Improving Patient Care Through Evidence Based Performance Measures
EMS Compass® is:

• An open, collaborative two-year effort, funded by the National Highway Traffic Safety Administration (NHTSA) led by the National Association of State EMS Officials (NASEMSO)

• Define and develop a sustainable process to design EMS performance measures primarily using National Emergency Medical Services Information System (NEMSIS) version 3 data

• Develop a core set (5-7) of evidence based patient care and safety related performance measures for use by all EMS providers to support a culture of performance improvement in EMS
EMS Compass® is not:

• Developing measures in order to punish “poor performers” or discredit them in their communities
• Submitting measures to the NQF or CMS
• Proposing that measures be used for anything other than improvement of patient care and safety
• Developing a comprehensive list of measures to address every aspect of EMS
• Directing how local, state or federal agencies or payers may choose to utilize the measures once they become available
Figure 1. Performance measure (re)development lifecycle

1. Proposed new measure or update to measure
2. Public and expert input
3. Prioritization
4. Evidence review
5. Measure (re)design
6. Measure testing
   a. Vendor technical testing
   b. Public testing and input
7. Steering committee approval
Algorithm #1. Guidance for Evaluating the Clinical Evidence

1. Does the measure assess performance on a health outcome (e.g., mortality, function, health status, complication) or PRO (e.g., HRQoL/function, symptom, experience, health-related behavior)?
   - YES: PASS
   - NO: NO PASS

2. Does the SR agree that the relationship between the measured health outcome/PRO and at least some healthcare action (structure, process, intervention, or service) is identified (stated or diagrammed) and supported by the stated rationale?
   - YES: RATE AS HIGH
   - NO: RATE AS MODERATE

3. For measures that assess performance on an intermediate clinical outcome, process, or structure - is it based on a systematic review (SR) and grading of the BOM of empirical evidence where the specific focus of the evidence matches what is being measured?
   - YES: Answer NO if any:
     - Evidence is about something other than what is measured
     - Empirical evidence unreviewed but not systematically reviewed
     - Based on expert opinion
     - No evidence because it won't be studied (e.g., "document" diagnosis)
     - Distal process step is not the specific focus of the evidence (e.g., monitor BP each visit, when evidence is about treatment of hypertension or relationship to mortality)
   - NO: NO (without QOD from SR, moderate is highest potential rating)

4. Is a summary of the quantity, quality, and consistency (QOC) of the body of evidence from SR provided in the submission form?
   - A SR is a scientific investigation that focuses on a specific question and uses explicit, prespecified scientific methods to identify, select, assess, and summarize the findings of similar but separate studies. It may include a quantitative synthesis (meta-analysis), depending on the available data.
   - YES: Answer NO if:
     - Specific information on QOC not provided (general statements/conclusions, lists/descriptions of individual studies is not sufficient)
   - NO: NO (without QOC from SR, moderate is highest potential rating)

5. Does the grade for the evidence or recommendation indicate:
   - NO: RATE AS MODERATE
   - YES:RATE AS LOW

6. Does empirical evidence submitted but without systematic review and grading of the evidence?
   - NO: NO

(Continued on Next Page)
10. Are there, or could there be, performance measures of a related health outcome, or evidence-based intermediate clinical outcome or process?

*Example for YES: Propose to measure whether BP is assessed each visit instead of BP control or use of effective treatment.*

11. Is there evidence of a systematic assessment of expert opinion (e.g., national/international consensus recommendation) that the benefits of what is being measured outweigh potential harms?

12. Does the Steering Committee agree that it is OK (or beneficial) to hold providers accountable for performance in the absence of empirical evidence of benefits to patients? (Consider potential detriments to endorsing the measure, e.g., focus attention away from more impactful practices, more costly without certainty of benefit; divert resources from developing more impactful measures.)

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**Rate as insufficient evidence with exception**

**Rate as insufficient**
National Association of state EMS Officials

NATIONAL MODEL EMS CLINICAL GUIDELINES PROJECT

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Supported by the NHTSA, Office of EMS, and by HRSA
The Future of Emergency Care: Emergency Medical Services at the Crossroads (Institute of Medicine report released in 2007)

“NHTSA, in partnership with professional organizations, should convene a panel of individuals with multidisciplinary expertise to develop evidence-based model prehospital care protocols for the treatment, triage, and transport of patients.”
Assembly of expert panel and GRADE training
Define the EBG content area and establish specific clinical questions to be addressed
Literature searches and prioritization of outcomes
Creation of evidence profiles (GRADE tables) and summarize work and draft recommendations
Vet and endorse GRADE evidence tables and draft recommendations
Synthesis of collective wisdom into an EMS protocol and visual algorithm
NHTSA Evidence–Based Guidelines

Published in *Prehospital Emergency Care* in January 2014

- Development of Evidence–Based Guidelines Using a GRADE–based Methodology
- Pediatric Prehospital Seizure Management Using GRADE Methodology
- Prehospital Analgesia in Trauma
- Air Medical Transportation of Prehospital Trauma Patients
- Implementation and Evaluation of an Evidence–Based Statewide Prehospital Pain Management Protocol
Why the Need for National Model EMS Clinical Guidelines?

- Enhance patient care with current, evidence-based practices
- Provide a useful composite of expert-panel based guidelines with EB considerations as placeholders for future EBGs
- Promote uniformity in prehospital care which, in turn, promotes skilled practice as EMS providers move across healthcare systems
- Provide ready-to-adopt guidelines for EMS systems
NASEMSO Medical Directors Council (seven members, one alternate)

Seven EMS medical director stakeholder organizations: AAEM, AAP, ACEP, ACOEP, ACS–COT, AMPA, NAEMSP

Subject matter experts and consultations as deemed necessary by the workgroup membership

Three EMS physician technical reviewers
NASEMSO National Model EMS Clinical Guidelines: Chapters

- Cardiovascular
- General Medical/Other
- GI/GU/GYN
- Pediatric-Specific
- Respiratory

- Respiratory
- Resuscitation
- Toxins/Environmental
- Trauma
- Universal Care
NASEMSO National Model EMS Clinical Guidelines: Essential Components of Each Guideline

- Title
- Patient care goals
- Patient presentation
- Patient management
- Notes/educational goals
- Quality improvement
- References
Future Goals on the Path to the Oak Tree

- Dynamic evolution of the National Model EMS Clinical Guidelines to maintain currency
- Track utilization or adoption of the document by the EMS community
- Development of additional core patient care guidelines
- Improve linkage with NEMSIS
- Improvement of interoperability between EMS and healthcare systems
- Encourage quality EMS research
The National Association of State EMS Officials is the lead national organization for EMS, a respected voice for national EMS policy with comprehensive concern and commitment for the development of effective, integrated, community-based, universal and consistent EMS systems. Read more...

| EMS News & Resources |
NASEM50 Announces New Trauma Monograph at 2016 Fall Meeting

(09/21/16) Today at its Fall Meeting, NASEM50 announced the release of "Status of State Trauma System Planning and Development: Utilization of the HHS Model Trauma System Planning and Evaluation Document," at the NASEM50 2016 Fall Meeting.

- Download monograph and related charts and figures
- Download press release

In this monograph, NASEM50 examined the general status of formal trauma system development in the states, and particularly the utilization of system development tools produced by the Health Resources and Services Administration (HRSA) and the National Highway Traffic Safety Administration (NHTSA).

Key data included: 82% of respondents indicated their state has enabling legislation or rules to designate trauma centers; 83% of respondents, only 18.7% of all states, have legislative authority to limit the number of trauma centers; 46% of respondents did not receive federal or outside funding for state trauma program administration; In spite of a 14% net loss in the Level I category, there has been a 27 percent increase in trauma centers overall since 2010; and the largest increase in trauma center recognition is occurring at the level III (12%), IV (62%), and V (117%) levels.

NASEM50 2016 Fall Meeting Underway

NASEM50 and the Wisconsin EMS Council are preparing for their joint meeting, which will take place September 19-22, 2016 at the Hotel abstraction, New Mexico, downtown.

May 2016 (PDF)
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| NASEM50 News |
NASEM50 Releases State Model Rules for Regulation of Air Medical Services (09/21/16) Today at its Fall Meeting, NASEM50 announced the release of "State Model Rules for the Regulation of Air Medical Services" to assist states with regulatory language intended to avoid conflict with the Airline Deregulation Act (ADA) and the possibility of Federal preemption. These model rules are intended to be applied in a manner that would conform to their scope by matters solely related to medical care, and not construed in a way that could constitute regulation of aviation safety or economic matters.

- Download State Model Rules for the Regulation of Air Medical Services
- Download press release

NASEM50 is the lead national organization for emergency medical services (EMS) and a respected voice for national EMS policy. Air ambulances are medical resources that are used and integrated within EMS systems to provide patient care. In response to "Guidelines for the Use and Availability of helicopter Emergency Medical Transport (HEMT)" published by the United States Department of Transportation in April 2010, NASEM50 sought to identify opportunities for state regulators that address outcomes related to:

- Quality of emergency medical care provided to patients
- Requirements related to the qualifications and training of air ambulance medical personnel
- Scope of practice and credentialing

2015 (PDF)
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| NASEM50 Fall 2016 Meeting & Exhibit |
Sept. 19-22, 2016
Milwaukee, Wisconsin, Ocotber

| NASEM50 Fall 2016 Meeting & Exhibit |
Sept. 19-22, 2016
Milwaukee, Wisconsin, October
Evidenced Based Practice in EMS: An Australian Perspective

Shane Lenson
Paramedicine Professional Practice Lead
Australian Catholic University
Canberra, Australia
Twitter: @shanelenson
EMS in Australia

- Population 23 million
- 8 State/Territory based Ambulance Services
- Largely tax payer system
Paramedicine in Australia

- Employed predominantly as health care professionals into State/Territory based Ambulance Services.

- Three year undergraduate degree in paramedicine, including
  - Research
  - Evidenced Base Practice
EBP in Ambulance Services

Clinical Advisory Groups:

Paramedic:

- Clinicians
- Researchers
- Academics
- Leaders/Administrators

- Medicine & Other health care professionals
EBP in Ambulance Services

Clinical Expertise

Best Research Evidence

EBP

Patient Values & Preferences

Clinical Practice Guidelines
Clinical Advisory Groups

Not without Issues....

- Organisational Culture
- Resourcing
- Professional/Personal Bias
- Community Expectations
- Inconsistently, Inconsistent
The Future

- Increasing Paramedic lead research focused on pre hospital care
- Extended roles for paramedics
- Post graduate education
- Continued over populated undergraduate degree programs