Open fractures
All open fractures irrespective of type require immediate irrigation and debridement (I&D). The optimal time is within six hours from injury. If the patient cannot be taken to the OR within six hours of injury due to problems with clearance by trauma surgery or neurosurgery, a preliminary I&D will be performed at the bedside to decrease the amount of gross contamination. However, this is not an adequate procedure and the patient will require operative debridement as soon as medical clearance is obtained.

Neurosurgery will be involved in the evaluation and management of many poly-trauma patients. It is their responsibility to communicate with the general surgery trauma service regarding the status of the patient's neurologic injury. Ultimately, it is the decision of the trauma service regarding the timing of orthopaedic surgery and overall management.

The orthopaedic resident on-call is responsible for contacting the orthopaedic attending on-call if a patient with an open fracture is delayed for greater than six hours or if a bedside I&D is performed. Operative stabilization of open fractures is almost always required to assist with bony as well as soft tissue stabilization. This includes a variety of procedures including external fixation and internal fixation with nails or plates. Temporary fixation can be achieved with open fractures using an external fixator. This should not add a significant amount of time to the procedure. If any concern exists, the orthopaedic attending can give a reasonable estimate regarding the duration of the procedure.

Pelvic Fractures
Patients with significantly displaced or unstable pelvic fractures, especially the "open book" variety, are candidates for emergent external fixation. The most common method of stabilizing these injuries is an external fixator. This can be accomplished in the trauma bay if necessary but preferably in the operating room. If needed, a flat sheet can be wrapped circumferentially around the patient's pelvis until the patient is in the operating room. This should be accomplished quickly and should only serve as a temporary measure until definitive fixation can be achieved. Otherwise, the sheet can cause skin necrosis.

If the fracture pattern is not amenable to external fixation i.e.: significant posterior injury or iliac wing fracture extension, angiography can be considered if there is evidence of bleeding.

Skeletal Traction
All femoral shaft fractures, acetabular fractures, and vertically unstable pelvic fractures should be placed in skeletal traction. The goal is to minimize the number of joints
spanned between the fracture and traction pin. Therefore, a distal femoral traction pin is preferred for acetabular and pelvic fractures and a proximal tibial pin for femoral shaft fractures. X-rays should be obtained of the knee to rule-out fractures prior to inserting either of these traction pins.

**Compartment Syndrome**
When the diagnosis of compartment syndrome has been made, the patient must be taken to the operating room immediately for fasciotomies. The first procedure includes releasing all compartments and no effort is made to close the wound. The patient will then return to the operating room 2 to 3 days later for delayed closure +/- split thickness skin grafting.