

# **Madigan Army Medical Center Clinical Practice Guidelines**

## **Trauma Patients with Potential Blunt Abdominal Injury**

Department of Emergency Medicine  
Madigan Army Medical Center  
Maintained by Quality Services Division  
Clinical Practice and Referral Guidelines Administrator

Last Review for this Guideline: **May 2010**  
Clinical Guidelines require review every three years

## Core Document

**TITLE:** Clinical Guidelines for Trauma Patients with Blunt Abdominal Injury.

**INDICATIONS FOR THE CLINICAL GUIDELINE:** The American College of Surgeons states that "care of the injured patient requires a system approach to ensure optimal care. A systematic approach is necessary within a facility..." Clinical guidelines present a systematic approach to care, set a standard of care and are intended to reduce resource utilization while maintaining or improving overall clinical outcomes. Head injury and abdominal trauma represent the most frequent type of trauma case and can have some of the most costly and morbid sequelae. These clinical guidelines were presented to the MAMC Trauma Committee. This interdisciplinary committee reviewed and discussed the guidelines prior to this submission for acceptance.

**METRICS: THE KEY ELEMENTS OF THE CLINICAL GUIDELINE THAT WILL BE USED TO MONITOR PROVIDER ADHERENCE TO THE CLINICAL GUIDELINE.** Each Clinical Guideline has at least one key point. If not followed this could represent a serious risk of liability to the patient and/or the hospital. The key point(s) will be added to the data collection areas in the Washington State Trauma Registry, Collector. To be eligible for entry into the registry the patient must be a Step 1, 2 or 3 trauma, be admitted to the hospital or observation unit and fall within the ICD-9 codes of 800-904.99 and 910-959.9. Charts meeting the criteria are currently entered into the registry by the Trauma Coordinator.

Potential Blunt Abdominal Trauma the data collection piece will be either a Diagnostic Peritoneal Lavage by the physician or an abdominal ultrasound by the radiologist or Emergency Department staff for hemodynamically unstable patients without abdominal distension or patients with probable hollow viscus injury.

**DATE:** Published: August 1999, Revised: April 2010.

**AUTHORS:** Please contact the clinical guidelines administrator at 253-968-3013 for information regarding the authors of this clinical guideline.

**AREAS OF DISAGREEMENT:** The Trauma Committee members discussed the Guidelines prior to submission for approval. The only point at issue was sonography. Radiology wanted the sonography done by a technologist or radiologist and not by the Emergency Department (ED) physician. This was taken under advisement and the guideline does not indicate who should do the sonography. The radiology department most often does sonography therefore not indicating who is to perform the sonography implies radiology staff.

### **PUBLISHED GUIDELINES OF CARE AND OTHER REFERENCES UPON WHICH THE CLINICAL GUIDELINE IS BASED:**

1. Elliott DC and Militello P. Pitfalls in the Diagnosis of Abdominal Trauma. In Maull et al (eds). Complications in Trauma and Critical Care, Saunders (Philadelphia), 1996. Pages 145-158
2. Eastern Association for the Surgery of Trauma. Practice Guidelines for the Non-Operative Management of Blunt Injury to the Liver and Spleen, 1998

3. Eastern Association for the Surgery of Trauma. Practice Guidelines for the Evaluation of Blunt Abdominal Trauma, 2001
4. American College of Surgeons, Committee on Trauma Resources for Optimal Care of the Injured Patient, 1999
5. American College of Surgeons, Committee on Trauma. Evaluation of Abdominal Trauma, 1995

**CLINICAL PRACTICE RECOMMENDATIONS:** See Attachment: Blunt Abdominal Trauma

**KEY POINTS:**

1. All trauma patients should be evaluated for the presence of blunt abdominal injuries (BAI).
2. Inadequate evaluation with a resultant missed BAI can result in significant patient morbidity and/or mortality.
3. Hemodynamic instability in the blunt trauma patient should be assumed to be due to abdominal injury until proven otherwise and there should be a low threshold for laparotomy in these patients.
4. FAST exam is a useful screening tool but CT scan of the abdomen is the gold standard imaging study for BAI.

**IMPACT STATEMENT TO INSTITUTION:** Adoption of these clinical guidelines will impact the following departments; Emergency, General Surgery, Neurosurgery, Anesthesiology, Respiratory Therapy, Radiology to include angiography, sonography and CAT scan, Critical Care and Perioperative. There is no additional workload or expense involved in the initiation of these Guidelines. Adoption of a uniform method of patient care for specific disease processes should increase provider efficiency and positive patient outcome.

**LINKS WITHIN THE MAMC INTRANET:** The clinical guidelines should be added to the Disease Management Recommendations under Clinical Guidelines. It should be made clear that these Clinical Guidelines are directed at surgeons leading trauma resuscitation or ED physicians initiating trauma resuscitation while awaiting the surgeon's response to the Trauma Resuscitation Code Page. A note about their acceptance should also be made in What's New on the MAMC Internet Home Page with the Clinical Guidelines section linked. The Glasgow Coma Score should also be referenced and linked with the Clinical Guidelines for individual reference. See Attachment F. An announcement of the acceptance should be distributed via CHCS with the Internet link cited.

**METHODS OF PROVIDER EDUCATION:** There is now a template in Essentris for documentation of the initial evaluation of the trauma patient. This "trauma note" includes pre-formatted fields for documentation of subjective abdominal complaints, the abdominal exam, and any additional studies such as FAST and CT scan. The trauma resuscitation rooms will have laminated guidelines posted and pocket-sized versions will be available for providers. The guidelines will be included in the training for medical students, interns and residents participating in ED or General Surgery rotations and are available on the MAMC intranet.

**METHODS OF PATIENT EDUCATION:** There are no patient education materials for this clinical guideline.

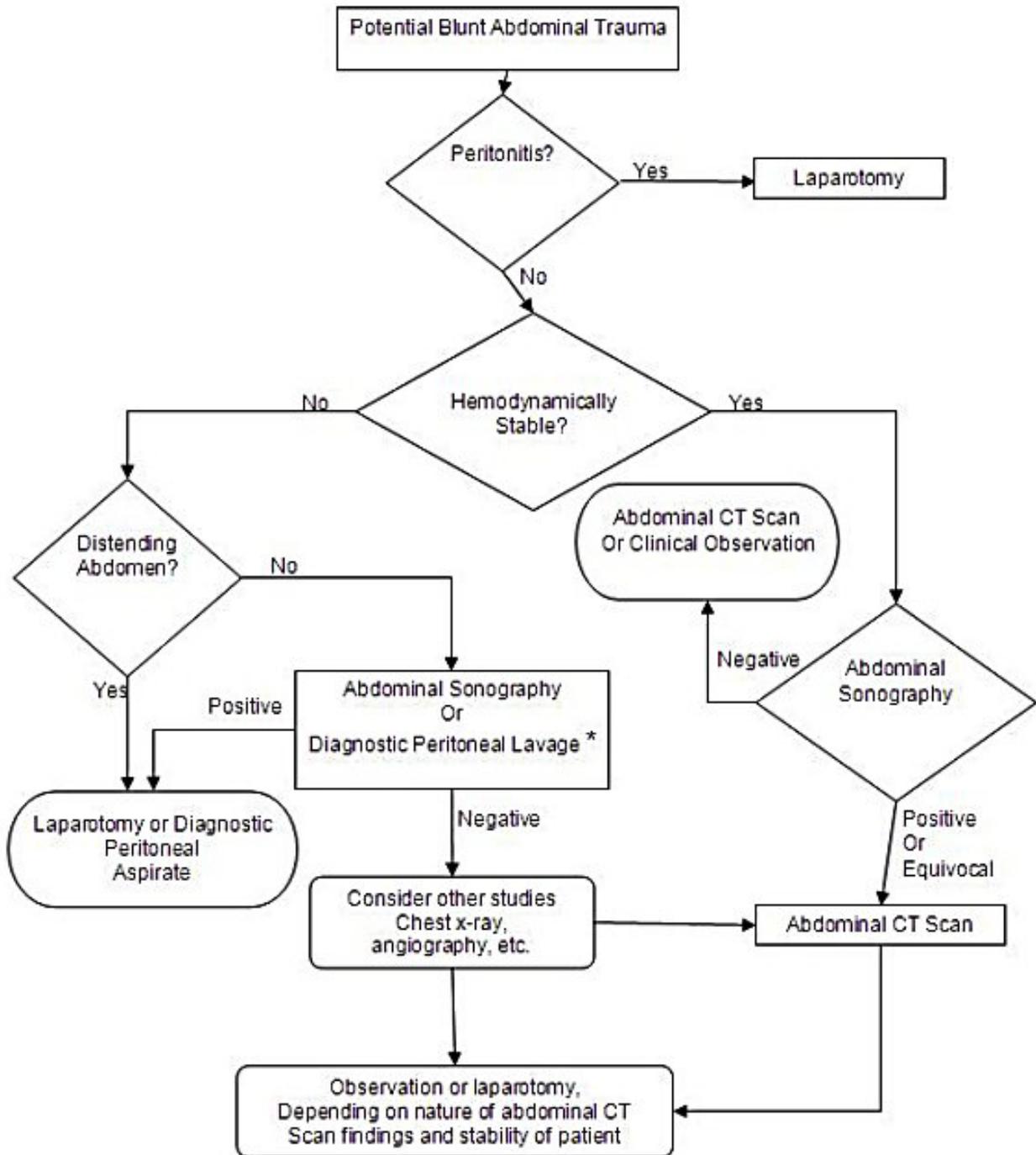
**REVISION FREQUENCY:** The clinical guidelines will be reviewed every 3 years or sooner at a Trauma Committee meeting. Current journals relating to emergency medicine, trauma surgery and the recommendations of Committee on Trauma, American College of Surgeons will be monitored for any changes in guidelines of care or treatment modality recommendations. The TD and TNC maintain regular discourse with trauma facilities in the community. Any changes in community standard of care or treatment will be discussed at the review. Any MAMC research studies that may indicate a need for a clinical guideline revision will be reviewed when results are published. Also, any changes mandated by DA or OTSG will be made in a timely manner.

### **References**

1. Elliott DC and Militello P. Pitfalls in the Diagnosis of Abdominal Trauma. In Maull et al (eds). Complications in Trauma and Critical Care, Saunders (Philadelphia), 1996. Pages 145-158.
2. Eastern Association for the Surgery of Trauma. Practice Guidelines for the Non-Operative Management of Blunt Injury to the Liver and Spleen, 1998
3. Eastern Association for the Surgery of Trauma. Practice Guidelines for the Evaluation of Blunt Abdominal Trauma, 2001
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5. American College of Surgeons, Committee on Trauma. Evaluation of Abdominal Trauma, 1995

### Clinical Guideline

#### Evaluation by Surgeon Directed Trauma Team of Potential Blunt Abdominal Trauma



\*Consider DPL only if abdominal sonography equivocal or inadequate and patient not stable for CT scan

### **Metrics**

1. For all patients trauma patients presenting to Madigan Army Medical Center, an initial evaluation of the abdomen will be documented in the electronic record and shall include:
  - Any subjective complaints of abdominal or flank pain
  - Absence or presence of abdominal tenderness to palpation and location, distension, external signs of injury such as abdominal wall bruising (“seat-belt sign”), elicitation of any peritoneal signs
2. All patients with history or mechanism concerning for blunt abdominal injury, or having any positive abdominal complaints or physical exam findings shall have further diagnostic evaluations performed and documented in the electronic record:
  - Focused abdominal sonography for Trauma (FAST) will be performed by either Radiology personnel or credentialed Emergency Department staff and the results reported to the Surgery attending and/or chief resident
  - All patients with a positive FAST exam should be taken expeditiously for either laparotomy or computed tomography of the abdomen depending on their clinical status and associated injuries. All patients with a negative FAST exam but documented abdominal complaints or abnormal physical exam findings should also have abdominal computed tomography performed

### **Key Points**

1. All trauma patients should be evaluated for the presence of blunt abdominal injuries (BAI).
2. Inadequate evaluation with a resultant missed BAI can result in significant patient morbidity and/or mortality.
3. Hemodynamic instability in the blunt trauma patient should be assumed to be due to abdominal injury until proven otherwise and there should be a low threshold for laparotomy in patients that remain unstable despite resuscitation.
4. FAST exam is a useful screening tool but CT scan of the abdomen is the gold standard imaging study for BAI.