5.) Measure # ACSTrauma4
Splenic Removal Rate

**National Quality Strategy (NQS) Domain:** Effective Clinical Care

**Measure Type (Process/Outcome):** Outcome

**DESCRIPTION:**
Percentage of patients with a spleen injury (spleen AIS ≥ 2 and < 5) that undergo a splenectomy.

**INSTRUCTIONS:**
This measure is to be reported **each time** a patient with blunt multisystem trauma presents with severe spleen injury (spleen AIS ≥ 2 and < 5).

**Measure Reporting via Registry:**
Medical record information are used to identify patients who are included in the measure’s denominator. The listed numerator options are used to report the numerator of the measure.

**DENOMINATOR:**
All patients meeting the following criteria:
   a) TQIP inclusion criteria
   b) Survival ≥ 1 hour
   c) Spleen AIS ≥ 2 and < 5

**NUMERATOR:**

* Numerator Note: A lower calculated performance rate for this measure indicates better clinical care.

All patients meeting the following criteria:
   a) TQIP inclusion criteria
   b) Survival ≥ 1 hour
   c) Spleen AIS ≥ 2 and < 5
   d) Splenectomy performed during the admission defined by the presence of any of the following ICD-10 codes: 07TP0ZZ, 07TP4ZZ, 1OB87DA, 1OB87DAAG, 1OB87DAW3, 1OB87DAX7, 1OB87DAXXE, 1OB87DAXXN, 1OB87LA, 1OB87LAAG, 1OB87LAW2, 1OB87LAW3, 1OB87LAX7, 1OB87LAXXE, 1OB87LAXXN, 1OB87PF, 1OB87PFAG, 1OB87PFW2, 1OB87PFW3, 1OB87PFX7, 1OB87PFXXE, 1OB87PFXXN, 1OB89DA, 1OB89LA, 1OB89PF

**Numerator Quality-Data Coding Options for Reporting Satisfactorily**

**Performance Met:**
The patient with a spleen injury (AIS 2-4) undergoes an operative procedure to remove the spleen

**OR**
Spleen removed for qualifying medical reasons:

**Medical Performance Exception:**

a) First or lowest systolic blood pressure <90 mm Hg  
b) Receive ≥ 4 units of packed red blood cells within 4 hours of emergency department arrival

**OR**

**Performance Not Met:**  
The patient with a spleen injury (AIS 2-4) does not undergo an operative procedure to remove the spleen

**RISK ADJUSTMENT:**
Risk adjusted splenic removal rate will be calculated by adjusting for the variables listed in the following table. Thus, these patient characteristics must be reported.

<table>
<thead>
<tr>
<th>Age</th>
<th>Sex</th>
<th>Race (modeled individually)</th>
<th>Comorbid Conditions (modeled individually)</th>
<th>Transfer Status</th>
<th>Pre-Hospital Cardiac Arrest</th>
<th>Initial ED/Hospital Glasgow Coma Scale Motor score</th>
<th>Initial ED/Hospital systolic blood pressure</th>
<th>Initial ED/Hospital Pulse</th>
<th>Mechanism of Injury</th>
<th>Max AIS* Severity by Body Region (modeled individually)</th>
<th>Survival Risk Ratio (derived from codes)</th>
<th>Presence of Traumatic Intracranial Hemorrhage</th>
<th>Presence of Spinal Cord Injury</th>
<th>Presence of &gt;3 Rib Fractures</th>
<th>Severity of Splenic Injury</th>
</tr>
</thead>
</table>

*Abbreviated Injury Scale codes as derived through the Association for the Advancement of Automotive Medicine*
RATIONALE:
The spleen is one of the most commonly injured organs following blunt abdominal trauma, and nonoperative management with or without splenic artery embolization of hemodynamically stable patients without peritonitis is currently the standard of care.¹ Failure of nonoperative management has been associated with inappropriate patient selection, and insufficient infrastructure and processes for management of such patients.²,³ There is significant clinical practice variation within successful nonoperative management of splenic injuries.²,⁴

REFERENCES: