integrated Triage tool



Resuscitation Area Designation



Trauma & Medical checklists



Standardised Clinical Form



WHO Clinical Registry