

Alaska Native Medical Center

Trauma Service

Guideline: Musculoskeletal Trauma

PURPOSE:

More than 50% of all hospitalized trauma patients have one or more musculoskeletal injuries that can be life or limb threatening or result in significant functional impairment.

PATIENT TYPES:

1. Patient with isolated, closed, simple musculoskeletal injury not associated with any other fracture or potential injury.
 - a. Can be evaluated by emergency department physician with referral to orthopedic surgeon.
 - b. Surgical intervention is determined on an elective basis.
 - c. Trauma activation not necessary.
2. Patient with multiple fractures of major long bones and joints or significant injury potential.
 - a. Full trauma activation (Level I) strongly recommended for the following known musculoskeletal injuries due to potential for missed life-threatening injuries:
 - i. Two or more proximal long bone fractures (femur, humerus shaft, or tibia shaft).
 - ii. Traumatic amputation of the extremity proximal to wrist or ankle.
 - iii. Crushed, degloved, mangled, or pulseless extremity.
 - b. Partial trauma activation (Level II) strongly recommended for high mechanism injuries due to the potential for missed life-threatening injuries as per ANMC Trauma Team Activation Criteria.
 - c. After initial resuscitation and evaluation, orthopedic surgeon consulted for fracture management and continued care.
 - d. Isolated orthopedic injuries will be admitted to:
 - i. The Trauma Surgery service for <24 hours observation if concern for high-mechanism injury. If no additional injuries, patient will then be transferred to Orthopedic service.
 - ii. The Orthopedic service if no additional concerns in trauma evaluation.
3. Patient with complex pelvic / acetabular fracture
 - a. Trauma activation required; initial resuscitation and evaluation by trauma team, orthopedic surgeon consulted and present within 30 minutes if meets criteria (listed below).
 - b. Hypotensive patient may require multidisciplinary approach, which may include pelvic binder, angioembolization, pelvic external fixation, or laparotomy with pelvic packing. Use of the hybrid OR is strongly encouraged.

- c. Combined pelvic/spine injuries or complex multi-injured patients may be considered for transfer to trauma center of higher level of care on individual basis. Initial stabilization and trauma evaluation to be performed at ANMC.

AVAILABILITY:

1. Orthopedic team members must have dedicated call at ANMC and be available in the emergency department within 30 minutes after consultation by the trauma surgeon for the following types of acute musculoskeletal injuries:
 - a. Suspected compartment syndrome
 - b. Mangled extremity (fractured extremity with large soft tissue defect or extremity with loss of pulses)
 - c. Pelvic fracture that is unstable or with hemodynamic instability
 - d. Operating rooms must be readily promptly available to allow for emergency procedures on musculoskeletal injuries (i.e., open fracture debridement and stabilization, external fixator placement, and compartment decompression). Use of the hybrid OR is strongly encouraged.
2. Vascular Surgery should be consulted for the multidisciplinary approach to musculoskeletal injury with compromised blood flow.
 - a. Vascular surgeon must be available for an in-person evaluation within 30 minutes after consultation by the trauma surgeon.
 - b. If the Vascular surgeon is not available within 30 minutes, Trauma surgery will perform evaluation and temporizing measures as needed. Consideration of transfer to definitive care location will be on an individual bases.

GERIATRICS:

1. Geriatric patients require appropriate medical specialists to evaluate and manage co-morbid conditions.
 - a. Isolated hip fracture patients ≥ 60 years of age will be admitted by medicine service with an orthopedic consultation.
 - b. Anesthesia consultation is recommended for peripheral nerve block.

Responsibility	Trauma
Written	August 2015
Approval	Multidisciplinary Trauma QAI Peer Review Committee, Trauma Clinical Core Business Group
Date last reviewed	July 2021
Date last revised	July 2021
Supersedes	December 2018, September 2019