Trauma Resuscitation Algorithm

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

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.
   - Is the patient talking normally with no signs of obstruction?
     - Yes: Go to airway.
     - No: Go to breathing.

   **ABCDE Approach**
   - **Airway and Cervical Spine Immobilization**
     - 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 (foot around the mouth or nose, burned facial hair, facial burns)
     - Act:
       - Use jaw thrust with tongue 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?
         - No: Evaluate Airway
         - Yes: Proceed
         - Reach out to advanced provider

   - **Breathing**
     - Look for:
       - Signs of tension pneumothorax (hypotension with absent breath sounds/hyperventilation on one side, distended neck veins)
       - Open (sucking) chest wound
       - Breathing not adequate
     - Act:
       - Perform needle decompression.
       - Give oxygen, IV fluids. 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 thoracotomy.
       - Give oxygen and provide pain medication.
       - May need advanced airway management and assisted ventilation.
     - Check:
       - Is breathing adequate?
         - Yes: Proceed
         - No: Evaluate Breathing

   - **Circulation**
     - 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, split 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?
         - Yes: Proceed
         - No: Evaluate Perfusion

   - **Disability**
     - 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 neurological care
       - As above, and give IV antibiotics per local protocol.
     - Check:
       - Is mental status improved?
         - Yes: Proceed
         - No: Evaluate Brain, Breathing, Circulation and Disability

   - **Exposure**
     - 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.
       - Immobilize 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.**

Contact emergencycare@who.int for more information.