NAEMT COMMENT TO NHTSA-EMS ON NEW EMS AGENDA FOR THE FUTURE

The National Association of Emergency Medical Technicians (NAEMT) sincerely appreciates the opportunity to offer comment to a proposed new EMS agenda for the future. This initiative can be a helpful exercise to continue educating and aligning all EMS stakeholders around a shared vision and common goals, and can provide valuable background and insights to help leaders make informed decisions.

Many subject matter experts contributed to our comment. We thank the following contributors for sharing their expertise and insights in this comment: Bruce Evans (CO), Brian Schaeffer (WA), Terry David (KS), Scott Matin (NJ), Don Lundy (SC), Troy Tuke (NV), Matt Zavadsky (TX), Mark Babson (ID), Rob Luckritz (NJ), Dr Craig Manifold (TX), Dr. Kate Remick (TX), Ray Barishansky (PA), Tommy Loyacono (LA), Lee Varner (MO), Jason White (MO), Dave Page (MN) and Gary Wingrove (MN).

As a precursor to embarking on the creation of a new EMS agenda for the future, it would be helpful to all stakeholders to have a clear understanding of the purpose and desired outcomes of this new initiative.

The care of emergency patients outside of the hospital has changed significantly since the EMS Agenda for the Future was published in 1996. Over the last 20 years, the EMS profession and industry have matured. In 1996, national level EMS organizations were not as well developed and organized as they are now. Today, national EMS organizations routinely collaborate to address issues and solve problems. Most recent examples include the development of mobile integrated healthcare and community paramedicine services and outcome measures, prehospital evidence-based guidelines, and resources to support a culture of safety within EMS.

Currently, several of the leading national EMS organizations are collaborating to develop a blueprint for guiding EMS through its next transformation to "EMS 3.0." Included with our comment is a copy of the paper, *EMS 3.0: Realizing the Value of EMS in Our Nation's Health Care Transformation*, which explains this transformation and outlines the steps that the EMS industry must take to achieve EMS 3.0. To date, this initiative has been endorsed by several national organizations. All endorsing organizations will participate in the development and implementation of the blueprint.

Another initiative, the Promoting Innovation in EMS (PIE) project, is developing a national framework document that will provide guidance and specific, actionable recommendations on overcoming barriers to innovation in EMS and foster the development of innovative models of healthcare delivery within EMS. This project includes broad representation from internal and external EMS stakeholders, and is nearing completion. Plans will now need to be developed and executed to implement the PIE recommendations.

How these initiatives relate to the proposed development of a new EMS agenda for the

future will need to be clarified to avoid duplication of effort and conflicting guidance, and ensure industry alignment. Additional questions that should be answered include:

- **whether this new agenda for the future is intended as an agenda for the industry, to guide the activities of the federal government in support of the industry, or both;**
- **what entities are responsible for implementing this new agenda; and**
- **how progress in achieving the goals of the new agenda will be measured.**

The NAEMT Board of Directors thanks the NHTSA Office of EMS for reaching out to all EMS stakeholders to seek comment. We hope our comments are helpful.

1. ***What are the most critical issues facing EMS systems that should be addressed in the revision of the EMS Agenda? Please be as specific as possible.***

   Listed below are what we believe are the most critical issues facing EMS systems:

   - Lack of reimbursement for stabilization of the acutely ill/injured, chronic disease management, and preventive care provided by non-transport EMS personnel. Nationally, the transition to value-based health care represents an opportunity to leverage the knowledge and expertise of EMS professionals. Establishing a fee schedule and reimbursement methodology for these activities is essential to establishing sustainable mobile integrated health care services.
   - Lack of a comprehensive domain of learning that incorporates acute emergency care, chronic disease management, and preventive care in the out of hospital setting. Establishing such as domain will fully prepare EMS professionals with the knowledge and training to augment existing health care resources and improve access to quality health care.
   - A current regulatory environment that restricts EMS professionals from crossing state borders in the daily provision of out of hospital care (e.g., automatic aid to neighboring cross-border agencies, wildland fire suppression activities, etc.)
   - The entrance of infectious disease previously found outside of the U.S. that now poses a significant threat to EMS providers (e.g., Ebola, Zika, etc.).
   - Increased demand on already strained EMS resources due to an aging population, increased access to health insurance and a lack of understanding by the lay public about the overall healthcare system. In essence, the EMS system becomes the default health care provider for those who do not clearly understand how to navigate the health care system.
   - Lack of a robust system for the exchange of health information between the prehospital and acute hospital environments for the purpose of continuous quality improvement and outcomes measurement (i.e., a national health information exchange).
   - Lack of a consensus-based set of clinical performance measurement indicators (KPI) that allow for universal benchmarking and objective measurement of EMS performance.

2. *What progress has been made in implementing the EMS Agenda since its publication in 1996?*

Substantive progress has been made within EMS since the 1996 Agenda was published, including:

- Progress has been made in establishing a prehospital care data set that promotes evidence-based decision-making and development of evidence-based treatment guidelines.
- EMS systems are beginning to integrate into to the general health care and public health care systems.
- An EMS physician sub-specialty has now been established.
- EMS research is more robust.
- National accreditation of paramedic education programs is now the standard and completion of coursework at an accredited institution is required to sit for the National Registry Paramedic certifying exam.
- The development of clinical performance measurements and monitoring are in progress at the national level.
- There is increased use of electronic health records (eHR or ePCR) by EMS systems.
- National EMS education standards are more congruent with the National EMS Scope of Practice. The standards and scope of practice are generally recognized at state and local levels as a baseline.
- E-9-1-1 is well established as the primary access point for EMS services.
- Many EMS agencies have incorporated some level of community based care through community paramedicine, mobile integrated healthcare and community outreach services.
- The EMS Education Agenda for the Future has been implemented.
- Injury prevention has been introduced in EMS and continues to be developed.

3. How have you used the EMS Agenda? Please provide specific examples.

The agenda has provided a foundation for strategic initiatives such as the development of community paramedicine and mobile integrated health care services, development of agency-specific clinical key performance Indicators and increased integration.

4. As an EMS stakeholder, how might the revised EMS Agenda be most useful to you?

A revised EMS agenda can be most useful as a roadmap for the industry to understand how the federal government will support our nation's EMS infrastructure and capacity building in the next decade.

5. What significant changes have occurred in EMS systems at the national, State and local levels since 1996?

Major events that have impacted EMS since 1996 include:

- 9/11**,** terrorism, active shooter, and mass casualties involving bombs and IEDs have significantly changed both the operational environment and training requirements of EMS. As time went on, we learned that EMS was also in the target zone for these groups. The consequence of this increased violence resulted in the need for expensive equipment, time consuming training, and coordination with law enforcement, costs for which to be absorbed in budgets marginally capable of meeting daily demand. Federal grants to assist in this process are no longer available and many systems do not have the resources to keep up with the training and equipment needs in this arena.
- While the 24 hours on and 48 hours off shift has been the standard for many EMS systems, this standard was originally established when there were few calls. Today, crews are suffering from sleep deprivation while driving very large emergency vehicles at a high rate of speed. The federal government dictates how long pilots can fly and truck drivers can drive. There are currently no maximum hours for EMS providers.
- **E**MS has, by default, become "the gate keeper" for patients who either don't know or do not feel comfortable entering the medical system.
- No national or state plans exist for addressing the ballooning populations of mental health patients. These patients are frequently served by EMS, but would be better served with a more comprehensive plan.
- Suicide and mental health issues are now a serious issue within the EMS workforce. Most workers' compensation laws do not generate coverage for the diagnosis and treatment of mental health issues.
- While clinical and technical advancements have greatly enhanced cardiac and stroke care, a communications gap between most hospitals and EMS continues to exist. This lack of communication hinders the ability of the healthcare system to optimize these advancements.
- Many organizations have increased the ratio of paramedics to EMTs with the goal of improving care. However, no evaluation has been conducted on whether more paramedics translates into improved patient care. As a result, some areas of the country have 30 minute wait times (or more) for a paramedic to arrive, while others have in excess of six paramedics treating one patient. Both situations make skill levels difficult to maintain.
- There has been an economic shift placing more people on Medicaid and there are now financial incentives for pathway management in the structured environment of the Affordable Health Care Act.
- Generational transitions have created a new EMS workforce dynamic with different types of employees.

- Our nation has been at war since 2003. Many of the lessons learned on the battlefield over the last 13 years have been translated into civilian clinical practice. The wars have also created a pool of highly trained military medics who are returning home. These veterans have a depth of knowledge and skills, a strong work ethic, but a narrow scope of practice.

6. What significant changes will impact EMS systems over the next 30 years?

While it is difficult to accurately predict the future and understand all factors that will impact EMS, here are some of our thoughts on issues that will impact EMS:

- An exponential increase in the geriatric population that will strain the capacity of EMS to serve.
- The replacement of the retiring baby-boomer generation with generation X and millennials in EMS.
- Lack of affordable healthcare with increasing deductibles and out of pocket expenses that result in another increase in uninsured. Employers eliminating the healthcare coverage benefit, and a probable two tiered (public/private) healthcare system, with the public system lacking the necessary resources to meet the needs of the patients being served.
- Under resourcing of mass casualty and disaster preparedness.
- A transition from a quantity centric, fee for service payment model to a quality centric, value based and patient centered model.
- State and local governments increasingly unable to fund public sector retirement systems.
- State and local governments increasingly unable to sustain public funding for first responder services.

7. How might the revised EMS Agenda support the following FICEMS Strategic Plan goals:

a. ***coordinated, regionalized, and accountable EMS and 9-1-1 systems that provide safe, high-quality care***

A revised EMS Agenda for the Future could enhance EMS care by supporting specific actions for federal agencies to require minimum data reporting of metrics that directly relate to patient safety and quality; and that these metrics be publicly reported in a format that allows informed decision making on the part of local jurisdictions to decide the level of EMS care they desire.

There are little to no federal standards for EMS and the 'standards' that do exists are primarily for payment from Medicare and/or Medicaid. Decisions relative to how EMS systems are delivered are appropriately left up to state or local authorities to determine. Our nation is comprised of wonderfully diverse communities with different expectations for

EMS care. This diversity should not be generally scrutinized. Communities that are responsible for regulating *and funding* EMS care should be allowed to do so to the level they consider to be acceptable.

However, the federal government can and should assist local communities with making good decisions regarding *accountable, safe and quality care*. A revised EMS Agenda should promote standardized reporting from ***ALL*** EMS agencies of a core minimum data set that can be used to benchmark quality standards across systems. The federal government should not judge whether or not an agency's standards are acceptable, as that is best determined by the local community. However, establishing national core measures that are transparently published, much like CMS has done for other healthcare sectors through their "compare" databases, will better equip communities to make local decisions that will affect the quality of EMS care delivery.

b. ***data-driven and evidence-based EMS systems that promote improved patient care quality***

A revised EMS Agenda could enhance EMS care by supporting specific actions by federal agencies such as NHTSA and ONC-HIT to incentivize HIT standardization and integration between EMS and the rest of the healthcare industry, including, but not limited to financial incentives for, and penalties for not effectively integrating HIT systems across the full continuum of care, including EMS.

Data is essential to helping assure patient safety and quality of care, as well as measure the value of services delivered. Since the original EMS Agenda was published, healthcare information technology (HIT) has evolved exponentially. However, this evolution has been typically within specific healthcare delivery sectors (i.e. inpatient, outpatient, payer, etc.). Integration of HIT has been an elusive goal. The Office of the National Coordinator (ONC) has promulgated guidelines and rules, with incentive funding, for most of the healthcare system for standardizing and integrating HIT in some healthcare sectors. Parallel to that effort, NHTSA has funded the National EMS Information System (NEMSIS) in an effort to create uniform data collection processes for EMS agencies. Unfortunately, the ONC and NEMSIS initiatives have not been effectively coordinated.

c. ***EMS systems fully integrated into State, territorial, local, tribal, regional, and Federal preparedness planning, response, and recovery;***

A new EMS Agenda for the Future should call out the need for federal funding in support of EMS preparedness. EMS has a vital role in the response to all threats to our nation and is a critical element in every facet of preparedness planning. These threats include, but are not limited to, natural disasters, healthcare crises, accidental catastrophes, public health emergencies, and acts of violence. EMS practitioners also serve as an invaluable source of support to the public and an effective resource for building strong community resilience. To eliminate the current gaps in our emergency response network, the EMS community must be provided with:

- Inclusion and integration as a primary partner in all aspects of preparedness planning.

- Equitable and stable funding comparable to other partners within the emergency response network.
- Resources and training opportunities to that are accessible to all EMS providers and EMS organizations.

The essential life-saving public function fulfilled by EMS necessitates support by all levels of government to ensure its viability. The ability of EMS to fulfill this essential public function in meeting the day-to-day needs of local communities and responding to disasters, public health crises and mass casualty incidents depends upon sufficient resources. Local, state and federal government authorities must share the responsibility for funding EMS and integrating EMS in our nation's preparedness, response and recovery infrastructure.

EMS systems are an integral component of each state's emergency response system and are a critical element of our nation's disaster and mass casualty response infrastructure. The vital role played by EMS in recent mass casualty events illustrates its significance in saving lives in the worst of circumstances.

EMS, Fire, and Law Enforcement work together to form a triad of critical services in disaster response and recovery. EMS' function is to perform medical triage, and provide life-saving treatment and transport. Both the Fire Service and Law Enforcement are funded through governmental sources; EMS relies on a fragmented and inadequate patchwork of financing despite its essential public function.

EMS is also a component of our nation's public health system that protects our communities through disease prevention, surveillance, and response. Cooperation and integration of EMS and public health not only provides an essential infrastructure for daily response, but also improves a community's preparedness and response to natural and man-made disasters, including acts of terrorism. An effective national EMS system is essential in any plan to mitigate and respond to the medical consequences of disasters or other public health events, whether natural or man-made.

d. ***EMS systems that are sustainable, forward looking, and integrated with the evolving health care system***

A revised EMS Agenda could enhance EMS innovation by encouraging federal agencies to facilitate innovation with grants and other funding opportunities. It should also encourage states to allow innovative pilot projects to incubate without unnecessary regulatory interference.

The U.S. healthcare system is transforming at a frenetic pace, often faster than regulations can adapt as mentioned by IHI's Dr. Donald Berwick in his JAMA editorial announcing the formation of the Healthcare Leadership Alliance. Changing expectations, enhanced clinical research, and new economic models are industry and stakeholder driven innovations that are transforming EMS' role in the larger healthcare system. In many respects, the vision

articulated on the 1996 EMS Agenda is coming to fruition, thanks to the changing economic models and roles for EMS. Innovation generally occurs organically at a local level and rarely occurs from federal policy initiatives. The future of EMS financial sustainability will be grounded in the ability for EMS to prove value to the various EMS payers. With the changing focus of the healthcare system on patient navigation, FICEMS should be diligently working to promote the testing of alternative payment models for EMS.

e. ***an EMS culture in which safety considerations for patients, providers, and the community permeate the full spectrum of activities*****;**

The role that EMS plays in healthcare continues to burgeon as laws and medical advancements also grow. One area that demands greater attention across the medical profession is that of patient safety. In 1999, the landmark report by the Institute of Medicine, "To Err is Human" examined adverse events in hospital settings. It became a corner stone for improving patient safety in the medical profession. Similarly, in 2013, the National Strategy for an EMS Culture of Safety outlined concerns and made extensive recommendations for greater patient safety.

As we fast forward from 1999 to the present day, many changes have taken place in the medical industry. The Affordable Care Act (ACA) ties reimbursement for patient care with patient safety standards and measures. Currently, there are no uniform standards for patient safety within EMS organizations that have linkage to reimbursement.

The study and understanding of patient safety has been driven by experts in healthcare, specifically those in the hospital or acute care setting. Unlike aviation and other high risk occupations where safety is studied as a science, EMS has lagged behind in such studies. EMS, like aviation, is a high risk industry both for the EMS provider and the patient. The profession has a highly fragmented organizational and regulatory structure when compared to aviation where national standards and public safety practices are uniform as well as imposed by a more centralized regulatory body.

Providers don't typically receive any formal education or training in patient safety theory or concepts and therefore believe that "doing their best" is practicing patient safety. However, patient safety is actually a concrete subject that must be studied in order for EMS to advance alongside other health care professionals. This includes shifting the strategy of EMS safety from personal performance and human reliability to improved systems as well as safety behaviors.

EMS must use science to guide and drive the work of patient and provider safety. A revised EMS agenda should include f**ederal agency support for the development of the science of EMS patient and provider safety through appropriate research.** Such research can result in a body of evidence upon which standards can be formulated. The science of safety takes into consideration human factors which are an integral part of forming a solid framework for the teaching and practice of patient safety within EMS.

Many EMS systems have commonalties, yet differ based on many dynamics such as leadership, organizational structure, and jurisdiction. Therefore, measurement is an important consideration when developing patient and provider safety management systems. Using a scientific survey tool for analysis of patient safety would best guide improvements within an EMS organization regardless of whether the issues are system or behavior based. Findings from a scientific instrument would allow for benchmarking across healthcare based on science derived from internal organization data.

Collection of patient and provider safety data is just beginning. A recent NAEMT survey on the collection, use and exchange of EMS Data reported that collection of patient and provider safety lags behind collection of other types of EMS data. The challenge frequently encountered in using safety data in EMS organizations is the inability to measure and study the depth of adverse events in EMS. Without data that includes adverse events, near misses and unsafe conditions, it is difficult to quantify or share the depth of the problem. Because data sharing across EMS organizations is currently not a common practice, many organizations only see what is happening to them. Unfortunately, this leads to a silo or compartmentalization of information and the benefits of analyzing and learning from the data is never realized. Currently, however, there are no uniform definitions of EMS adverse events.

Today, there is a solution for EMS leaders who want to share information privately without the possibility of it being used against their organization. The Patient Safety and Quality Improvement Act (PSQIA) offers EMS organizations a safe environment to discuss safety issues provided they use a Patient Safety Organization (PSO). The PSO collects data from EMS organizations, studies it, and develops recommendations for safer care. This program was developed by the Agency for Health Research and Quality to improve patient safety and permit learning to prevent future adverse events, unsafe conditions as well as save healthcare dollars. Participation in PSO's has been growing among EMS organization and will likely be more common as leaders learn about the benefits that are offered for protection, learning and prevention of adverse events. **A revised EMS Agenda should include federal agency promotion of participation in PSO's by EMS agencies and promotion of the EMS Voluntary Event Notification Tool (EVENT) for EMS practitioners to anonymously report adverse events.** To effectively participate in PSOs, EMS personnel must be uniformly defined by all State statutes and regulations as healthcare providers.

Within many EMS organizations, there is no reporting process for adverse events, near misses or unsafe conditions. If an event occurs it is handled on a case-by-case basis and in a quiet fashion that is on a need to know basis. Therefore, understanding the type and frequency of such events is often difficult to measure. It is unknown how many might adverse events or near misses fly under the radar or are not reported.

This non-reporting is attributed to the culture of the EMS industry and the fear of punitive action. In addition, there is the human side in which as providers, EMS personnel feel embarrassed, ashamed, and disappointed when such an event occurs. Therefore, events are

not reported. The "just culture" philosophy has been introduced in some EMS agencies to create a culture which encourages open dialogue so that mistakes, near misses and adverse events can be openly analyzes without the fear of blame.

Just culture teaches an organizational method to improve performance by utilizing equity and fairness. This is because just culture focuses on a proactive management system designed to reduce human error. It also emphasizes proactive management of behavioral choices such as human error, at-risk behavior and reckless behavior. In addition, it supports a culture of learning within the organization so that errors and behavior can be analyzed. By providing a safe rather than punitive environment, just culture promotes an environment where lessons can be learned and best practices gleaned from human and organizational errors or missteps. **A revised EMS Agenda should include federal agency promotion of the just concept to all EMS agencies.**

f. ***A well-educated and uniformly credentialed EMS workforce.***

The EMS Agenda for the Future is 20 years old. It is probably safe to assume another 20 years will go by before the next edition is printed. This version needs to contemplate 20 years into the future. Over the last 20 years other countries have surpassed the US in terms of EMS development and we need to consider where the world has passed us by when producing this version. The two major areas in the educational realm where other countries lead the U.S. are in identifying EMS as a single profession and requiring academic excellence in education programs.

The current version of the EMS Agenda for the Future does not contain a chapter dedicated to the practitioner; the practitioners are buried in a chapter called "workforce." This must change in the revised EMS Agenda. A forward looking agenda should focus on the profession of paramedicine and describe a singular name for those engaged in this profession - *paramedics.* Use of the term emergency medical technician should be retired.

The most advanced EMS countries have already adopted this nomenclature. Many countries have already identified dates upon which the paramedic workforce entry to practice will be a baccalaureate degree. In the United States today, many (maybe most) of the colleges that offer paramedic training do not offer a degree option. The new version of the EMS Agenda for the Future should articulate a vision for the paramedicine profession that makes paramedic degrees available by 2020; with degrees required by 2025.

8. ***How could the revised EMS Agenda contribute to enhanced emergency medical services for children?***

A revised EMS agenda should include a call for integration of pediatric-specific needs/considerations in all aspects of EMS, including patient safety issues, data capture, pediatric-specific education and metrics.

9. How could the revised EMS Agenda address the future of EMS data collection and information sharing?

A revised EMS Agenda for the Future could support specific actions for federal agencies such as NHTSA and ONC to incentivize HIT standardization and integration between EMS and the rest of the healthcare industry, including, but not limited to financial incentives and penalties for not effectively integrating HIT systems across the full continuum of care, including EMS. A revised Agenda could also recommend specific action be taken by HHS to clearly delineate that data sharing between EMS and the rest of the healthcare continuum is not only allowed, but encouraged.

As previously stated in Question 7(b), data is essential to helping assure patient safety and quality of care, as well as measure the value of services delivered. Since the original EMS Agenda was published, healthcare information technology (HIT) has evolved exponentially; unfortunately, this evolution has been typically within specific healthcare delivery sectors (i.e. inpatient, outpatient, payer, etc.). Integration of HIT has been an elusive goal. The Office of the National Coordinator (ONC) has promulgated guidelines and rules, with incentive funding, for most of the healthcare system for standardizing and integrating HIT in some healthcare sectors. Parallel to that effort, NHTSA has funded the National EMS Information System (NEMSIS) in an effort to create uniform data collection processes for EMS agencies. Unfortunately, the ONC and NEMSIS initiatives have not been effectively coordinated.

Additionally, many EMS agencies report challenges integrating data sharing because affiliated healthcare entities are under the belief that sharing data with EMS is a HIPAA Privacy Rule violation, despite letters from HHS' ASPR indicating that data sharing with EMS is allowed under HIPAA.

Finally, many EMS agencies, especially volunteer agencies in rural areas, lack the technology infrastructure or expertise to adequately collect and use data effectively.

10. ***How could the revised EMS Agenda support data-driven and evidence-based improvements in EMS systems?***

A revised EMS Agenda for the Future could support specific actions by federal agencies such as CDC, AHRQ and CMS to undertake and fund research projects designed to test the clinical effectiveness of EMS response, assessment, treatment and patient navigation as compared to other modes of community access to care. This should specifically include metrics not limited to mortality, but outcomes such as patient experience, healthcare utilization, cost of care and outcome of the specific medical need for which EMS was summoned.

EMS has struggled employing evidence-based improvements due to the limited ability to effectively use data as referenced in questions 7(b) and 9. Further, there has been little to no published research conducted on EMS clinical practices to prove efficacy. What few research studies that have been published use mortality as the study's outcome. The most effective way for a revised Agenda to support data driven and evidence-based improvements is to adopt the

recommendations from the previously referenced question responses, but also recommend that federal agencies such as the Centers for Disease Control and Prevention, CMS, AHRQ and others specifically fund research projects designed to test the clinical effectiveness of EMS response, assessment, treatment and patient navigation as compared to other modes of community access to care. This should specifically include metrics not limited to mortality, but outcomes such as patient experience, healthcare utilization, cost of care and outcome of the specific medical need for which EMS was summoned.

11. How could the revised EMS Agenda enhance collaboration among EMS systems, health care providers, hospitals, public safety answering points, public health, insurers, palliative care and others?

A revised EMS Agenda for the Future should specifically state that EMS is NOT a hybrid of three different service sectors, but rather a uniquely qualified profession, designed to deliver mobile healthcare services in the out-of-hospital setting that navigates patients through the healthcare system. It should recommend that CMS reclassify EMS services from "supplier" to "provider" status.

For 30 years, EMS has been described as the intersection of public health, public safety and healthcare. That characterization has, in some ways, created disassociation of EMS from its likely champion, the healthcare system. Further, the classification of EMS and ambulance services as a "supplier" of services by CMS has further relegated EMS to providing and getting paid solely for transportation. The most appropriate role for EMS is its core function, the provision of mobile healthcare services in the out-of-hospital environment. Enabling EMS to collaborate with the rest of the healthcare system will require a re-definition of the role of EMS, not as an intersection of three different service sectors, but as a uniquely qualified profession, designed as mobile healthcare delivery in the out-of-hospital setting that navigates patients through the healthcare system.

Further, a revised Agenda should support the reclassification of EMS from a 'supplier' of transportation status to 'provider' of medical care status by CMS. This will help enable the transformation of the value and payment models for EMS as described and suggested in numerous publications and articles by respected healthcare system leaders.

12. ***How will innovative patient care delivery and finance models impact EMS systems over the next 30 years?***

America's healthcare system is transforming at a frenetic pace. Care delivery models that are commonplace today, to a large extent, were not envisioned 10 or 20 years ago. Patient safety, research and economic models are continually driving changes in care delivery based on the goals articulated in the IHI Triple Aim. To maintain relevance, the EMS system needs to also continually transform – building on evidence-based practice to bring value to the system payers.

Primarily, EMS providers will be incentivized to assist patients navigate the U.S. healthcare

system maze. Providers will be paid to prevent the need for emergency care, and when episodic care is necessary, have the training, experience and critical thinking skills to navigate the patient to the most appropriate source of care for their medical need. Many of the delivery models being researched today in the U.S. have been in place for years in healthcare systems in the United Kingdom, Australia and Canada. These countries have a more coordinated and integrated care delivery process for EMS that includes the use of 911 Nurse Triage and Advanced Care Practitioners responding as part of the emergency care system that can immediately treat life threats and bring patients to the emergency department, but more often can mitigate immediate needs on scene and navigate patients to patient centered medical homes for follow-up care.

The 1996 EMS Agenda envisioned an EMS system that took 20 years to finally begin to come to fruition. The key to a potentially Revised Agenda is to seek the input from EMS leaders, hospitals, physicians, payers, skilled nursing, home health, regulators and virtually all internal and external stakeholders to determine what THEIR future looks like, and then craft the vision for the future state of EMS.

Provider/Agency Liability - Both the healthcare delivery system and financial reimbursement models will involve much more non/alternate transport, treat and release, possible expanded scope/interventional abilities for the EMS healthcare provider. How the liability risk will be mitigated in the future will require statue changes, differing or increased malpractice insurance, and more hands on involvement from medical directors.

Agency Licensure – As EMS evolves, the type of agency licensure may change, and may be regulated under new federal/state/local regulatory institutions.

Personnel Recruitment/Retention - The standard duties and responsibilities of EMS will change. This will change the types of individuals attracted to this industry. How we recruit those individuals, and keep them engaged will need to be considered.

Collaboration/Stakeholder Engagement/Industry Messaging - As EMS becomes more integrated into the broader healthcare delivery model, the need for collaboration and stakeholder engagement is going to be vital.

Education – What is included in the standard EMT and paramedic initial training will need to be rethought. More emphasis on patient engagement, motivational interviewing, mental health, healthcare system delivery models, and personnel development will be required. There is sweeping innovation happening in the medical schools. There will need to be similar sweeping innovation in EMS education. (http://www.wsj.com/articles/innovation-is-sweeping-through-u-s-medical-schools-1424145650)

13. How could the revised EMS Agenda promote community preparedness and resilience?

The EMS Agenda should identifying strategies that integrate EMS Systems into community preparedness activities. This includes two-way recognition of the importance of EMS in community preparedness. Preparedness planners need to recognize the important role of EMS and EMS systems need to engage with the Preparedness Community by:

- Applying the FEMA model for resiliency.
- Applying similar Joint Accreditation standards for facility and agency readiness.
- Promote EMS resiliency much like the Wildland Fire prevention, resiliency, and prevention strategies.
- Educating the public on how to sustain life and treat injuries for up to 48-72 hours in the event of a disaster.

14. How could the revised EMS Agenda contribute to improved coordination for mass casualty incident preparedness and response?

The EMS Agenda should recommend and underscore the important role that EMS systems play in the preparedness, response and mitigation phases of a mass casualty incident. Additionally, the Agenda should underscore the importance of removing regulatory barriers across state borders so that EMS resources can move freely on a regional basis in response to a mass casualty incident. Please see our response to question 7(c)

The Institute of Medicine (now the National Academies of Medicine) has noted that EMS is one of five pillars of medical surge response that are critical elements of a disaster system. EMS must be well integrated with the other four pillars, which include hospital care, public health, out of hospital care, and emergency management and public safety organizations, to create a unified disaster care response system. An independent or poorly integrated pillar may delay, deter, or disrupt medical care delivery during a disaster.

*Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response, Institute of the National Academies, 2012, Volume 1, pp. 2-4.

15. How could the revised EMS Agenda enhance the exchange of evidence based practices between military and civilian medicine?

Future development of prehospital practices can benefit greatly by improved collaboration and prioritization of military and civilian practices. This is a **bidirectional** process which should enhance and improve development of research priorities and actual implementation of proven concepts. Currently, there is no coordinated communication among military needs and civilian priorities. While recognizing unique environments, there are many opportunities to evaluate and test theories, systems issues, techniques and products. Early examples of this much need collaboration is the REMTORN project. Military projects are currently being placed in civilian prehospital environments which are similar to recent combat experiences. The REMTORN

project utilizes a platform similar to combat operations in regards to prehospital and interfaculty care from outpost (rural hospitals) to level one trauma centers.

Current translational research topics are often based on limited or weak methodological principles compared to gold standard randomized clinical trials prior to implementation. These initial studies may show promise but should have continued validation and stronger methodologies used to confirm the initial findings. This does mean that we should not use the preliminary evidence or impede implementation, but we should deploy new concepts based on evidence while continuing to strengthen the evidence available as time and resourcing is prioritized.

Each body should identify and prioritize research projects and then develop implementation strategies to accomplish these goals. Example…. The need/request/requirement for a ketamine auto injector for rapid analgesia administration is a military need and presumed priority. A pathway for rapid FDA approval is needed for projects of this type which may have an impact on prehospital care for military as well as civilians. Another example is the compensatory reserve index (CRI) which potentially can identify a traumatized patient in shock earlier than current vital signs monitoring and also monitor response to resuscitation measures.

In order to efficiently evaluate such devices or technologies, large clinical trials involving major metropolitan EMS agencies should be quickly engaged to design and study. The potential populations and disease exposure rates are significantly higher than most military type populations.

The National Academies of Medicine, formally, Institutes of Medicine, is currently convening a committee regarding the military trauma care learning health system. This report should be reviewed and recommendations implemented which impact EMS in both the civilian and military environment.

The revised EMS Agenda should identify strengths and strategies for exchanging evidence and experience based out of hospital care. Tactics, techniques and procedures which can translate in civilian and military environments should be evaluated and implemented with consideration to the environments, skill set, and economic impact as well as patient related outcomes.

http://www.unboundmedicine.com/medline/citation/23883898/The_Remote_Trauma_Outcomes_Research_Network:_rationale_and_methodology_for_the_study_of_prolonged_out_of_hospital_transport_intervals_on_trauma_patient_outcome_

Journal of Trauma and Acute Care Surgery:

December 2013 - Volume 75 - Issue 6 - p 1053–1059

doi: 10.1097/TA.0b013e3182aa811a

WTA 2013 Plenary Papers

Running on empty? The compensatory reserve index

Moulton, Steven L. MD; Mulligan, Jane PhD; Grudic, Greg Z. PhD; Convertino, Victor A. PhD

http://www.nationalacademies.org/hmd/Activities/HealthServices/LearningTraumaSystems.aspx

16. How could the revised EMS Agenda support the seamless and unimpeded transfer of military EMS personnel to roles as civilian EMS providers?

A new EMS Agenda for the Future should strongly recommend that states adopt methods to transition military trained EMS personnel into civilian EMS positions. It should call out the programs implemented by NREMT to facilitate military medic transition. States should be strongly encouraged to recognize military EMS training as significantly equivalent to the civilian EMS education and identify methods for rapidly processing civilian EMS credentials for military personnel. The Agenda should also recommend that our Armed Services adopt the civilian medical standards of practice or adjust the military validated practices into the civilian side so there is less to cross over for those transitioning.

17. How could the revised EMS Agenda support interstate credentialing of EMS personnel?

The revised EMS Agenda for the Future should recommend the standardization of the protocols and template the language for interstate compacts. It should also recommend the creation of a National EMS provider database for state EMS officials to be able to move immediately for temporary credentialing in an emergency.

18. How could the revised EMS Agenda support improved patient outcomes in rural and frontier communities?

A significant portion of EMS in the United States is provided by rural and frontier EMS systems that are often staffed with volunteers. As EMS continues to move from the public safety sector to an integrated healthcare system, a revised EMS Agenda could be instrumental in improving, and in many cases even continuing patient care and outcomes. This was addressed in the Vision of the original document. The following items should be addressed:

- The shrinking pool of volunteer EMS responders. The increase in age of the general population in rural locations also ha as strong effect on recruiting and maintaining an EMS workforce as there is limited availability to recruit and train new providers. As EMS strives to be more professional with advanced education, the Agenda for the Future should recognize the importance of systems that do not, and will not have the financial stability to meet these education requirements.
- The closing of rural hospitals will not reduce the number of car accidents, heart attacks and strokes. This has, and will continue to created significate issues for both paid and volunteer agencies due to extended travel distances and additional crew requirements. Special emphasis should be given to regionalization of services to continue to provide care and treatment. There is no national plan or template on providing healthcare to rural and frontier communities in the event of the local hospital closing.

- The Agenda should suggest the establishment of a Primary Health Center model in which basic services would be provided either 12 or 24 hours. While this model certainly has merit, transport of patients to these types of facilities will require a change in payment models. EMS should work with other healthcare providers to facilitate such change within CMS.
- Continued technology advances should be referenced as a key to improving rural and frontier healthcare as some parts of the United States have robust systems already in place which allow EMS crews to have face to face discussions with physicians and other providers from the back of the ambulance.
- Both Community Paramedic and Mobile Integrated Health Care should be a top priority in the new Agenda and fit perfectly in a rural and frontier healthcare model.

19. How could the revised EMS Agenda contribute to improved EMS education systems at the local, State, and national levels?

EMS education systems must evolve as EMS evolves. The Agenda should call for an assessment of our current system with recommendations on changes needed to support the EMS transformation. Areas for consideration are as follows:

- As EMS transforms its role in healthcare, there is an obvious need for development of core community healthcare (community paramedicine) functions that are expandable to meet the needs of individual communities that may be urban, suburban, and rural or frontier.
- Quality EMS Research is hampered by several impediments not the least of which are related to funding and the ability to collect accurate and meaningful data. But in spite of the desire to professionalize EMS, the majority of providers have little understanding and appreciation for research activities. EMS providers need to be educated on the importance of research as well as the basics of how to design and conduct research projects to guide system enhancements.
- The desire to eliminate barriers to mobility among the EMS workforce encompasses the desire for a single national EMS certification that is recognized by all states and the development of an EMS Compact (Replica) to facilitate cross-state licensure of the workforce.
- There is a need for competent EMS supervisors, training officers, in-house researchers and administrators. Too often promotion follows seniority or popularity without adequate preparation to serve in the new role. There is a need for educational offerings that prepare EMS providers to manage the evolving role of the EMS workforce.
- The new agenda needs to recognize that there will likely remain a need for first responders whose primary role is not as an EMS responder. In many parts of the country there are urban fire services that require EMT certification as a prerequisite for employment. In many of these communities, the firefighter does not have primary EMS responsibility. They are required to obtain and maintain a certification so that they are eligible to work in their chosen profession of firefighting. Daily, they respond to very basic medical calls where they obtain vital signs, apply oxygen and occasionally perform

CPR. Conversely, there are rural environments where the nearest Paramedic is many miles away and where the EMT is the highest trained responder. The education system of the future, in conjunction with statewide and local medical direction, needs to be able to prepare and provide recognizable credentialing to all these providers so that Emergency Medical Responders (EMR) without primary EMS responsibility are able to enhance their skills pertinent to assisting the primary provider, and rural EMTs on a scene where no Paramedic is available are able to enhance their life sustaining intervention skills on the frontier, much as the military EMT does on the battlefield. In addition, law enforcement officers are being asked to provide medical first response in active shooter and other mass casualty events. This might create a need for a law enforcement first response certification

20. How could the revised EMS Agenda lead to improved EMS systems in tribal communities?

The Agenda should call attention to the special needs of tribal communities that have rural and frontier challenges as well as the need for cultural sensitivity.

21. How could the revised EMS Agenda promote a culture of safety among EMS personnel, agencies and organizations?

The following concepts should be included in a revised EMS agenda for the future:

- EMS practitioners should be screened for risk factors which would make them incompatible with the stresses of the profession.
- A system to support mental health should be developed for EMS personnel
- Research should be conducted that identifies the health effects (both physical and mental) of EMS response on EMS professionals. Research should also include strategies to reduce physical and mental health impact on EMS professionals.
- Collect patient safety incidents in EMS and identify system modifications to reduce or eliminate using the Haddon matrix.

22. Are there additional EMS attributes that should be included in the revised EMS Agenda? If so, please provide an explanation for why these additional EMS attributes should be included.

- Preparedness – please see responses to questions 7c, 13 and 14.
- Patient and Practitioner Safety – please see responses to questions 7e and 21.

23. Are there EMS attributes in the EMS Agenda that should be eliminated from the revised edition? If so, please provide an explanation for why these EMS attributes should be eliminated.

No.

24. What are your suggestions for the process that should be used in revising the EMS Agenda?

- Clarify what the purpose, desired outcome and deliverables will be for the next EMS agenda for the future.
- Conduct stakeholder surveys to establish a baseline of understanding of stakeholder priorities.
- Bring stakeholder leaders together to draft a new agenda – which should be a living strategy with goals, action items and benchmarks.
- Seek wide comment and feedback on the strategy through all means, including town hall meetings and online submissions.

25. What specific agencies/organizations/entities are essential to involve, in a revision of the EMS Agenda?

- NAEMT
- NHTSA/HHS/DHS
- International Association of Fire Chiefs
- International Association of Fire Fighters
- American Ambulance Association
- NAEMSE
- AAMS
- NEMSMA
- NAEMSP
- ACEP
- NASEMSO
- National Association for Healthcare Quality (NAHQ)
- Institute for Health Improvement
- American College of Surgeons
- American Heart Association
- American Public Health Association

26**. Do you have any additional comments regarding the revision of the EMS Agenda?**

We suggest that consideration be given to having a non-EMS healthcare group with experience in creating transformation strategies lead this effort.