Trauma Assessment/Treatment Guidelines 705.01

I. Purpose: To establish a consistent approach to the care of the trauma patient

A. Rapid trauma survey

1. Airway
   a. Maintain inline cervical stabilization
      1) Follow spinal motion restriction guidelines per VCEMS Policy 614
   b. Open airway as needed
      2) Utilize a trauma jaw thrust to maintain inline cervical stabilization if indicated
   c. Suction airway if indicated
   d. Insert appropriate airway adjunct if indicated
2. Breathing
   a. Assess rate, depth, and quality of respirations
   b. If respiratory effort inadequate, assist ventilations with BVM
   c. Assess lung sounds
   d. Initiate airway management and oxygen therapy as indicated
      1) Maintain SpO2 ≥ 94%
3. Circulation
   a. Assess skin color, temperature, and condition
   b. Check distal/central pulses and capillary refill time
   c. Control major bleeding
   d. Initiate shock management as indicated
4. Disability
   a. Determine level of consciousness (Glasgow Coma Scale)
   b. Assess pupils
5. Exposure
   a. If indicated, remove clothing for proper assessment/treatment of injury location, always maintaining patient dignity
   b. Always maintain patient body temperature

B. Detailed physical examination

1. Head
   a. Inspect/palpate skull
   b. Inspect eyes, ears, nose and throat
2. Neck
   a. Palpate cervical spine
   b. Check position of trachea
   c. Assess for jugular vein distention (JVD)

3. Chest
    a. Visualize, palpate, and auscultate chest wall
4. Abdomen/Pelvis
    a. Inspect/palpate abdomen
    b. Assess pelvis, including genitalia/perineum if pertinent
5. Extremities
    a. Visualize, inspect, and palpate
    b. Assess Circulation, Sensory, Motor (CSM)
6. Back
    a. Visualize, inspect, and palpate thoracic, and lumbar spines

C. Trauma care guidelines
1. Fluid Administration
    a. Maintain SBP of ≥ 90 mmHg
        1) Patients 65 years and older, maintain SBP of ≥ 100 mmHg
        2) Isolated head injuries, maintain SBP of ≥ 100 mmHg
    b. Pediatric patients, maintain minimum SBP for respective age in Handtevy
2. Transfusion of Blood Products
    a. Warm and transfuse one unit (Approximately 500 mL) of whole blood or packed RBC when indications are met.
    b. Repeat x1 to a total max of 2 units of blood transfused when indications continue to be met.
    c. Inclusion Criteria
        1) Adult patient ≥ 14 Y.O.
        2) Patient consent obtained (informed or implied)
    d. Indications
        1) Life threatening hemorrhage
        2) Vital sign criteria met (1or more required)
            a. SBP < 70 mmHg
            b. SBP < 90 mmHg AND HR > 110
            c. EMS witnessed traumatic cardiac arrest
    e. Contraindications
        1) Ground level fall
        2) Isolated head injury
        3) Patient refusal
        4) Patient < 14 Y.O.
        5) Traumatic arrest not witnessed by EMS

3. Tranexamic Acid (TXA) Administration
    a. As indicated in VCEMS Policy 734
3. Head injuries
    a. General treatments
        1) Evaluate head and face – maintain high index of suspicion for injury if significant mechanism of injury is present or physical examination is remarkable for findings
        2) Elevate head 30° unless contraindicated
        3) Do not attempt to intubate head injured patients unless unable to manage with BLS airway measures
        4) Do not delay transport if significant airway compromise
    b. Penetrating injuries
        1) DO NOT REMOVE IMPALED OBJECT (unless airway obstruction is present)
        2) Stabilize object manually or with bulky dressings
    c. Facial injuries
        1) Assess airway and suction as needed
        2) Remove loose teeth or dentures if present
    d. Eye injuries
        1) Remove contact lenses
        2) Irrigate eye thoroughly with suspected acid/alkali burns
        3) Avoid direct pressure
        4) Place eye shield over injured eye only
        5) Ask patient to keep eyes closed
        6) Stabilize any impaled object manually or with bulky dressing
4. Spinal cord injuries
    a. General treatments
        1) Evaluate spinal column – maintain high index of suspicion for injury if significant mechanism of injury is present or physical examination is remarkable for findings
        2) Place patient in supine position if hypotension is present
    b. Penetrating injuries – DO NOT REMOVE IMPALED OBJECT
        1) Stabilize object manually or with bulky dressings
        2) Control bleeding if present
        3) In the presence of isolated penetrating injuries, spinal motion restriction is contraindicated

c. Neck injuries
    1) Monitor airway
    2) Control bleeding if present

5. Thoracic Trauma
    a. General treatments
        1) Evaluate chest – maintain high index of suspicion for internal injury if significant mechanism of injury is present or physical examination is remarkable for findings
        2) Keep patients sitting high-fowlers
            i. In the presence of isolated penetrating injuries, spinal motion restriction is CONTRAINDICATED
    b. Penetrating injuries – DO NOT REMOVE IMPALED OBJECT
        1) Remove object if CPR is interfered
        2) Stabilize object manually or with bulky dressings
        3) Control bleeding if present
    c. Flail Chest/Rib injuries
        1) Assist ventilations if respiratory status deteriorates
    d. Pneumothorax/Hemothorax
        1) Keep patient sitting high-fowlers
        2) Assist ventilations if respiratory status deteriorates
        3) Suspected tension pneumothorax should be managed per VCEMS Policy 715
    e. Open (Sucking) Chest Wound
        1) Place an occlusive dressing to wound site, secure on 3 sides only or place a vented chest seal.
        2) Assist ventilations if respiratory status deteriorates
    f. Cardiac Tamponade – If suspected, expedite transport
        1) Beck's Triad
            i. Muffled heart tones
            ii. JVD
            iii. Hypotension
    g. Traumatic Aortic Disruption
        1) Assess for quality of radial and femoral pulses
        2) If suspected, expedite transport

6. Abdominal/Pelvic Trauma
    a. General Treatments

1) Evaluate abdomen and pelvis – maintain high index of suspicion for internal injury if significant mechanism of injury is present or physical examination is remarkable for findings

b. Blunt injuries
   1) Place patient in supine position if hypotension is present

c. Penetrating injuries – DO NOT REMOVE IMPALED OBJECT
   1) Stabilize object manually or with bulky dressings
   2) Control bleeding if present

d. Eviscerations
   1) DO NOT REPLACE ABDOMINAL CONTENTS
   2) Cover wound with saline-soaked dressings
   3) Control bleeding if present

e. Pregnancy
   1) Place patient in left-lateral position to prevent supine hypotensive syndrome

f. Pelvic injuries
   1) Assessment of pelvis should be only performed ***ONCE*** to limit additional injury
   2) Control external bleeding if present
   3) Place a commercial binder or sheet if pelvic injury is suspected and patient is hemodynamically unstable (see step one for parameters)
   4) Empirically place a binder or sheet if patient is in cardiac arrest due to a blunt or blast injury
   5) **Consider** applying a binder or sheet in patients with suspected pelvic injury **without** hemodynamic instability

7. Extremity Trauma
   a. General Treatments
      1) Evaluate CSM distal to injury
         i. If decrease or absence in CSM is present:
            a) Attempt to reposition extremity into anatomical position
            b) Re-evaluate CSM
            c) If no change in CSM after repositioning, splint and expedite transport
            d) Cover open wounds with sterile dressings
            e) Place ice pack on injury area (if closed wound)
            f) Splint/elevate extremity with appropriate equipment

   b. Dislocations

1) Splint in position found with appropriate equipment

c. Penetrating injuries – DO NOT REMOVE IMPALED OBJECTS
   1) Stabilize object manually or with bulky dressings
   2) Control bleeding if present

d. Femur fractures
   1) Utilize traction splint only if isolated mid-shaft femur fracture is suspected
   2) Assess CSM before and after traction splint application

e. Amputations
   1) Clean the amputated extremity with NS
   2) Wrap in moist sterile gauze
   3) Place in plastic bag
   4) Place bag with amputated extremity into a separate bag containing ice packs
   5) Prevent direct tissue contact with the ice pack