



# State Performance Improvement Indicators

## South Dakota Trauma System

### PRE-HOSPITAL

<b>EMS Scene Time &gt; 20 Minutes</b>	
<b>Definition</b>	The time calculated between the time the unit transporting to your hospital arrived at the scene and the time the unit transporting to your hospital left the scene.
<b>Exceptions</b>	“Not Applicable” is used for patients who were not transported by EMS.
<b>Data Source Guide</b>	EMS Run Report

### EMERGENCY DEPARTMENT

<b>Trauma Activation Criteria Met-Team Not Activated</b>	
<b>Definition</b>	Patient meets facility’s activation criteria and the trauma team was not activated.
<b>Exceptions</b>	None
<b>Data Source Guide</b>	EMS Run Report ED Triage/Trauma Flow Sheet Nursing Notes Physician Notes Telemedicine Documentation
<b>Backboard Removal &gt; 20 minutes</b>	
<b>Definition</b>	The backboard removal time is calculated as the minutes from the “ED/Acute Care Admission Time” to the documented time the backboard is removed.
<b>Exceptions</b>	“Not Applicable” is used for patients who were not on a backboard.
<b>Data Source Guide</b>	EMS Run Sheet ED Triage/Trauma Flow Sheet Nursing Notes Telemedicine Documentation
<b>Designated Provider at Patient’s Side &gt; 30 Minutes</b>	
<b>Definition</b>	The designated provider is present in the ED within 30 minutes of notification. The response time is calculated as the minutes from the “notification” to the “trauma team member arrived time.” If trauma team is activated after patient arrival, the provider is expected to respond within 30-minutes of notification.
<b>Exceptions</b>	If provider is notified greater than 30 minutes prior to patients expected arrival provider will be present in the ED prior to patient’s arrival.
<b>Data Source Guide</b>	ED Triage/Trauma Flow Sheet Nursing Notes Physician’s Notes Telemedicine Documentation
<b>Decision to transfer &gt; 15min</b>	
<b>Definition</b>	For patients presenting to a trauma center meeting facility defined transfer criteria for early transfer, the decision to transfer time is documented as greater than 15 minutes after patient arrival.
<b>Exceptions</b>	If indicator for transfer is identified during assessment or within diagnostics results, the decision to transfer time is documented within 15 minutes of identified finding. *Decision to transfer may be made prior to arrival if appropriate.
<b>Data Source Guide</b>	ED Triage/Trauma Flow Sheet Nursing Notes Physician’s Notes Telemedicine Documentation

<b>I/O Documentation Missing</b>	
<b>Definition</b>	Intake and output is not documented.
<b>Exceptions</b>	None
<b>Data Source Guide</b>	Triage/Trauma Flow Sheet Nursing Notes/Flow Sheet Anesthesia Record ICU Flow Sheet Telemedicine Documentation

## HOSPITAL PROCEDURES

<b>&gt; 1 Liter Crystalloid Given Before Blood Products Started</b>	
<b>Definition</b>	<i>Adult:</i> Greater than 1 liter of fluid given before blood products were introduced. This includes a total of all fluids including those given by EMS.
<b>Exceptions</b>	<i>Pediatrics:</i> Greater than 20ml/kg fluid given before blood products were introduced for patients weighing < 40kg. This includes a total of all fluids including those given by EMS.
<b>Data Source Guide</b>	EMS Run Report ED Triage/Trauma Flow Sheet Nursing Notes Physician's Notes Telemedicine Documentation Anesthesia Record
<b>CT Chest/Abd/Pelvis Without Contrast</b>	
<b>Definition</b>	CT chest, abdomen, and/or pelvis performed without IV contrast. Clinical decision making for lack of CT contrast should be documented and included in the performance improvement review.
<b>Exceptions</b>	None
<b>Data Source Guide</b>	ED Triage/Trauma Flow Sheet Nursing Notes Physician's Notes Procedure Notes Telemedicine Documentation Radiology Reports
<b>CT Performed After Decision to Transfer Has Been Made</b>	
<b>Definition</b>	CT was performed after the decision to transfer for further trauma care was documented.
<b>Exceptions</b>	Patients transferred for non-trauma care such as the care of a medical or mental health condition, for palliative care, or evaluation and placement for a living situation.
<b>Data Source Guide</b>	ED Triage/Trauma Flow Sheet Nursing Notes Physician's Notes Procedure Notes Telemedicine Documentation Radiology Reports
<b>CT Scan Done on Pediatric Case &lt;= 16 Years</b>	
<b>Definition</b>	CT scan performed on pediatric case <= 16 years. Clinical decision making for performing CT scan should be documented and included in the performance improvement review.
<b>Exceptions</b>	None
<b>Data Source Guide</b>	ED Triage/Trauma Flow Sheet Nursing Notes Physician's Notes Procedure Notes Telemedicine Documentation Radiology Reports Provider Note

<b>CT Without Portable Chest X-Ray</b>	
<b>Definition</b>	CT was performed prior to a chest X-ray.
<b>Exceptions</b>	None
<b>Data Source Guide</b>	ED Triage/Trauma Flow Sheet Nursing Notes Physician's Notes Procedure Notes Telemedicine Documentation Radiology Reports
<b>GCS <math>\leq</math> 8 and NOT Intubated</b>	
<b>Definition</b>	At any point in the patient's care the Glasgow Coma Scale (GCS) was $\leq$ 8 and the patient was not intubated.
<b>Exceptions</b>	Advanced directive limiting care
<b>Data Source Guide</b>	EMS Run Sheet ED Triage/Trauma Flow Sheet Nursing Notes Physician's Notes Procedure Notes Telemedicine Documentation ICU Flow Sheet
<b>Hemothorax or Pneumothorax Diagnosed and Chest Tube NOT Placed</b>	
<b>Definition</b>	Patients with evidence of hemothorax or pneumothorax without a chest tube placed during the trauma encounter. Evidence can include imaging, physician suspicion, or symptoms. Clinical decision making for not placing chest tube with evidence of hemothorax or pneumothorax should be documented and included in the PI review.
<b>Exceptions</b>	None
<b>Data Source Guide</b>	ED Triage/Trauma Flow Sheet Nursing Notes Physician's Notes Procedure Notes Telemedicine Documentation Operative Reports ICU Flow Sheet
<b>Hypothermic (<math>&lt; 97^{\circ}</math>) Without Warming Measures</b>	
<b>Definition</b>	Patients with a temperature of $< 97^{\circ}$ and no warming measures were applied. Measures can include warm blankets and fluid, warmed trauma bay, forced air warmer, and/or radiant heat.
<b>Exceptions</b>	None
<b>Data Source Guide</b>	ED Triage/Trauma Flow Sheet Nursing Notes Physician's Notes Telemedicine Documentation Operative Reports ICU Flow Sheet

**OUTCOMES**

<b>Death and Autopsy Not Requested</b>	
<b>Definition</b>	Trauma patients that expire in the care of your hospital and an autopsy is not requested. (The role of autopsy is to evaluate missed injury after traumatic death.)
<b>Exceptions</b>	None
<b>Data Source Guide</b>	Physician's Notes Post Mortem Flow Sheet Death Record

## Resources

South Dakota Trauma Treatment Manual: *Guidelines for the Treatment of Trauma in Level IV and V Trauma Centers*  
<https://doh.sd.gov/documents/Providers/Trauma/TreatmentGuidelines.pdf>

Eastern Association for the Surgery of Trauma (EAST) Practice Management Guidelines  
<https://www.east.org/education/practice-management-guidelines>

Rural Trauma Team Development Course (RTTDC)  
<https://www.facs.org/quality-programs/trauma/education/rttdc>

Advanced Trauma Life Support (ATLS)  
<https://www.facs.org/quality-programs/trauma/atls>

Trauma Nursing Core Course (TNCC)  
<https://www.ena.org/education/tbcc>

National Trauma Data Standard 2020 Data Dictionary  
<https://www.facs.org/quality-programs/trauma/tqp/center-programs/ntdb/ntds/data-dictionary>

Resources for Optimal Care of the Injured Patient Orange Book, Committee on Trauma, American College of Surgeons  
<https://www.facs.org/~media/files/quality%20programs/trauma/vrc%20resources/resources%20for%20optimal%20care.ashx>

Trauma Care After Resuscitation (TCAR)  
<https://tcarprograms.visionem.org/>

Trauma Outcomes and Performance Improvement Course  
<https://www.traumanurses.org/topic>