

2023 NEW National EMS Quality Alliance Measure Set: Tools for EMS to Operationalize Evidence Based Care

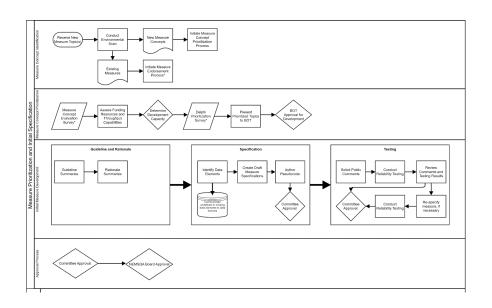
Michael Redlener, MD, FAEMS President of the Board

Jeffrey L Jarvis, MD, MS, EMT-P Chair, Measure Development Committee



Outline

- What is NEMSQA?
- Measure Development Process
- What is Measure Endorsement?
- 2021-2023 Measure Endorsement Cycle
- Overview of the New Measures
- Resources
- What's next









What We Do

 Provide measurable ways for EMS systems to pursue improvement, improve patient outcomes and provider safety.

 Collaboratively develop and test evidence-based quality measures.



Why It Matters

- Focus on measuring what matters and provide the tools to make that happen at a local and national level.
 - Operationalize treatment guidelines and best practices.
 - Providing the best care to patients and the best service to their communities.
 - Identify successes and areas for growth.
 - Provide a path that puts data to use in a meaningful way to help EMS providers better serve patients and communities.



NEMSQA History



2017

Established with assistance from NHTSA to continue EMS Measure Development initiative



2019

Established as its own 501(c)(6) nonprofit entity Released National

EMS Measure Set (Compass 2.0)



2021

Updated Membership Structure Started EMS

Quality Improvement Partnership



2023

Release Endorsed Measure Set

Airway EBG Measure Development

Develop new measures from PGC EBG Systematic Review

Board of Trustees Established

EMS-based organizations became steering committee or stakeholder members



COVID...

Rollout of National EMS Measure Set

Florida F.A.I.R Project

2020

Lights and Siren Collaborative

Field Triage Guideline Measure Development with American College of Surgeons

Completed F.AI.R. Project

2022



Current NEMSQA Measures

Measure ID	Description	
Hypoglycemia-01	Treatment Administered for Hypoglycemia	
Respiratory-01 previously Pediatrics-01	Respiratory Assessment	
Asthma-01 previously Pediatrics-02	Administration of Beta Agonist for Asthma	
Pediatics-03b	Documentation of Estimated Weight in Kilograms	
Seizure-02	Patients with Status Epilepticus Receiving Intervention	
Stroke-01	Suspected Stroke Receiving Prehospital Stroke Assessment	
Trauma-01	Injured Patients Assessed for Pain	
Trauma-03	Effectiveness of Pain Management for Injured Patients	
Trauma-04	Trauma Patients Transported to a Trauma Center	
Safety-01	No Lights or Sirens During Response to Scene	
Safety-02	No Lights or Sirens During Transport	



Measure Development Work



- Florida DOH F.A.I.R. Measure Development
 - 56 Measure including stratifications



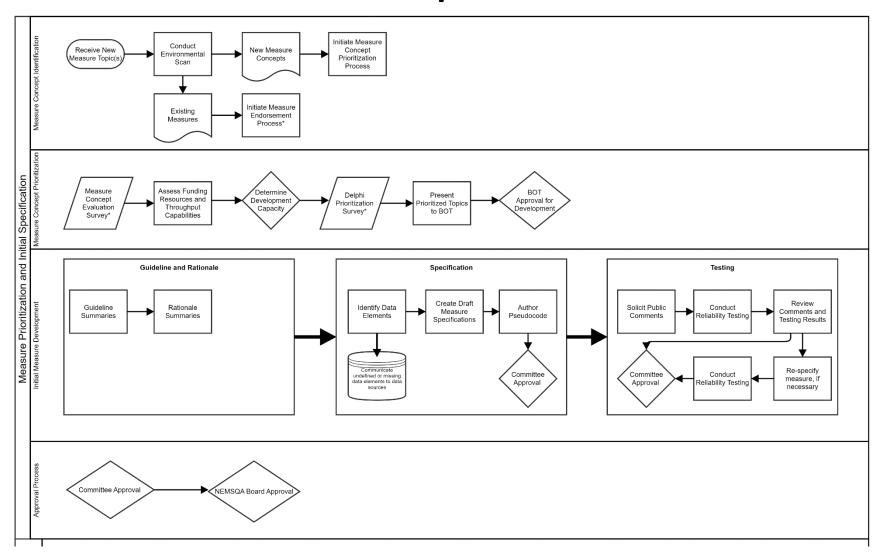
Guidelines for Field Triage of Injured Patients
 Update Measure Development



 NASEMSO Prehospital Airway Management EBG Measure Development (in progress)



Measure Development Process





Measure Endorsement

- Evaluate measures developed/published by other organizations
- Consider for 'endorsement' of measure as opposed to internally developed measures.
- Avoids 're-inventing wheel'



Criteria for Measure Evaluation

Clinical Value/Impact

- Does the measure evaluate an outcome or process that is clinically important to EMS patients.
 - Addresses a specific national health goal/priority for EMS
 - Affects large numbers of patients and/or has a very substantial impact for smaller populations
 - Focuses on a leading cause of morbidity or mortality
 - High resource use (current and/or future)
 - Severity of illness
 - Patient/Societal consequences

Evidence

- Internal assessment of evidence
 - Guideline recommendation has strong evidence (Level I or Level III (Harm) or equivalent)
 - Guideline recommendation has moderate evidence (Level 2a or equivalent)
 - Guideline recommendation has low evidence (Level 2b or equivalent)
 - Guideline recommendation has very low evidence or is based on consensus opinion (Level III or equivalent)



Criteria for Measure Evaluation

Feasibility

 Evaluates if the measure is feasible using standard fields available in the National Emergency Medical Services Information System (NEMSIS) or another national, state or local data source.

Face Validity:

- Determines whether a measure has consensus-based face validity.
 - Reviewers agree the measure will provide an accurate reflection of quality and will be able to be used to distinguish good and poor quality.



Criteria for Measure Evaluation

Technical Work and Implementation

 Evaluates the level of effort required to create pseudocode and implement the measure into clinical practice.

Ease of Endorsement*

 Likelihood of agreement with measure steward within 3 months

^{*}unique to this endorsement cycle



2021-2023 NEMSQA Measure Endorsement Cycle



Summer 2021

Scoping review/environmental scan for existing, published EMS measures from federal agencies, national and state organizations

Identified **174** EMS measures.



Winter 2022

Round 2 measure reviewconsensus based rating/grading of measures measures on criteria for measure endorsement.

Identified **26** "A" graded measures



Fall 2022

Review of reliability testing data for Florida FAIR measures

Final recommendations to BOD of 11 measures.



2023

Executed agreement with measure steward

Round 1 measure review to remove duplicates of existing NEMSQA and not feasible for development, merge similar measure concepts.

Identified **38** unique measures for endorsement consideration.

Round 3 measure reviewprioritization survey of "A" graded measures

Summer 2022

Final Board approval of 10 measures

February 2023

Published Measures

2023

Fall 2021



Grading Criteria

Grade	Clinical Value/Impact	Ease of Endorsement	Technical Work	
А	High	High	Pseudocode & Testing Completed or minimal work needed	
В	High	Moderate/Low	No pseudocode or moderate work needed	
С	Moderate/Low	Moderate/Low	No pseudocode and complicated work	



New NEMSQA Measures

Airway-01	Successful First Advanced Airway Placement without Hypotension or Hypoxia		
Airway-05	Adequate Oxygen Saturation Achieved Before Intubation Procedure		
Airway-18	Waveform Capnography Airway Device Monitoring		
Respiratory-02	Oxygen Administration for Hypoxia		
Safety-04	Pediatric Restraint Device Used During Transport		
Syncope-01	ECG Performed for Syncope Patients		
TBI-01	TBI: Clinical Assessments for Patients with Traumatic Brain Injury (oxygen level, ETCO2, and SBP)		
Trauma-08	Documentation of GCS, SBP, and Respiratory		
Trauma-14	Trauma Call Rate		
TTR-01	Vital Signs Documented (non-transported)		



Criteria for All Measures

- EMS responses originating from a 911 request for patients
- Measures stratified by age
 - Less than or equal to 18 years of age
 - Greater than 18 years of age



Airway-01: Successful First Advanced Airway Placement without Hypoxia or Hypotension

Numerator

 Patients without peri-intubation hypoxia or hypotension

Denominator

All advanced airways
Supraglottic airway
Endotracheal Intubation

 First advanced airway procedures with SPO2 and SBP documented greater than 5 minutes and between 0-5 minutes before advanced airway procedure



Airway-05: Adequate oxygenation before endotracheal intubation

Numerator Pat mir

 Patients with SPO2 >93% between 0-5 minutes prior to intubation attempt

Denominator

- Patients with intubation attempted.
 - Exclude: Intubation or cardiac arrest prior to EMS arrival



Airway-18: Waveform Capnography Airway Device Monitoring

Numerator \prec

Denominator <

- Capnography used for tube placement and monitoring
- Patients with successful advanced airway procedures
 - Exclude: None



Respiratory-02: Oxygen Administration for Hypoxia

Numerator \prec Denominator ~

Hypoxic patients with that received oxygen

- Patients with hypoxiaExclude: Less than 24 hours of age



Syncope-01: ECG Performed for Syncope **Patients**



Numerator < • Syncope patients with 12-lead or greater





TTR-01: Vital Signs Documented

Numerator < Denominator

Basic vitals documented (SBP, DBP, SPO2, RR, GCS, AVPU)

- Patients not transported by EMS
 Exclude: Cardiac arrest prior to arrival



Safety-04: Pediatric Restraint Device Used During Transport

Note: 911 and interfacility transports included for this measure

Numerator

Denominator

• Restrained in car seat during transport

- Transported patients < 8 years old
- Exclude: >= 8y/o, immobilized, severe trauma, active airway management, cardiac arrest



Trauma-08: Documented GCS, SBP, RR

Numerator Denominator - Patients with trauma

Trauma patients with documented GCS, RR, SBP



Trauma-14: Trauma Call Rate

Numerator

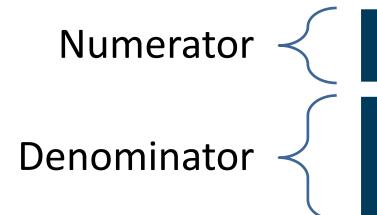
Denominator

Transports with prearrival trauma alert initiated

Patients meeting step 1 or 2 trauma criteria



TBI-01: Clinical Assessments for Patients with TBI



Numerator < • Documented SPO2, ETCO2, & SBP

Patients with suspected traumatic brain injuries



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NEMSQA Measure Technical Documents

NEMSIS Pseudocode: Measure worksheets with guidance for mapping measures/data to the National Emergency Medical Services Information System (NEMSIS) registry.

2022 NEMSQA Psuedocode Interim Update.pdf

2021 NEMSQA Psuedocode Update.pdf

Measure ID	Description	Туре	National Quality Strategy Domain
Hypoglycemia-01	NEMSQA-Hypoglycemia-01_Updated_2021	Process	Clinical Process - Effectiveness
Respiratory-01 previously Pediatrics-01	NEMSQA- Respiratory-01_Updated_2021	Process	Clinical Process - Effectiveness
Asthma-01 previously Pediatrics-02	NEMSQA - Asthma-01_Updated_2021	Process	Clinical Process - Effectiveness
Pediatrics-03b	NEMSQA - Pediatrics-03b_Updated_2021	Process	Patient Safety
Seizure-02	NEMSQA - Seizure-02_Updated_2021	Process	Clinical Process - Effectiveness
Stroke-01	NEMSQA - Stroke-01_Updated_2021	Process	Clinical Process - Effectiveness
s://nemsqa.memberclicks.net	VEMSQA - Trauma-01_Updated_2021	Process	Patient Experience

Quick Links



Upcoming Events

Thu Apr 20, 2023

NEMSQA General Membership Meeting

Category: Events

View Full Calendar



www.nemsqa.org/nemsqa-measure-technical-documents



What's Next in Measure Development

- Prioritize evidence-based guidelines for measure development
 - Collaboration with Pre-hospital Guidelines Consortium
- Future measure endorsement cycles will include call for submission of measures for endorsement.



Questions



Get Involved

- Become a member: https://nemsqa.org/nemsqa-membership-application
 - Organization
 - EMS Agency
 - Individual
 - Corporate Partner



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- Contact us: Sheree Murphy, Executive Director: smurphy@nemsqa.org