



CLINICAL PATHWAYS

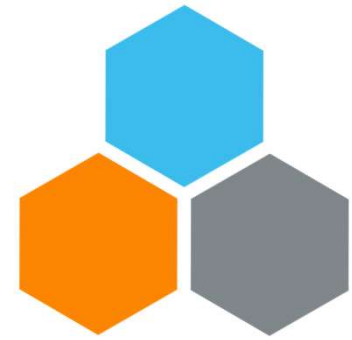
TRAUMA CLINICAL PATHWAY FOR UN CLINICS

Clinical Governance Section

Division of Healthcare Management and Occupational Safety and Health (DHMOSH)

Department of Operational Support (DOS)

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TRAUMA CLINICAL PATHWAY FOR UN CLINICS

PRIMARY SURVEY

This step is to be done from minute 0 to minute 20 since patient arrival to the health facility

- Re-evaluate as indicated after each resuscitative intervention

PERSON
RESPONSIBLE:

In less than 20 minutes



<u>C: Catastrophic Hemorrhage</u>	<u>A: Airway; Cervical Spine</u>	<u>B: Breathing</u>	<u>C: Circulation</u>	<u>D: Disability, Dextrose</u>	<u>E. Exposure</u>
<ul style="list-style-type: none"> Identify and control active exsanguination 	<ul style="list-style-type: none"> Assess airway stability & protect as needed Oxygen, suction Be prepared for a difficult intubation 	<ul style="list-style-type: none"> Assess Indications for Intubation Avoid hypoxemia, hyperventilation 	<ul style="list-style-type: none"> Vascular access: IV access within 5 minutes of arrival (ideally x 2, with largest caliber possible). Consider escalation to intraosseous (IO), External Jugular (EJ), Femoral line or Saphenous Cut-Down early to optimize volume resuscitation 	<ul style="list-style-type: none"> Neurological evaluation Identify intracranial hypertension and lateralizing findings on cranial nerve in motor exam, Identify signs of spinal cord injury. Consider hypoglycemia and toxins as a potential cause of reduced consciousness. Glasgow coma scale 	<ul style="list-style-type: none"> Ensure full exposure (Remove all clothing) Maintain normothermia (blankets, warm fluids and blood products, maintain room temperature at 25 C)
<ul style="list-style-type: none"> <u>LIFE- THREATENING INJURY</u> <ol style="list-style-type: none"> <u>Hemorrhagic Shock:</u> <ul style="list-style-type: none"> Blunt Trauma Penetrating Trauma Pelvic Fracture Long Bone Fracture Vascular Injury <u>Massive Hemothorax</u> 	<ul style="list-style-type: none"> Maintain full spinal precautions Identify and immobilize patients at risk for cervical spine injury. 	<p><u>LIFE- THREATENING INJURY</u></p> <ol style="list-style-type: none"> Altered mental status due to neurologic/circulatory etiologies. -Airway obstruction -Direct Airway Trauma -Tension Pneumothorax -Suspected Pneumothorax -Pulmonary Contusion. -Smoke inhalation 	<ul style="list-style-type: none"> <u>Rapid Fluid Administration:</u> <ul style="list-style-type: none"> Recognize and treat hemorrhagic shock, Apply direct pressure to obvious hemorrhage. Follow IV escalation plan (isotonic crystalloid solution or o negative or type specific blood). Use blood products and rapid infusion early. Review other causes of shock if poor response (tension/hemothorax, cardiac tamponade/injury, severe abdominal trauma etc.) 	<p><u>LIFE- THREATENING INJURY</u></p> <ol style="list-style-type: none"> Head/Intracranial Injury Spinal Cord Trauma Spinal Shock 	<ul style="list-style-type: none"> <u>Trauma laboratory:</u> <ul style="list-style-type: none"> CBC, Blood type Basic metabolic panel Hepatic function panel Amylase Lipase Urinalysis, Serum drug screen test, Alcohol drug screen test if available

ONGOING CARE

Stabilization and considerations for MEDEVAC

- Imaging considerations- Prioritize triaging imaging (X-ray Cervical spine, chest, pelvis, injured extremities.)
- **Consultations:** Orthopedist, Intensive Care Specialist, Anesthetist, Telemedicine consultations with specialists not available at the facility when possible.
- Start MEDEVAC process immediately if CT scan, MRI or specialties not available at the facility are required.

PERSON
RESPONSIBLE:

Within 20 minutes

SECONDARY SURVEY

Organized evaluation to identify all injuries

- Any unexpected deterioration in ABCDE status requires re-assessment and intervention

PERSON
RESPONSIBLE:

IMMEDIATE

SYSTEM	EXAM
Head, Maxillofacial, ENT	<p>Inspect and Palpate</p> <p>Head</p> <ul style="list-style-type: none"> • Wounds - abrasions, lacerations, hematomas • Skull tenderness, depression, step-offs or midface instability <p>Eyes</p> <ul style="list-style-type: none"> • Subconjunctival hemorrhage, hyperemia, irregular iris, penetrating injury, contact lenses, pupil response <p>Ears</p> <ul style="list-style-type: none"> • Signs of basilar skull fracture: <ul style="list-style-type: none"> -Bleeding, hemotympanum, Battle's sign (bruising over mastoid) • CSF leak <p>Nose</p> <ul style="list-style-type: none"> • Deformities, bleeding, tenderness, septal hematoma, CSF leak <p>Mouth</p> <ul style="list-style-type: none"> • Lacerations to lips, gums, tongue or palate, bleeding <p>Teeth</p> <ul style="list-style-type: none"> • Subluxed, loose, missing, fractured <p>Maxilla/Mandible</p> <ul style="list-style-type: none"> • Abrasions, lacerations, contusions, pain, trismus, malocclusion
C-spine & Neck	<p>Inspect and Palpate, Open C-collar, maintain immobilization</p> <ul style="list-style-type: none"> • Tracheal deviation • Posterior, anterior cervical tenderness • Wounds, seatbelt mark • Subcutaneous emphysema • Neck vein distention • Carotid pulses, hematoma
Chest	<p>Inspect, Auscultate and Palpate</p> <ul style="list-style-type: none"> • Wounds • Asymmetric or paradoxical chest wall movement • Breath sounds & heart sounds • Pain (clavicular/rib tenderness) or crepitus on palpation

Abdomen**Inspect, Auscultate and Palpate**

- **Softness/Rigidity, tenderness**
- **Distended/Non-distended**
- **Wounds**
- **Seat belt sign, handle-bar injuries**
- **Bowel sounds**

Pelvis**Inspect and Palpate**

- Stability - minimize number of exams to avoid further injury
- Wounds
- Tenderness of iliac crest

Musculoskeletal**Inspect and Palpate**

- Swelling or deformities
- Wounds
- Tenderness on palpation
- Sensory and motor function
- Pulses and capillary refill
- ROM

Neurologic**Evaluate**

- Re-evaluation of mental status, GCS
- Cranial nerve exam
- Strength & sensation testing

Skin**Inspect**

- Wounds (abrasions/contusions/lacerations/punctures)

REFERENCES

1. <https://www.facs.org/Quality-Programs/Trauma/ATLS>
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3. https://www.who.int/violence_injury_prevention/publications/services/en/guidelines_traumacare.pdf
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