National Association of State EMS Officials

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May 23, 2022
Response to National Highway Traffic Safety Administration
As Requested in Docket No. NHTSA-2022-0036
Uniform Procedures for State Highway Safety Grant Programs
Request for Comments

The National Association of State Emergency Medical Services Officials (NASEMSO) is a 501(c)3 formed in 1980; members are the state agencies and staff that have legislative mandates for regulatory and system design authorities squarely focused on ensuring and improving Post-Crash Care in the interest of protecting the public. State Emergency Medical Services (EMS) offices—NASEMSO members—including all 50 states, the District of Columbia and five territories, regulate ambulance services that respond to 911 calls as well as helicopters and other local emergency medical services agencies, and license EMS personnel such as paramedics and emergency medical technicians. Equally importantly, they are the engineers and stewards of statewide systems of care for time sensitive emergencies such as trauma systems.

The interrelationship of highway safety and EMS is not a new concept. The very foundation of modern EMS is often attributed to the Highway Safety Act of 1966. During Congressional deliberations, the importance of EMS was presented as the need to "concentrate on improvement in methods of communication and transportation as well as the need for improved equipment and trained personnel"[1]. These needs remain very real today.

With regard to the highway safety grant program regulations, NASEMSO's comments in response to NHTSA Docket No. NHTSA-2022-0036 are as follows:

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[1] Highway Safety Act of 1966 (PL 89-564). Legislative History. Washington DC: US Government Printing Office; 1967:2741-2765.

1. How can NHTSA, States, and their partners successfully implement NRSS and the SSA within the formula grant program to support the requirements in Bipartisan Infrastructure Law, enacted as the Infrastructure Investment and Jobs Act (Pub. L. 117-58)?

NASEMSO Response:

Post-Crash Care is one of five core components of the SSA, the tenets of which are embraced and reinforced in the NRSS released by Secretary Buttigieg in January of 2022. No one element of the SSA is more or less important than the other four; all must be given equal consideration in order to achieve the necessary multi-layered effect, especially as it relates to the systemic intervention necessary for seriously injured victims. Post-Crash Care is the final prevention opportunity when education, enforcement, and engineering efforts are not 100% effective. Not all fatalities resulting from motor vehicle crashes die at the scene, making rapid incident detection, prompt and safe emergency medical services (EMS) response, EMS personnel clinical capabilities, transport mode decision making (i.e., ground or air), and destination determinations based on the victim's needs critical. All of the behaviors, equipment, and knowledge of EMS personnel provide the last chance to avoid a preventable death, or prevent a serious injury from becoming a permanent disability.

Therefore, successful implementation of the NRSS and the SSA within the formula grant program must rely on equitable consideration of the needs and opportunities for Post-Crash Care that state EMS and trauma care systems make possible when they are functioning optimally. State EMS offices also bring at least two sources of rich and underutilized data to the table and are described in responses below. Seriously injured victims of motor vehicle related incidents are the most extreme example of a vulnerable road user while they are being treated on scene and transported to a hospital.

2. What non-traditional partners and safety stakeholders can the States work with to implement NRSS and SSA?

NASEMSO Response:

State EMS officials. Every state legislature has established an office to protect the public via the regulation of EMS agencies and personnel, patient care (e.g., 911 response) data collection systems, and engineering systems of care for time sensitive emergencies such as trauma. Without their direct, full and integrated

involvement, a state formula grant program cannot—in any way—address clinical and operational aspects of Post-Crash Care on a statewide basis. Relevant state EMS officials include the state EMS director, who can harness the expertise of staff, such as the state trauma system manager, the state EMS data manager, state EMS medical director, and in states where they exist, the state EMS epidemiologist.

3. How can the Sections 402, 405, and 1906 formula grant programs contribute to positive, equitable safety outcomes for all? How can states obtain meaningful public participation and engagement from affected communities, particularly those most significantly impacted by traffic crashes resulting in injuries and fatalities?

NASEMSO Response:

All highway safety related formula grant programs and state offices of highway safety must be evidence driven. Engagement of the public, whether at large or via local, chapter, regional or statewide coalitions and non-governmental organizations may be enabled by the use of contemporary and compelling geospatial display and stratification by victim types such as bicyclists, pedestrians, motorcyclists, and other personal conveyances in addition to motor vehicle occupants. State EMS offices' NEMSIS data (described more fully in responses below) may be more informative and timelier for these purposes.

More widespread utilization of social media outlets and communication channels utilized by those organizations may require concerted effort.

4. How can the formula grant program require practices to ensure affected communities have a meaningful voice in the highway safety planning process?

NASEMSO Response:

In the EMS community at the state level, elevating the voices of NGOs and representatives of marginalized groups into state committees and other advisory group arrangements has provided environments where previously uninformed parties can hear about concerns and issues in a multi-perspective environment. In the EMS for Children space, the formation of statewide Family Advocacy Networks has been a practice funded by the federal grant program available to the states. This may be a completely different composition of persons than has been typical under prior formula grant programs.

5. What varied data sources, in addition to crash-causation data, should States be required to consult as part of their Highway Safety Plan problem identification and planning processes to inform the degree to which traffic safety disparities exist on their roadways?

NASEMSO Response:

A. Highway safety practitioners have a very long history of significant reliance on law enforcement crash reports to assess characteristics of motor vehicle related incidents that result in injury or death. It is imperative that states be required to consult the state's National EMS Information System (NEMSIS) data available to them through the state EMS office. Section 24105(4)(C) of the Bipartisan Infrastructure Law specifically lists NEMSIS data as a "core highway safety database" that then contributes to the purpose listed in Section 24105(D) of "enhancing the ability of a State and the Secretary to observe and analyze local, State, and national trends in crash occurrences, rates, outcomes, and circumstances". State EMS offices collect an estimated 92% of all EMS activations nationwide —largely 911 dispatches—through the voluntary adoption by 52 state EMS offices of national standards (akin to MMUCC, a universal data dictionary, as well as other standardization components) and widespread utilization of electronic records submission. State EMS offices clear an average of 75% of all records received from local EMS agencies in their states for submission to the NEMSIS Technical Assistance Center within eight (8) days.

   Access to state NEMSIS data can provide rich insights and in most states the basis for application of graphical analysis of information that is not visible through crash records. This information includes the ability to quantify serious injury based on a set of clinical measurements, as well as information related to on-scene delays, mode of transport, and the paramedic or other EMS practitioner's rationale for destination hospital selection, among others. These data can be provided in an aggregate, deidentified, and HIPAA-compliant manner, and can be made exponentially more powerful if and when linked with law enforcement crash records through the promise of a Universally Unique Identifier. This could be accomplished through a direct partnership between the state EMS office and the state office of highway safety.

B. With rare exception, state EMS offices also execute a legislative mandate to engineer and maintain a trauma system, one common element of which is a state trauma registry, into which hospitals in the state are required to submit a

substantial amount of clinical data about trauma patients that meet inclusion criteria. These records, which can also be accessed in an aggregate, deidentified, and HIPAA-compliant manner, offer definitive clinical insights into patients including but not limited to final diagnoses of injury, interventions necessary to preserve life and avoid disability, and outcome data upon discharge.

Access to these data sources through a deliberate and formal partnership between state offices of highway safety and state EMS offices and ensuing analysis would provide unprecedented clinical insights into the capacity and performance of all medical resources engaged in the Post-Crash Care phase and the most informative clinical analyses related to serious injury

6. How can the triennial cycle best assess longer-term behavior modification progress and connect year-to-year activities in a meaningful way?

NASEMSO Response:

By providing the overarching vision, goals and objectives organized across the five core elements of the SSA, thereby eliminating the need for annual regurgitation of the same content. This allows for more detailed and contemporary information to be the focus of the Annual Reports.

7. How can the triennial HSP account for strategies that are proportionate to the State's highway safety challenges?

By US DOT rulemaking including clarity about eligibility for Post-Crash Care investments for NEMSIS software, personnel, equipment and maintenance; EMS personnel education; and patient care equipment (to include communications, telehealth, and/or NG911 related expenses). This would avoid states whose triennial HSP properly addresses Post-Crash Care needs proportionate to the challenges that exist in that state only to be advised that since the rules are silent or ambiguous the expenditure in not permitted.

To quote the chat entered by a state office of highway official during the early May 2022 public comment meetings under this docket, “yes, its difficult for SHSO's to determine what is, and is not, eligible for NHTSA funding for EMS service providers (in regard to training and equipment), and inevitably we end up not funding any EMS projects due to restrictions.” Anecdotally NASEMSO members report receiving similar messages in their interactions with their state highway safety counterparts.

8. What information is needed to ensure the HSP provides comprehensive, longer-term, and data-driven strategies to reduce roadway fatalities and serious injuries?

NASEMSO Response:

A. Historical data for three to five years in advance of the triennial plan period, to include state NEMSIS and trauma registry data.
B. The Triennial Highway Safety Plans should clearly identify preparatory and planning steps being taken in anticipation of a universally unique identifier or "UUID" to deterministically link EMS patient care reports (state NEMSIS records) with law enforcement crash records as these fields evolve in upcoming versions of MMUCC and NEMSIS. This known capability exists is to apply UUID methodology, the development of which was funded by the NHTSA Office of EMS, to link state trauma registry records as well. This would yield individual crash reports connected to the patient care report connected to the trauma registry where insights into the actual outcomes (or deaths, including those beyond 30 days) of roadway incident victims can be viewed in aggregate form. We are anticipating an NCHRP project this coming round to fully outline this procedure and proof. Enough documentation exists in NCHRP Report 17-57 about the process to leverage the triennial timeframe to fully prepare while the newest NCHRP is developed and published.

9. What data elements should States submit to NHTSA in their annual grant application to allow for full transparency in the use of funds?

NASEMSO Response:

A. Data: Presuming that submission rates and other performance attributes of law enforcement agency crash databases are a given, there should be a corresponding "mirror" of the same performance and quality measurement of the state EMS office patient care reporting (i.e., the state NEMSIS system and trauma registry).
B. Education: For any trainings funded by the grant, complete life cycle data of educational program delivery and outcomes should be required, to include at a minimum, number of enrollees, number of course completers, and the delta between pre-course and post-course cognitive knowledge change (suggesting that such evaluation be a requirement of all educational programs funded by the grants). Reporting should also include measures of penetration, such as percent of all target organizations eligible to apply,

percent of eligible organizations that did apply, percent of applicant organizations awarded, and percent of award organizations that executed courses.

For courses targeted at multiple disciplines, such as Traffic Incident Management, special measures should be included that quantify the percent of "to be trained" by discipline that actually completed the training. This is important to assure that the numbers of enrollees are proportionate to those actually responding. See monthly TIM statistics compiled and published monthly by FHWA where a significant under-involvement of EMS personnel in contrast to law enforcement and fire departments is evident. By our NASEMSO members count, there are nearly 11,500 transporting ambulance services that respond to 911 calls in the US, and nearly 1 million people licensed to staff them. Like law enforcement, EMS also has a large army to educate and train, equip, resource, and help improve in their Post-Crash Care duties. The obligations of the ambulance and other EMS agency crews are to their own safety first, hence why we espouse and embrace TIM related initiatives, then to tend to injured victims second.

C. Equipment: Availability (e.g., on what percent of vehicles, percent of shifts, etc.) and utilization rate data (e.g., on what percent of applicable responses) are appropriate considerations. Software package (e.g., ImageTrend or ESO) that is used to collect and report EMS data and track metrics utilization prevalence. Types and frequency of use of all other equipment that is used to deterministically link data across EMS, trauma, and crash records.

10. What types of data can be included in the annual grant application to ensure that projects are being funded in areas that include those of most significant need?

NASEMSO Response:

The regulations that govern this formula grant program should stipulate the baseline data and germane calculations expected from the traditional sources as they relate to highway safety from the corresponding State Crash Database, Vehicle Database, Driver Database, Roadway Database, and State Citation/Adjudication Database. This list must be augmented with the "State NEMSIS Database and the State Trauma Registry" at a minimum to portray similar information and calculations to represent conditions in the Post-Crash Care

phase. This would enable a reviewer to determine proportionality or the potential for complete disregard of lower performing areas as it compares to the investments being planned for that annual grant application cycle.

11. Should these [performance] measures be revised? If so, what changes are needed?

NASEMSO Response:

We consulted "Model Performance Measures for State Traffic Records Systems" (DOT HS 811 441 published in February 2011) and the "GHSA/NHTSA Recommended/Optional Core Performance Measure Target Chart – FY2020" (accessed at https://www.ghsa.org/resources/Core-Performance-Measure-Target-Chart on 5/19/22). Both documents should be revised, as the former is outdated, and submission quality metrics and controls have been implemented under the aegis of NHTSA funding to the NEMSIS TAC, and the latter is completely silent on state level EMS records submission. We are also unclear how the STRAP process and resulting documentation is interrelated to this question, suggesting that a comprehensive multidisciplinary review and revision is in order.

The rulemaking and subsequent guidance related to performance measures under this formula grant program should ***not*** adopt a measure as suggested in the NRSS, specifically "shortening on-scene ambulance response times." This is not a performance measure known to correspond to improved patient outcomes, and if addressed blindly can actually pose risks to rescuers and patients. If the rulemaking or any guidance requires or prompts triennial plans or annual reports to focus on on-scene time intervals for patient care, it should be bivariate in nature and examine the intervals against an existing field in the state and required national NEMSIS data set "eResponse.10 - Type of Scene Delay". This would enable analysis of the factors that compromise the completion of patient stabilization and preparation for transport actions, yielding actionable insights that can be addressed in TIM curricula and state and local level trainings.

12. Section 24102 of the Bipartisan Infrastructure Law requires performance targets "that demonstrate constant or improved performance." What information should NHTSA consider in implementing this requirement?

NASEMSO Response:

Serious injury measures based on clinical data sources (e.g., state NEMSIS systems and/or trauma registries) are crucial and available in HIPAA-compliant formats.

It may not be rational to set a fixed number as the target for every state, leading us to recommend that year over year changes in selected measures that may be published as suggested in the response to Question 11 would be the most prudent. This would allow for identification of states that made the greatest net change over time (whether that is in a single year or longer intervals) and exploration of root causes that contributed to success.

The National EMS Quality Alliance exists to fully test and vet EMS-specific performance measures. Three measure already exist related to trauma care, and two have been published related to safety[2]. These are the only performance measures specific to Post-Crash Care that have undergone rigorous specification and research.

13. What should be provided in the Annual Report to ensure performance target progress is assessed and that projects funded in the past fiscal year contributed to meeting performance targets?

NASEMSO Response:

All relevant state NEMSIS and trauma registry data, to include characteristics of interest such as accuracy, timeliness, completeness, etc. and recommendations for areas of improvement. Annual Reports should show how EMS and trauma care has contributed to any metrics on serious injury and deaths set forth by NHTSA. The Annual Report should represent data from the entire system as a whole to provide a better understanding to the audience and most importantly, the public how the state office of highway safety and its partners are meeting their strategic goals and objectives.

14. How can the Annual Report best inform future HSPs?

NASEMSO Response:

Annual Report content that is required to be provided in a well-structured format, to include qualitative explanations related to obstacles and successes, could be

[2] http://www.nemsqa.org/nemsqa-measures

harvested to assist with future planning in that state as well as a resource for other states that may have experienced problems to identify promising practices or who have yet to undertaken an activity to proactively identify potential challenges that they may face and preplan accordingly.

In conclusion, we note there was a question we anticipated in the Federal Register Notice that did not appear, namely "What historical barriers could be overcome via forthcoming rulemaking related to the State Highway Safety Grant Program?". A persistent and perennial report NASEMSO leadership receives from its members is that when a state EMS office is engaged by their state office of highway safety and the opportunity for funding for NEMSIS software, personnel, maintenance, and/or training of state and local EMS personnel is being explored, state EMS offices are routinely advised that the office of highway safety will only provide funding proportionate to the percent of all EMS responses in the NEMSIS dataset that are for roadway related incidents. This message is so frequent and pervasive that we sought clarification, and apparently this position is rooted in a decades-old memo issued by NHTSA leadership that was subsequently rescinded. The belief that this is still NHTSA policy persists however, and is a significant limitation to fully enabling NEMSIS systems to contribute meaningfully to inform Post-Crash Care.

All EMS responses, whether for a stroke, heart attack, or a bicyclist crash on a local park path are transportation incidents as ambulances use the roadway for response to the scene and ultimately safe transportation of all patients of all types to destination facilities. We respectfully request NHTSA's assistance dispelling this misguided belief about proportionate funding.

Thank you for the opportunity to comment on this Congressional priority. Any questions or need for further clarification can be directed to NASEMSO Executive Director Dia Gainor via dia@nasemso.org.

Sincerely,

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President