National EMS Quality Alliance
EMS Compass 2.0
Trauma-03 Measure Package
Disclaimer

EMS Performance Measures (Measures) and related data specifications developed by the National EMS Quality Alliance (NEMSQA) are intended to facilitate quality improvement activities by EMS professionals.

These measures are intended to assist EMS professionals in enhancing quality of care. These Measures are not clinical guidelines and do not establish a standard of medical care and have not been tested for all potential applications. NEMSQA encourages testing and evaluation of its Measures.

Measures are subject to review and may be revised or rescinded at any time by NEMSQA. The measures may not be altered without prior written approval from NEMSQA. The measures, while copyrighted, can be reproduced and distributed, without modification, for noncommercial purposes (e.g., use by health care providers in connection with their practices). Commercial use is defined as the sale, license, or distribution of the measures for commercial gain, or incorporation of the measures into a product or service that is sold, licensed, or distributed for commercial gain. Commercial uses of the measures require a license agreement between the user and NEMSQA. Neither NEMSQA nor its members shall be responsible for any use of the measures.

THESE MEASURES AND SPECIFICATIONS ARE PROVIDED “AS IS” WITHOUT WARRANTY OF ANY KIND.

©2019 National EMS Quality Alliance. All rights reserved.

Limited proprietary coding is contained in the measure specifications for convenience. Users of the proprietary coding sets should obtain all necessary licenses from the owners of these code sets. NEMSQA and its members disclaim all liability for use or accuracy of any Current Procedural Terminology (CPT®) or other coding contained in the specifications. ICD-10 copyright 2019 International Health Terminology Standards Development Organization.

CPT ® is a registered trademark of the American Medical Association and is copyright 2019. CPT® codes contained in the Measure specifications are copyright 2004-2019 American Medical Association
Trauma-03: Effectiveness of Pain Management for Injured Patients

Trauma-03, an outcome measure, measures the effectiveness of pain management for injured patients who are transported by EMS. The published evidence supporting this measure is similar to that of Trauma-01, as EMS often treats patients with pain and there are many clinical indicators for pain management. The intent of this measure is to determine if pain is being reduced for EMS patients during the EMS encounter. However, for this measure, the TEP feels it is important to note that there are alternative pain management methods to the administration of drugs, and drug administration should be used judiciously. The true intent of this measure is to determine if EMS providers are helping their injured patients feel better, not if they are administering opioids to their patients.

Similar to Trauma-01, the initial inclusion criteria for Trauma-03 was changed to EMS transports rather than EMS responses, to ensure the accurate initial population is being captured to protect the true intent of the measure – which is to measure how well EMS is helping injured patients who are in pain feel better. As for the threshold for the initial pain scale score, it remains at greater than zero. Much discussion took place among TEP members when it came to deciding upon this initial pain score value. However, in the end, the experts decided that the initial value should be any score greater than zero, because, again, the intent of the measure is to measure how well EMS is helping injured patients who are in pain feel better, not to measure the effectiveness of opioid administration or other medication-related outcomes.

While the intent of the numerator for Trauma-03 has not been changed, the language has been revised for clarity. The numerator for this measure includes EMS transports for patients with two or more documented pain scores and a final pain score value less than the first documented pain score. In order to determine if the clinical outcome for this measure has been met, a calculation must be completed.
**Trauma-03: Effectiveness of Pain Management for Injured Patients**

**Measure Score Interpretation:** For this measure, a higher score indicates better quality.

<table>
<thead>
<tr>
<th>Measure Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of EMS transports originating from a 911 request for patients whose pain score was lowered during the EMS encounter.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure Components</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator Statement</strong></td>
</tr>
<tr>
<td><strong>Denominator Statement</strong></td>
</tr>
<tr>
<td><strong>Denominator Exclusions</strong></td>
</tr>
<tr>
<td><strong>Denominator Exceptions</strong></td>
</tr>
<tr>
<td><strong>Supporting Guidance &amp; Other Evidence</strong></td>
</tr>
</tbody>
</table>
Pain is a common symptom in prehospital care. In a study conducted in 2007, it was found that among the patients who indicated they were in pain, 64% reported they were in intense to severe pain.\textsuperscript{ii}

Pain control benefits patients in ways that go beyond making them comfortable. Proper identification and treatment of pain can prevent long-term consequences in very young children. As well, uncontrolled pain can also cause side effects such as elevations in heart rate and blood pressure that may be misinterpreted as other clinical conditions or may have consequences on existing disease processes.\textsuperscript{iii}

Measure Designation

<table>
<thead>
<tr>
<th>Measure purpose</th>
<th>☒ Quality Improvement</th>
<th>☐ Accountability</th>
<th>☐ MOC</th>
<th>☐ Process</th>
</tr>
</thead>
</table>

\textsuperscript{ii} Pain is a common symptom in prehospital care. In a study conducted in 2007, it was found that among the patients who indicated they were in pain, 64% reported they were in intense to severe pain.

\textsuperscript{iii} Pain control benefits patients in ways that go beyond making them comfortable. Proper identification and treatment of pain can prevent long-term consequences in very young children. As well, uncontrolled pain can also cause side effects such as elevations in heart rate and blood pressure that may be misinterpreted as other clinical conditions or may have consequences on existing disease processes.
| National Quality Strategy/Priority/CMSS Measure Domain | • ☒ Outcome  
| | • ☐ Structure  
| | • ☐ Efficiency  
| CMS Meaningful Measure Domain | • ☐ Clinical Process-Effectiveness  
| | • ☐ Patient Safety  
| | • ☒ Patient Experience  
| | • ☐ Care Coordination  
| | • ☐ Efficiency: Overuse  
| | • ☐ Efficiency: Cost  
| | • ☐ Population & Community Health  
| Level of measurement | • ☒ Individual EMS Professional  
| | • ☒ EMS Agency  
| Care setting | • ☒ Pre-Hospital Care  
| Data source | • ☒ Electronic Patient Care Record (eCPR) data  
| | • ☐ Administrative Data/Claims (inpatient, outpatient or multiple-source claims)  
| | • ☒ Paper medical record/Chart abstracted  
| | • ☒ Registry  

Clinical Quality Measure Flow for Trauma-03
Effectiveness of Pain Management for Injured Patients

Start

All EMS Transports

Denominator

Originating from a 911 request

Yes

Patient with injury

No

Do not include in Eligible Population/Denominator

No

GCS of 15 or AVPU of A

Yes

At least one pain scale documented

No

Initial pain score greater than zero

Yes

Include in Eligible Population/Denominator

Yes

Final pain value less than first documented pain value

No

Two or more pain scales documented

Measure Performance Not Met

Yes

Measure Performance Met

NEMSQA EMS Compass 2.0 Measure Set © 2019 National EMS Quality Alliance. All rights reserved.
NEMSIS Pseudocode: Trauma-03: Effectiveness of Pain Management for Injured Patients

**Measure Score Interpretation:** For this measure, a higher score indicates better quality.

<table>
<thead>
<tr>
<th>Measure Components</th>
<th>Pseudocode</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
<td>last (eVitals.27 Pain Scale Score where e.Vitals.01 Date/Time Vital Signs Taken is not null sorted by eVitals.01 Date/Time Vital Signs Taken) is less than first (eVitals.27 Pain Scale Score where e.Vitals.01 Date/Time Vital Signs Taken is not null sorted by eVitals.01 Date/Time Vital Signs Taken)</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>(eSituation.02 Possible Injury is 9922005 (&quot;Yes&quot;) and first (eVitals.27 Pain Scale Score where e.Vitals.01 Date/Time Vital Signs Taken is not null sorted by eVitals.01 Date/Time Vital Signs Taken) is greater than 0) and (eResponse.05 Type of Service Requested is 2205001 (&quot;911 Response (Scene)&quot;) and eDisposition.12 Incident/Patient Disposition is 4212033 (&quot;Patient Treated, Transported by this EMS Unit&quot;))</td>
</tr>
</tbody>
</table>
