

Trauma Assessment in the ED

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SYMPOSIUM

Disclosures

- None

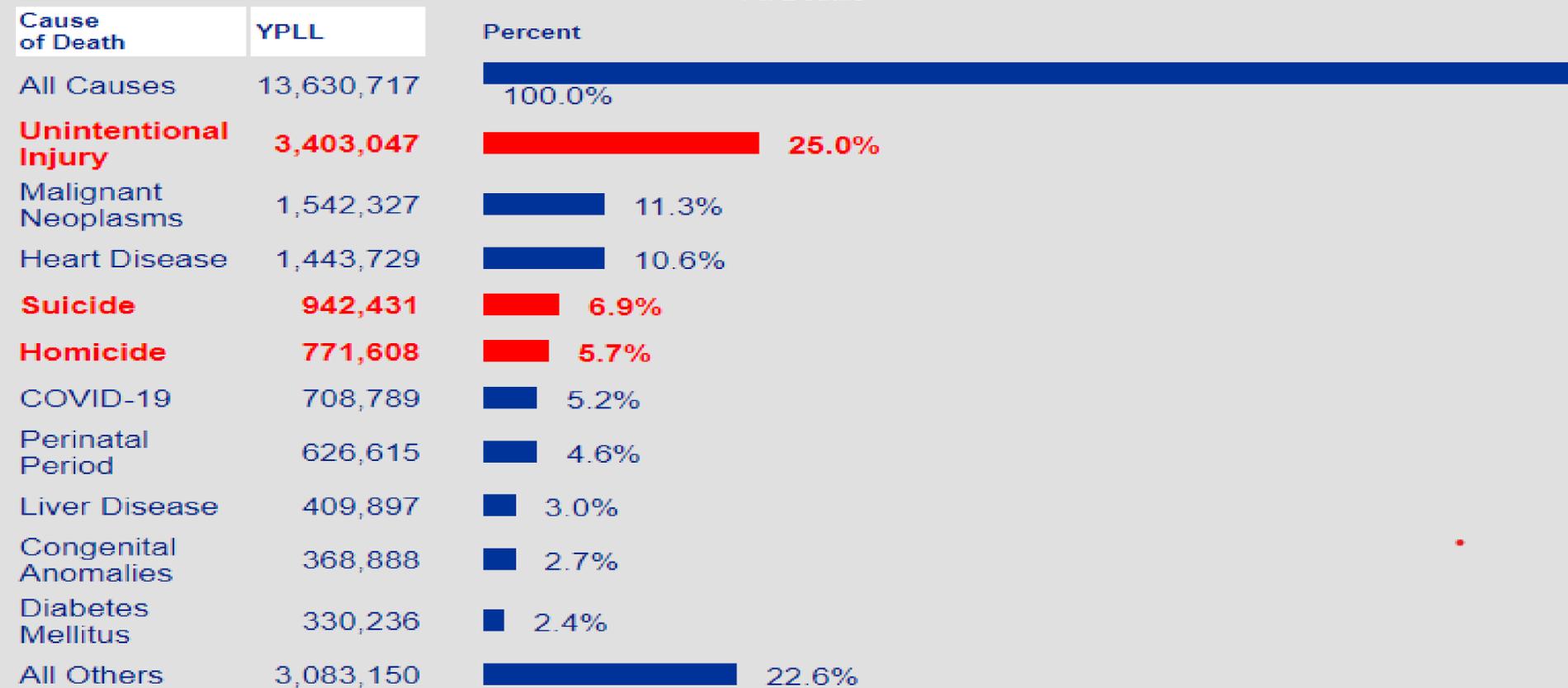
Learning Objectives

- Review the initial assessment process-trauma patient care requires a process to identify and treat or stabilize life-threatening injuries in an efficient and timely manner
- Select interventions to manage life-threatening conditions identified during the initial assessment process
- Describe the pathophysiologic changes as a basis for assessment of the trauma patient with musculoskeletal injuries
- Demonstrate the nursing assessment of the trauma patient with musculoskeletal injuries
- Plan and evaluate the effectiveness of nursing interventions for the trauma patient with musculoskeletal injuries

Clinical Recommendations

Years of Potential Life Lost (YPLL) Before Age 65

2020 United States
All Races, Both Sexes
All Deaths



[Terms for Causes of Death](#)

National Center for Injury Prevention and Control, CDC
National Center for Health Statistics (NCHS) Vital Statistics System.

A- Across the room assessment, Alertness, Airway

- This can allow for a rapid determination of the patients overall physiological stability and the identification of any uncontrolled external hemorrhage.
- Main goal is to identify all life-threatening conditions that can cause death within a few minutes
- Uncontrolled hemorrhage is the major cause of preventable death after injury.

A-Alert

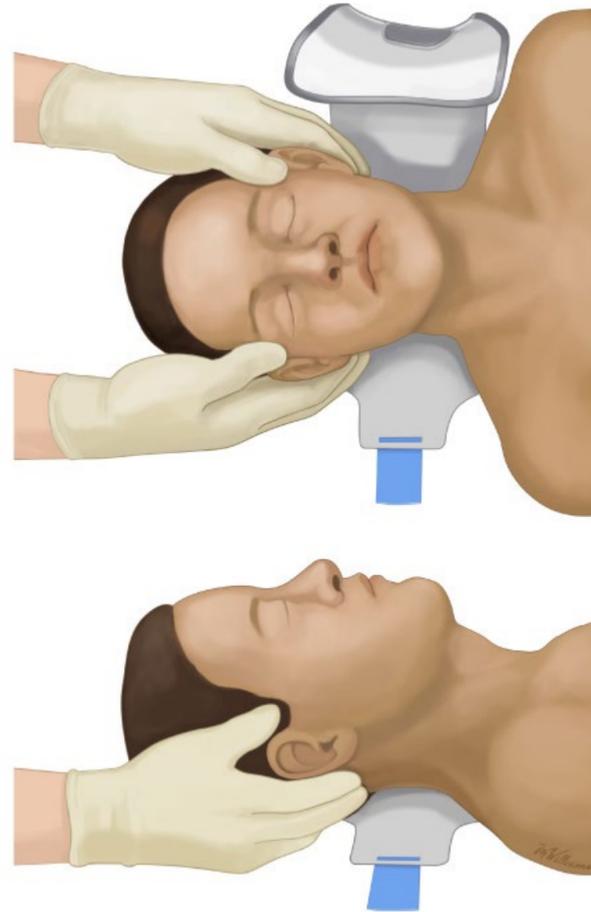
V-Pt responds to verbal stimuli

P-Pt responds to pain

U-Pt is unresponsive

Cervical Collar Stabilization

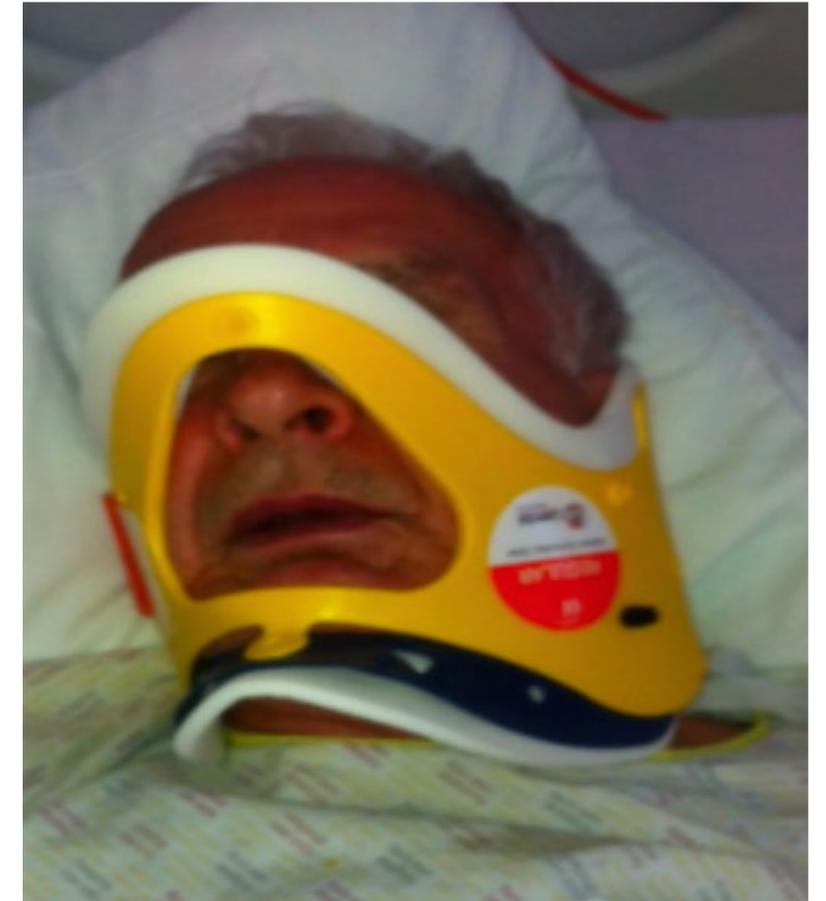
Suspect cervical spine injury until cleared via x-ray or CT and has a Glasgow Coma Score of 15



Manual Stabilization



Spinal Motion Restriction
(Cervical Collar)



Incorrect Size

A- Across the room assessment, **Alertness, Airway**

- Can patient respond to verbal stimuli? Can they open their mouth?
- No? use the Jaw-Thrust Maneuver!
- Open the airway and assess for obstruction
- Possible obstructions:
 - Tongue
 - Loose or missing teeth
 - Foreign objects
 - Blood, vomitus, or secretions
 - Edema
 - Burns or evidence of inhalation injury



Auscultate and Palpate the Airway

- Assessing for:
 - Adventitious airway sounds
 - Bony deformities
 - Subcutaneous emphysema



Crepitus

Do We Need A Definitive Airway?

The following situations require definitive airway:

- Apnea
- GCS score of 8 or less
- Severe maxillofacial fractures
- Evidence of inhalation injury
- Laryngeal or tracheal injury or neck hematoma
- High risk aspiration and the patient's inability to protect airway
- Compromised or ineffective ventilation

B- Breathing and Ventilation

Assess the following:

- Spontaneous?
- Symmetrical?
- What is the rate? Depth?
- Use of accessory muscles?
- Skin Color?
- Any wounds?
- Jugular vein distention?
- Trachea position?
- Breath sounds auscultated?
- Any injury palpated?



C- Circulation and Control of Hemorrhage

- Inspect for the following:
 - Uncontrolled external bleeding
 - Pale skin color
 - Hemorrhage
- Auscultate for the following:
 - Muffled heart sounds
- Palpate for the following
 - Presence of carotid and/or femoral pulses for rate, rhythm, and strength
 - Skin temperature and moisture (cool and diaphoretic or warm and dry)



Tourniquet



Pelvic Binder

D- Disability (Neurologic Status)

- Check Level of Responsiveness

A	Alert
V	Voice
P	Pain
U	Unresponsive

- Assess pupils



- Other Considerations:
 - Glucose level
 - Alcohol level
 - Toxicology screening

E- Exposure and Environmental Control

- Maintain Body Temperature



F- Full set of vitals and Family presence

- Have family present if a staff member can be with them
- Patients prefer family present



G- Get Monitoring Devices and Give Comfort

L - laboratory tests

M - monitor for continuous cardiac rhythm and rate assessment

N - nasogastric or orogastric tube consideration

O - oxygenation and ventilation analysis

P - Pain assessment and management



H- History and Head-to-Toe Assessment

Prehospital Report

M - mechanism of injury

I - injuries sustained

S - signs and symptoms

T - treatment

History

S - symptoms

A - allergies

M - medications

P - past medical history

L - last intake/output

E - events and environmental factors

I- Inspect Posterior Surfaces

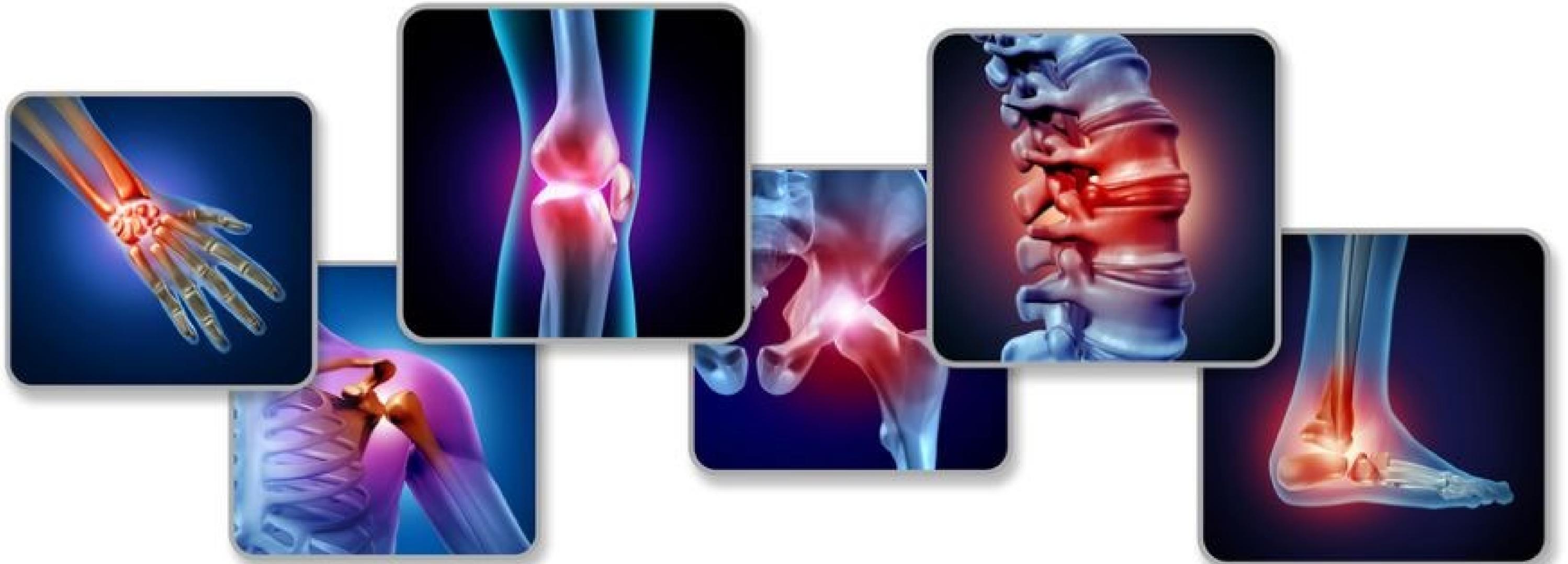
- Use the log roll technique
- Remove spine board once safe
- Wait for imaging if pelvic or spinal injury suspected



J- Just Keep Reevaluating

Start back at A!

Musculoskeletal Injuries/Trauma



The Six P's

Pain

Pulses

Paresthesia

Paralysis

Pallor

Poikilothermia

Mechanism of Injury

- Provides clues to trauma patterns
- MVCs
- Falls
- Crush Injuries
- Blast Injuries

All Patients need a Head-to-Toe Assessment



Compartment Syndrome Scenario

- 24y/o Male
- Skiing accident
- Nondisplaced transverse fracture on right tibial shaft
- Splinted and discharge
- Returns 7 hours later
- Pain is 10/10 and uncontrolled

What now?



Clinical Bottom Line

- Systematic and standardized approach to trauma care has been instrumental in saving lives and improving outcomes for those affected by trauma.
- Rapid assessment and treatment of the trauma patient is essential to their overall survival.
- Utilize the ABCDEFGHIJ Emergency Assessment Nursing framework to focus efforts.
- Always remember ABC and patient safety. Once those have been secured, move to less vital components.

References

Center for Disease Control and Prevention 2020 Data Updates: Mortality data from the National Vital Statistics System

Emergency Nurses Association. (2019). *Trauma nurse core course* (8th ed.). Emergency Nurses Association.