

STATE TRAUMA ADVISORY BOARD QUALITY IMPROVEMENT RECOMMENDATIONS

These recommendations represent suggested quality improvement indicators based on review of current trauma literature and on expert opinion reflecting the clinical experience of members of the STAB. Utilization of these indicators is at the discretion of trauma program staff.

TRAUMA QUALITY IMPROVEMENT INDICATORS OF CARE			
ASPECT	INDICATOR	COMMENTS	GOAL
System Function	<u>Team Activation</u> Appropriate trauma team <u>not</u> activated.	To assure that trauma team composition meets the standards set fort in Exhibit 3.	
	<u>Undertriage</u> Patients not entered into the trauma system by prehospital providers or a transferring hospital for whom retrospective review indicates severe injuries, morbidity, or mortality.	ISS greater than 9 ICU admission Major operative procedure within 6 hours Patient death	
	<u>Overtriage</u> Patients entered into the trauma system by prehospital or hospital providers for whom retrospective review indicates only minor injuries.	No mandatory triage criteria met Discharged from the emergency department LOS < 6 hours with discharge to home	

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	<u>Scene Time</u> Field personnel on scene time > 15 minutes.	The indicator should not be utilized in cases with prolonged extrication, multiple patients or difficult access to the scene.	
	<u>Interhospital Transfer</u> Failure to transfer patients in less than 3 hours from hospital arrival.	Transfer for the majority of patients should be accomplished within 2 hours.	
	<u>Surgeon Evaluation</u> Patients with significant blunt chest or multi system trauma admitted to the hospital by subspecialists with no general surgery evaluation.	Patients in this category initially meet requirements for a modified team response but during ED evaluation, are found to have significant injuries.	
	<u>Neurosurgical Evaluation</u> Neurosurgical consultation not obtained for patients with GCS < 13.		
Airway, Breathing & Circulation	<u>ABCs</u> Failure to follow airway, breathing, circulation priorities of patient management	This is applicable both for prehospital and hospital providers.	
	<u>Airway Management</u> GCS less than or equal to 8 and no intubation.	For prehospital transport of less than 5 minutes, intubation may not be indicated.	
	<u>Esophageal Intubation</u> Unrecognized placement of the endotracheal tube in the esophagus.		

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	<p style="text-align: center;"><u>Needle Thoracostomy</u></p> <p>Failure to decompress the chest for obvious pneumothorax with hemodynamic and respiratory compromise.</p>		
	<p style="text-align: center;"><u>Chest Tube Placement</u></p> <p>No chest tube placed for pneumothorax or hemothorax within 15 minutes of diagnosis or inappropriate size tube used.</p>		
	<p style="text-align: center;"><u>Ventilation</u></p> <p>Persistent over or under ventilation within the first 12 hours ($pCO_2 < 32$ or > 50) in patients with airway management.</p>	<p>This indicator is a reflection of the precision of critical care in the first 12 hours after initial stabilization.</p>	
	<p style="text-align: center;"><u>Vascular Access</u></p> <p>Inability to obtain vascular access in a patient with unstable vital signs.</p>		
	<p style="text-align: center;"><u>Hemorrhage Control</u></p> <p>Failure to control external bleeding</p>		
Resuscitation	<p style="text-align: center;"><u>Head Injury</u></p> <p>For significantly head injured patients hypotension < 90 systolic or $pCO_2 < 35$ or > 40.</p>		

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	<p style="text-align: center;"><u>Base Deficit</u> In adults, base deficit > 8 after initial resuscitation.</p>		
	<p style="text-align: center;"><u>Hypothermia</u> Prolonged hypothermia without adequate rewarming measures.</p>	Attention will be given to treating patients who arrive hypothermic or to preventing hypothermia during resuscitation.	
	<p style="text-align: center;"><u>Delay</u> Delay in transfer or operative procedure for hemodynamically unstable patients due to diagnostic imaging studies.</p>		
	<p style="text-align: center;"><u>Pediatric Fluid Administration</u> Infusion of more than 50ml/kg crystalloid solution in the first two hours in a pediatric patient with normal initial vital signs.</p>		
	<p style="text-align: center;"><u>Blood Product Utilization</u> Failure to initiate blood product administration after 2 liters (20cc/kg pediatric) crystalloid bolus during initial resuscitation of the patient with persisting class III shock.</p>	Class III shock (approx. 2,000 ml in an adult) is manifested by marked tachycardia, tachypnea, falling systolic pressure, and changes in mental status.	
	<p style="text-align: center;"><u>Shock</u> Patient with systolic blood pressure < 70 mmHg greater than two hours after hospital arrival with no definitive intervention.</p>		

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<p><u>Skeletal Protection & Evaluation</u></p>	<p style="text-align: center;"><u>Spinal Immobilization</u> No spinal precautions initiated in the field or not maintained until adequately cleared.</p>		
	<p style="text-align: center;"><u>C-spine Clearance</u> Cervical spine cleared radiographically in patients with altered level of consciousness.</p>		
	<p style="text-align: center;"><u>Initial Radiographs</u> AP chest, pelvis, and cervical spine films not completed following ATLS protocol for victims of blunt trauma.</p>		
	<p style="text-align: center;"><u>Splinting</u> No application of traction or splinting for long bone fractures.</p>	<p style="text-align: center;">This indicator is applicable for both the field and hospital setting.</p>	
	<p style="text-align: center;"><u>Fracture/Dislocation Reduction</u> Failure to attempt reduction of obvious extremity fractures or dislocations with lack of pulses.</p>	<p style="text-align: center;">This indicator is intended for the hospital setting.</p>	
	<p style="text-align: center;"><u>Hip Dislocation</u> Failure to attempt reduction of hip dislocation within 6 hours of hospital arrival.</p>		

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Miscellaneous	<p style="text-align: center;"><u>Antibiotic Administration</u> Failure to administer IV antibiotics for open fractures or extensive breakdown in skin integrity.</p>		
	<p style="text-align: center;"><u>Delayed Diagnosis</u> Injury diagnosed greater than 24 hours after the initial traumatic event.</p>		
	<p style="text-align: center;"><u>Progression of initial neurological insult</u></p>		
	<p style="text-align: center;"><u>Rectal Exam</u> No rectal exam documented prior to insertion of Foley catheter in males.</p>		
	<p style="text-align: center;"><u>Unplanned Return to OR</u></p>		
	<p style="text-align: center;"><u>Readmission</u> Patient readmitted to the hospital due to complication or incomplete management of injuries.</p>	<p style="text-align: center;">This excludes patients who are scheduled to return for follow up procedures.</p>	
	<p style="text-align: center;"><u>Nutritional Support</u> For patients with ISS > 15 or ICU admission, <u>no</u> nutritional support started within 48 hours of admission.</p>		
	<p style="text-align: center;"><u>Vascular Injury</u> Failure to diagnose major vascular injury within 8 hours of hospital arrival.</p>		