

Data Supplement 1 – The National Prehospital Evidence-Based Guidelines Strategy

RACI Matrix Overview

A RACI Matrix is a project management tool that depicts the functions of specific parties or roles in the performance of particular actions or tasks. Use of a RACI matrix can help ensure that all parties both have input into and are aware of the duties expected of them. For each action, an organization may be assigned one of the positions shown in the table below:

Responsible	Accountable	Consulted	Informed
The role or roles that actually perform the action required by the task.	The role that is finally answerable for the task.	The role or roles whose inputs are solicited prior to the task.	The role or roles to which the outcome is communicated following completion.
<i>Who has the action on this activity?</i>	<i>Who is “on the hook” for this activity?</i>	<i>From whom do we have to obtain input?</i>	<i>Who needs to know about this?</i>

Responsible – For action item #1 (formation of the Consortium), Responsible organizations are proposed to lead the core work of the PGC and form an Executive Committee of the Consortium. For other action items, “Responsible” organizations are proposed to lead the related workgroups of the PGC and have leadership roles in carrying out related objectives.

Accountable – One organization will be accountable for each of the items of this Strategy. For creation of the Prehospital Guidelines Consortium (PGC), a single organization (NAEMSP) is accountable for the initial establishment of this entity. The Consortium will then choose what organization provides continued administrative and logistical support for its operations, including managing its budget. For other action items in the Strategy, the PGC is accountable to ensure each of the stated objectives is carried out through involvement of its workgroups and appropriate stakeholders.

Consulted – Input will be solicited from stakeholders identified as “Consulted” for each of the action items of the Strategy. These organizations are anticipated to have an active role in the workgroups of the PGC and facilitate carrying out related objectives.

Informed – Stakeholders identified as “Informed” for each of the action items of the Strategy will receive specific communication about the activities performed under specific strategies and the completion of stated objectives. These stakeholders will be invited to have an active role in the PGC, including participation in its workgroups.

The roles as identified in this Strategy may be modified as needed during implementation of the Strategy and as the needs and involvement of specific organizations change.

Action Item 1: Create a Prehospital Guidelines Consortium (PGC)			
Objective: To create a Consortium of representatives from stakeholder organizations to facilitate and promote prehospital EBG development, implementation, and evaluation.			
Value: The implementation of evidence-based guidelines has been shown to improve processes of care and patient outcomes. Deriving scientific evidence and synthesizing literature is complex work. A PGC can help to increase the amount and quality of guidelines applicable to EMS.			
Organizations Supported by this Action Item: EMS and medical organizations that are currently, or are in a position to be, involved in activities related to EBG development, implementation, and evaluation. The Consortium would also facilitate liaison relationships with research institutions and Federal agencies involved in prehospital EBG-related projects.			
Resources Required: <ul style="list-style-type: none"> Funding to support the operations of the Consortium, provided by the core organizations forming the Consortium's Executive Committee (refer to proposed annual budget in Appendix E) Financial support for individuals to participate in the Consortium, including its workgroups (at a minimum, organizations should support travel and other costs for their representatives to participate in the Consortium's annual meeting and relevant workgroup activities) At the first meeting of the Consortium, the Executive Committee must determine the member organization(s) that will manage the budget and provide administrative support 			
Barriers to Completion: <ul style="list-style-type: none"> Securing a reliable, consistent source of funding for the operation of the Consortium (members of the Consortium Executive Committee capable of providing this support should be identified very early and agree to a minimum shared level of support) Need for administrative support for operations of the Consortium (NAEMSP has offered to coordinate the initial formation and meeting of the Consortium; following the initial meeting of the Consortium and designation of Executive Committee members through consultation with stakeholders, a lead organization should be selected by the Consortium to provide continued administrative support and coordination of the budget) 			
Performance Measures and Timetable for Completion: <table> <tr> <td> <u>Performance Measures:</u> <ol style="list-style-type: none"> Formation of the Prehospital Guidelines Consortium Meetings of the Prehospital Guidelines Consortium </td><td> <u>Timetable for Completion:</u> <ul style="list-style-type: none"> Formation within 1 year of publication of the Strategy One annual meeting and at least three quarterly conference calls </td></tr> </table>		<u>Performance Measures:</u> <ol style="list-style-type: none"> Formation of the Prehospital Guidelines Consortium Meetings of the Prehospital Guidelines Consortium 	<u>Timetable for Completion:</u> <ul style="list-style-type: none"> Formation within 1 year of publication of the Strategy One annual meeting and at least three quarterly conference calls
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Action Item 1: Create a Prehospital Guidelines Consortium (PGC) (Continued)	
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Responsibility Assignment:

R = Responsible				A = Accountable				C = Consulted				I = Informed																													
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Action Item 2: Promote Research Related to Prehospital Evidence-Based Guidelines

Objectives: To promote research related to prehospital EBGs through an open, consensus process, including:

1. Promoting research that can be utilized to create or update prehospital guidelines, that evaluates the effectiveness of guidelines, or that identifies evidence-based processes for implementing EBGs into practice
2. Creating and maintaining a research gap document related to prehospital EBGs
3. Providing support for EBG-related research projects

Value: Vast efforts go into the science that leads to a guideline. While EMS organizations value prehospital research, many lack the local expertise or resources to execute large, high-quality scientific endeavors. Further, partnership with research institutions, hospitals, and community providers may require expertise and relationships between these stakeholders, and can be challenging to establish. The Prehospital Guidelines consortium can assist to coordinate and promote research, partnerships, and opportunities to develop and execute EMS research, as well as provide support for funding opportunities for research institutions, national organizations, and individual EMS agencies.

Organizations Supported by this Action Item: Research institutions, medical organizations, EMS organizations, EMS agencies and individuals that participate in the performance or evaluation of research related to prehospital EBGs, and Federal agencies that fund and otherwise support prehospital research.

Resources Required:

- Workgroup within the PGC to work on research components of this Strategy with participation of scientists and leaders in the field of EMS research and EBG development
- Maintenance of a database of research related to EMS EBGs

Barriers to Completion:

- Potential limited acceptance of research recommendations of the Consortium by those who will actually conduct the research (being addressed by the inclusive and iterative nature of the current process)
- Sufficient research funding is needed to attract researchers and fill the gaps that exist, allowing the creation of additional prehospital EBGs

Performance Measures and Timetable for Completion:

Performance Measures:

1. Creation of a research-related workgroup and meeting schedule
2. Creation of a prehospital EBG-related research gap document
3. Review and support of EBG-related research projects

Timetable for Completion:

- Performed during the first meeting of the PGC
- Performed by the PGC within 3 years of publication of the Strategy and updated on a regular, scheduled basis
- Performed by the PGC on a regular, scheduled basis

Action Item 2: Promote Research Related to Prehospital Evidence-Based Guidelines (Continued)

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A	R	R	R	R	R	R	R	C	R	I	R	I	R	I	I	I	I	I	I	I	I	C	C	C	C	C	I	C	R	R	C	C	C	R	C	C	C	C	C	C	C	C	C	R

Action Item 3: Promote Development of Prehospital Evidence-Based Guidelines

Objectives: To promote and streamline processes for guideline development by:

1. Developing a topic agenda for prehospital EBG development using a structured methodology
2. Create a guidance document that identifies individuals and institutions and that can assist with the guideline development process, best practices in guideline development, and a suggested process and timeline for guideline revisions

Value: The EMS industry is a maturing field. While evidence-based medicine (EBM) is a valued philosophy, many EMS organizations lack the local resources or expertise to evaluate scientific evidence and create guidelines. Further, there are often many stakeholders impacted by guidelines. A Prehospital Guidelines Consortium can help to promote funding and coordinate development of high-quality EBM in EMS by acting as a liaison between stakeholders involved in these efforts.

Organizations Supported by this Action Item: Medical and EMS organizations that develop or are in a position to develop prehospital evidence-based guidelines, as well as research institutions and Federal partners that develop, fund, or assist in the development of prehospital EBGs.

Resources Required:

- Guideline development-related workgroup within the PGC with participation of leaders, content experts, and other stakeholders involved in EBG development

Barriers to Completion:

- There may be challenges in reaching consensus on the priority of new individual EBGs (focus should be on common medical conditions associated with high patient acuity and those conditions that are most likely to be improved by a structured EBG approach to treatment)

Performance Measures and Timetable for Completion:

Performance Measures:

1. Creation and maintenance of a guidance document that identifies:
 - a. Stakeholders, content experts, methodology experts, and institutions that can assist in the guideline development process
 - b. Best practices for guideline development
 - c. A standardized process for individual guideline review and support by stakeholder organizations
2. Development of a gap analysis and topic agenda for prehospital guideline development

Timetable for Completion:

- Performed by the PGC within 3 years of publication of the Strategy and updated on a regular, scheduled basis
- Performed by the PGC within 5 years of publication of the Strategy and updated on a regular, scheduled basis

Action Item 3: Promote Development of Prehospital Evidence-Based Guidelines (Continued)																																							
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Responsibility Assignment:

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C = Consulted

I = Informed

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Action Item 4: Promote Education Related to Prehospital Evidence-Based Guidelines

Objectives: To incorporate EBG concepts into education for EMS providers, educators, managers, regulators, physicians, and EMS-affiliated staff by:

1. Incorporating the basic principles of evidence-based medicine (EBM), as well as individual prehospital EBG content, into initial and continuing EMS provider education and certification examinations for EMS providers of all levels
2. Streamline the process for distribution of educational content upon publication of the individual EBGs to EMS and affiliated providers
3. Promote the creation of educational resources for individuals and organizations that will create guidelines

Value: EMS providers, managers, regulators and medical directors have specialized knowledge, but may lack strong understanding of scientific principles such as critical appraisal, epidemiology, research methods and biostatistics. A PGC can help coordinate multiple media (such as web resources or toolkits) that address research literacy, research design, project management and research analytics at a variety of levels, from field providers to legislators.

Organizations Supported by this Action Item: EMS organizations and medical organization affiliated with EMS, especially those that are most directly involved in the initial and continuing education of EMS providers.

Resources Required:

- Education-related workgroup within the PGC
- Online and print communication tools to disseminate educational content related to EBGs in an efficient manner

Barriers to Completion:

- Local EMS agencies and agency medical directors may be hesitant to adopt evidence-based medicine principles and EBG content into their current protocols, which may be thought to better apply to their local jurisdiction
- Incorporation of EBGs into provider training material, testing, and field protocols will require broad acceptance of EBGs by all levels of providers (this may be supported by the existence of a PGC with representatives from EMS professional and subspecialty organizations)

Performance Measures and Timetable for Completion:

Performance Measures:

1. Incorporation of EBM principles into new publications of national curricula, core content, educational standards, and standardized examinations in EMS
2. Creation of an education-related guidance document providing awareness of prehospital EBGs, encouraging their use, and providing model educational methods, resources, and sample content to educate providers about new EBGs
3. Creation of a process for dissemination of educational content on newly published EBGs to medical/EMS organizations and EMS agencies

Timetable for Completion:

- Performed by responsible organizations below within 3 years of publication of the Strategy
- Performed by the PGC within 3 years of publication of the Strategy and updated on a regular, scheduled basis
- Performed by the PGC, NAEMSP, NASEMSO, and state EMS offices within 3 years of publication of the Strategy

Action Item 4: Promote Education Related to Prehospital Evidence-Based Guidelines (Continued)

Responsibility Assignment:

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A	C	C	C	C	C	C	C	C	C	R	I	C	C	I	I	I	C	C	C	I	R	C	C	C	C	C	C	R	R	R	C	C	C	C	R	C	C	I	C	I	I	I	C	I	I

Action Item 5: Promote the Implementation of Prehospital Evidence-Based Guidelines

Objectives: To promote the implementation of prehospital EBGs by:

1. Providing a mechanism for review and vetting of guidelines through a Prehospital Guidelines Consortium and its member stakeholder organizations
2. Promoting the incorporation of tools that facilitate implementation as part of each guideline development project
3. Supporting the development of implementation science to identify best practices for implementation
4. Developing mechanisms for widespread and structured distribution of guidelines upon publication
5. Developing a recommended timeline for implementation and revision in guideline development projects

Value: Implementation of guidelines is essential for benefit to be realized. A Prehospital Guidelines Consortium can promote guideline implementation through early engagement, endorsement and promotion to a variety of stakeholders. A PGC can facilitate multiple dissemination mechanism to shorten the gap between “what we know and what we do”. Enhanced efforts to facilitate EBG implementation will help maximize the efforts of national organizations, research institutions, and individual leaders who develop prehospital EBGs.

Organizations Supported by this Action Item: EMS organizations, medical organizations, research institutions, EMS agencies and EMS leaders that are currently involved in or are in a position to be involved in activities related to EBG development and implementation, and Federal agencies that are in a position to fund or implement EBG efforts.

Resources Required:

- Implementation-related workgroup within the PGC
- Updated contact information and methods of distributing EBGs to state EMS offices (could incorporate NASEMSO in this process)

Barriers to Completion:

- Obtaining support from stakeholders for individual guidelines may be a continual barrier to implementation (strong communication with and participation of stakeholders throughout development and implementation may facilitate widespread acceptance and adoption)
- Perceptions of bias or conflict of interest could adversely impact implementation (this should be explicitly addressed in all EBG publications)

Performance Measures and Timetable for Completion:

Performance Measures:

1. Creation of a prehospital EBG implementation resource document that identifies:
 - a. A structured process for review and vetting of EBGs by the Prehospital Guidelines Consortium and its members
 - b. A structured process to distribute new EBGs to state EMS offices, EMS medical directors, and EMS training centers
 - c. Identified best practices for prehospital evidence-based guideline implementation

Timetable for Completion:

- Performed by the PGC in collaboration with NAEMSP, NASEMSO, and state EMS offices within 3 years of publication of the Strategy.

Action Item 5: Promote the Implementation of Prehospital Evidence-Based Guidelines (Continued)

Responsibility Assignment:

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A	R	R	R	R	R	R	R	C	R	C	R	I	R	I	I	C	R	R	C	I	C	R	R	R	R	R	R	R	R	R	R	C	R	R	R	R	C	C	R	C	C	C	C	C

Action Item 6: Promote Standardized Evaluation Methods for Prehospital Evidence-Based Guidelines

Objectives: To promote standardized evaluation methods for prehospital EBGs by:

1. Identifying evidence-based quality improvement and impact analysis methods for use by guideline developers, EMS administrators, and government regulators to aid in efforts that evaluate guideline impact
2. Promoting the use of outcome and quality measures as part of guideline development and implementation
3. Promoting dissemination of impact analysis findings

Value: As our knowledge of medicine and science advances, so do the standards to which guidelines are held. By engaging experts and stakeholders, a Prehospital Guidelines Consortium can promote quality through the development of standardized evaluation methods for guidelines. Many tools to assess guideline quality currently exist, and through consultation could be modified slightly to account for special circumstances faced by the EMS industry.

Organizations Supported by this Action Item: EMS organizations, medical organizations, and research institutions that develop or implement EBGs, and Federal agencies that are in a position to fund, implement, or evaluate EBG efforts.

Resources Required:

- Funding for an evaluation component to all EBG projects, which should be specified in the general budget for all EBG development projects
- Cooperation with hospitals, health care systems, or public health organizations to provide outcome data for patients cared for by EMS providers using EBG-derived protocols

Barriers to Completion:

- Difficulty and expense of linking patient outcome data with primary EMS data (development of a common data entry system that would allow NEMSIS data to be correlated with billing data, trauma data, or other large repositories of patient outcome data would improve the likelihood of evaluating the effect of EBG implementation)

Performance Measures and Timetable for Completion:

Performance Measures:

1. Inclusion of an evaluation component in all national prehospital EBG development and implementation projects (including standard outcome and quality measures, and optimally utilizing data available from NEMSIS, supplemented by other uniform data repositories)

Timetable for Completion:

- Performed by any new EBG project groups within 5 years of publication of the Strategy

Action Item 6: Promote Standardized Evaluation Methods for Prehospital Evidence-Based Guidelines (Continued)

Responsibility Assignment:

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A	R	R	R	R	R	R	R	C	R	I	R	I	R	I	I	C	C	C	C	I	C	C	C	C	C	C	C	C	R	R	C	C	R	R	C	C	C	C	C	C	C	C	C	C	C

Action Item 7: Promote Funding for the Development, Implementation, and Evaluation of Prehospital Evidence-Based Guidelines

Objectives: To promote additional funding for the development, implementation, and evaluation of EBGs by:

1. Identifying funding sources that can support future development, implementation, and evaluation of EBGs
2. Identifying resources that can be accessed by EBG development groups to assist with evidence collection and review
3. Providing a mechanism for individuals and organizations seeking funding for EBG development projects to receive support from EMS stakeholders who will be in a position to implement those guidelines

Value: Development, implementation, and evaluation of EBGs requires continued funding of research institutions, organizations, EMS agencies and individuals to invest the time and resources required for robust products that positively impact patient care. A Prehospital Guidelines Consortium can promote funding for prehospital EBG-related projects and connect independent groups carrying out these efforts with funders and other stakeholders in a manner that increases efficiency and cost-effectiveness of individual projects.

Organizations Supported by this Action Item: EMS organizations, medical organizations, and research institutions that develop or implement EBGs, and Federal agencies that are in a position to fund, implement, or evaluate EBG efforts.

Resources Required:

- Funding-related workgroup within the PGC that can identify funding agencies and facilitate contact with medical and EMS organizations, research institutions, and other groups that are interested in developing EBGs
- In the long term, creation of Center(s) of Excellence for EMS EBG development as previously recommended by the NEMSAC

Barriers to Completion:

- Limited availability of funding for continued efforts to develop and implement prehospital evidence-based guidelines
- Availability of funding for Center(s) of Excellence for EMS EBG development

Performance Measures and Timetable for Completion:

Performance Measures:

1. Provision of additional financial support in the form of grants for efforts related to the development, implementation, or evaluation of prehospital EBGs
2. Creation of a workgroup to identify funding sources, as well as facilitate contacts between funders and organizations, research institutions, and other groups that are interested in developing EBGs

Timetable for Completion:

- Performed by Federal agencies such as NHTSA and HRSA/EMSC on a continual basis
- Performed by the PGC within 2 years of publication of the Strategy

