

20 22 ANNUAL UPDATE



NHTSA Office of Emergency Medical Services (EMS)

The Office of EMS is housed within the
National Highway Traffic Safety Administration
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National Highway Traffic Safety Administration



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INTRODUCTION



Since assuming the role of director of NHTSA’s Office of EMS (OEMS) in January of last year, I’ve seen the Office’s mission in action, continuing NHTSA’s commitment of more than half a century in supporting the Nation’s EMS systems.

What does that work look like? It includes engaging stakeholders on many fronts, supporting the development and promotion of resources for Emergency Medical Services (EMS) system improvement, and improving the collection and use of data. This includes sharing EMS data with others, for example, giving public health and safety professionals more information to address the country’s ongoing opioid crisis, or supporting highway safety offices with EMS response data to help optimize the response to traffic crashes in ways that reduce not just deaths but severe injury.

Last February, DOT Secretary Pete Buttigieg announced the launch of the [National Roadway](#)

Safety Strategy (NRSS). Improving post-crash care—one of five core areas of focus in the NRSS—will depend on drawing on the expertise within our EMS and 911 systems. There’s no doubt that this systems-based approach, working in collaboration with colleagues across transportation safety, will provide more opportunities for EMS and 911 professionals to continue impacting injury and mortality on our roads, as well as in homes, businesses and schools across the communities you serve.

As we welcome this new year, there will be, of course, new projects and priorities. No matter what we undertake, we can say with confidence that it will be informed by both input from the EMS community and its stakeholders, as well as by the OEMS’ continued focus on EMS systems that are both people-centered and data-driven.

Gamunu “Gam” Wijetunge, NRP
Director, Office of EMS, NHTSA



COLLECTING & USING EMS DATA TO IMPROVE CARE

Gathering, applying and sharing standardized EMS data to support improvement in patient care, EMS systems, public health surveillance and research

National EMS Information System (NEMSIS)

NEMSIS establishes standardized documentation practices and promotes the sharing of EMS data with local, state and national organizations to improve patient care and clinician safety, measure performance, and support quality improvement programs. The NEMSIS uniform data standard and local, state and national databases facilitate the faster delivery of patient care and encourage the significant expansion of EMS research essential to evidence-based emergency medical care.

Access to timely EMS data enables policymakers to more accurately assess and project EMS needs, supports strategic planning and resource allocation, determines effectiveness of clinical interventions, facilitates cost-benefit analysis and improves patient outcomes. In 2022, NEMSIS collected more than 50 million records and released version 3.0 of the national dataset of EMS activations, which for the first time included full participation of all 50

states and the District of Columbia, along with three U.S. territories. More than 12,000 EMS agencies contributed data.

Office of National Drug Control Policy Non-Fatal Opioid Overdose Dashboard

NHTSA’s Office of EMS and partners at the NEMSIS Technical Assistance Center (TAC) collaborated with The White House’s [Office of National Drug Control Policy \(ONDCP\)](#) to develop a new [dashboard](#) that presents non-fatal opioid overdose information at the state and county level. This dashboard, which uses EMS data collected by NEMSIS to compare state- and county-level metrics against national averages, is available to the public as well as to Federal partners.

Pediatric Behavioral Health

The OEMS, in collaboration with other NHTSA offices and the [Health Resources & Services Administration \(HRSA\) EMS for Children program](#), is using NEMSIS data to study pediatric EMS/911

activations for behavioral health to identify impacts of COVID-19. An increase in pediatric behavioral health-related 911 activations was identified just after the declaration of the COVID-19 public health emergency compared to the two previous years. This is significant, as EMS works to improve how we care for pediatric patients, especially those with a behavioral health emergency. The authors have submitted a manuscript to a peer-reviewed journal.

National EMS Data Standard—v3.5 Transition

To stay current with expanding industry demands NEMSIS has updated the National EMS Data Standard to a new **v3.5 edition**. This new standard will improve accuracy and efficiency across the continuum of care. States are beginning to make the transition from v3.4 to v3.5. At the end of 2023, NEMSIS will no longer accept v3.4 data into its national repository.

Data Manager Certification Course

The Office of EMS and partners at the NEMSIS TAC are working to create a state Data Manager Certification course to teach new state data managers about the role and responsibilities. Resources are being created and the course is expected to launch in the first quarter of 2023. This course will help to support state data managers and ensure a similar baseline of knowledge.

Integrating the Healthcare Enterprise (IHE)

NEMSIS has partnered with **IHE USA** to improve the way healthcare information is shared in the prehospital setting. The goal is to improve the interoperability of healthcare and ultimately improve health outcomes for patients as well as better support first responders, EMS and disaster response. Listening sessions have been held and on-demand educational sessions were developed to help others

learn about the healthcare data interoperability landscape and technical standards through the **IHE Path to Production Digital Webinar Series**, hosted both live and virtually.

Multistate EMS and Medicaid Dataset (MEMD)

The Office is also working with the U.S. Department of Health and Human Services Office of the Assistant Secretary of Planning and Evaluation (ASPE) to develop a link between Medicaid and EMS datasets. The aim of the project is to evaluate social and medical issues experienced by vulnerable populations in the prehospital setting. The Multistate EMS and Medicaid Dataset (MEMD) will assist states in understanding the healthcare needs of Medicaid beneficiaries and aid in determining the usefulness and long-term sustainability of linking Medicaid and EMS datasets.

EMS By the Numbers: Impact of COVID-19

A **dashboard** was created to help state EMS officials track specific EMS activations occurring during the COVID-19 pandemic. The dashboard is still updated weekly and allows EMS officials to observe trends in their state or territory.

Emergency Triage, Treat and Transport (ET3) Model

The Office of EMS and the NEMSIS TAC are working with the Centers for Medicare & Medicaid Innovation (CMMI) to collect and analyze data related to the **Emergency Triage, Treat and Transport (ET3) Model** to support the development and testing of innovative healthcare payment and service-delivery models. NEMSIS continues to provide ongoing support for the collection of participants' data to CMMI.



ADVANCING EMS SYSTEMS

Supporting the development of EMS as a coordinated system of care

Post-Crash Care

A new resource utilizing NEMSIS data is helping highway safety experts and others better understand EMS response to motor vehicle crash-related (MVC) injuries. NEMSIS produces a **public report**

that includes current trends and graphs detailing MVC-specific response; severe injury; pedestrian, motorcycle, bicyclist, ejections and older-adult incidents; and comparisons between fatalities, severe injury and injury rates. In addition, visit the Public V3 MVC Dashboard [here](#).

National Model EMS Clinical Guidelines—Version 3.0

Together, the Office and HRSA's EMS for Children program funded the National Association of State EMS Officials' (NASEMSO) development of version 3 of the National Model EMS Clinical Guidelines. The guidelines, which were finalized in early 2022 based on the latest evidence and professional consensus, are used by state and local EMS systems as a reference for developing their own EMS protocols. More information about the guidelines and how they can be used or adapted at the state, regional or local level to enhance prehospital patient care can be found on the [NASEMSO website](#).

Tribal EMS Collaboration

OEMS is collaborating with the Indian Health Service (IHS), HRSA's EMS for Children program, NEMSAC's Tribal representative, NHTSA regional staff and the University of New Mexico Center for Rural and Tribal EMS to improve communication, access to resources and engagement with Tribal EMS clinicians and agencies across the country. Through this collaboration, a working list of Tribal EMS agencies has been started and will be expanded in the next few years to improve identification and communication. OEMS staff continues to look for opportunities to connect EMS agencies with existing grant funding. In addition, the OEMS is engaging in events like the Tribal Highway Safety Summit to share the ways in which 911 and EMS systems improvement are critical to reducing death and disability of American Indian and American Native populations on the Nation's roadways.

Development of EMS Quality Measures

The National EMS Quality Alliance (NEMSQA), a coalition of EMS organizations created with support from OEMS and HRSA's EMS for Children program, continues to create, develop, evaluate and publish EMS quality measures, including a **new measure addressing the use of lights and sirens**. Ten NEMSQA measures are aligned with the **NEMSIS Data Standard** for consistency in research and documentation. Learn more about NEMSQA, quality measures currently in development and how to get involved at [NEMSQA.org](#).

Infection Prevention and Control for the Emergency Medical Services and 911 Workforce

Supported by the OEMS, the Agency for Healthcare Research and Quality (AHRQ) released a new **report** designed to educate EMS clinicians about the latest evidence on infectious pathogen exposure among the EMS workforce, including diseases to which clinicians are at higher risk and precautions they can take to reduce their risk for exposure and infection.

Prehospital Airway Management Evidence-based Guideline (EBG)

The National Association of State EMS Officials (NASEMSO) has started development of an EBG following a systematic review led by AHRQ. NASEMSO will also develop a model EMS treatment protocol, a performance measure and training materials for prehospital airway management.



PROMOTING EDUCATION

Supporting a nationwide systems approach to EMS training and education

EMS Education for the Future: Continued Competency

The National Registry of EMTs (NREMT) is coordinating this national education effort with the support and guidance of a steering committee representing national EMS stakeholders and

experts, including the Office of EMS. This consensus approach will result in an agenda document that describes current approaches to verifying continued competency, the profession's goals for competency and how these can be achieved. More information can be found at [NREMT.org](#).

Helping the Public Understand EMS Education

With the 2021 update to the [EMS Education Standards](#), the EMS community identified a need to help future clinicians better understand the education, certification, licensure and credentialing process, as well as various levels of certification. EMS education is one of the most-visited pages on [ems.gov](#), and the 2022 refresh of the [ems.gov](#) website included more content about the education process and a video in support of recruiting more clinicians nationwide. [Watch the new video.](#)

FICEMS: Education and Training Activities

In 2022, the Federal Interagency Committee on EMS (FICEMS) added a subgroup to its Technical Working Group to assist in gathering and reporting information about the National EMS system's

education and training programs to determine if these programs are an effective pipeline to meet the EMS workforce demands. In its first year, the EMS Education and Training subgroup began development of a dashboard to supply FICEMS with this information by connecting with National EMS organizations with a shared focus on education and training. The subgroup has had moderate success in reporting on paramedic programs, certification and training programs; however, collecting comprehensive information has been a challenge due to limited availability of national programmatic information on EMT and Advanced EMT education programs and state credentialing processes. The Education and Training subgroup continues to collaborate with stakeholder partners in removing obstacles and closing National EMS education system information gaps.



ENHANCING THE EMS WORKFORCE

Supporting efforts to strengthen and prepare the EMS workforce nationwide

Fatigue in EMS

The Fatigue in EMS initiative, a collaboration of NHTSA and NASEMSO, aimed to address the potential dangers of fatigue among EMS workers, including the risk of traffic crashes, injuries to providers and patients, and medical errors. The five-year project was completed in 2022 and information about all three phases—evidence-based guideline (EBG) development, an [experimental study of the EBG](#) and the development of a [web-based scheduling tool](#)—are now available. Learn more at [NASEMSO.org](#) and read about the study and webtool in the December 2022 issue of "[Traffic Tech](#)."

Researching First Responder Suicide

The EMS and 911 workforces face significant stress and witness psychological trauma under even normal conditions. The increased strain of the COVID-19 pandemic has made it even more critical that we improve our understanding of first responder mental health and suicide. NHTSA's OEMS collaborated with the Centers for Disease Control and Prevention's (CDC) [National Institute for Occupational Safety & Health \(NIOSH\) Division of Safety Research](#) and the [National Center for Injury Prevention and Control \(NCIPC\)](#) to examine

occupation-coded data in the National Violent Death Reporting System in order to learn more about the causes of first responder suicide. Read more in [this NIOSH blog](#); a manuscript addressing this topic has also been accepted for publication in the *Journal of Safety Research* in summer 2023.

White House Suicide Prevention Interagency Policy Committee (IPC)

Since 2021, the Office of EMS and National 911 Program continue participating in the White House Interagency Policy Committee for Suicide Prevention, created to improve coordination and collaboration among federal agencies working to prevent suicide. The OEMS reinforces the important role of EMS and 911 systems in helping people in crisis, as well as the increased risk of suicide for public safety professionals. The Office is also actively engaged in five subcommittees and has an ongoing collaboration with the Substance Abuse and Mental Health Services Administration (SAMHSA) in implementing improved crisis-response systems, including 988. OEMS will continue to work with our fellow committee members and stakeholders to improve care for prehospital patients and enhance EMS workforce health and safety.

Workforce Measures and Evaluation

This effort is underway with NASEMSO to develop model state EMS workforce measurement and evaluation tools. Technical assistance will be provided to select states to implement new

measurement and evaluation tools. From lessons learned during the pilot phase, an implementation guide will be produced.



ENABLING PREPAREDNESS

Fostering collaboration to enhance readiness for catastrophic incidents

Public Health Emergency Collaboration Guidelines

In partnership with NASEMSO—this effort will develop model statewide guidelines for collaboration among state and local EMS, 911, Public Health and Emergency Management agencies in response to public health emergencies. NASEMSO will provide technical assistance for piloting in five states. Over the course of this multi-year project, the lessons learned during the pilot phases will be used to produce an implementation guide.

response. The team educates Federal partners within the response about the critical work done by EMS and 911 systems as well as the needs of the workforce.

In 2022, the prehospital/EMS team continued to engage with stakeholders as well as Federal partners in the response. This engagement facilitated the identification of emerging issues (e.g., ambulance shortage) and sharing of real-time concerns between Federal partners. These established relationships allowed OEMS to assist CDC and the National Emerging Special Pathogens Training and Education Center (NETEC) in updating Ebola resources as well as sharing updated information with the EMS community and addressing Mpox concerns.

Learning from the COVID-19 Response & Continuing Pandemic Preparation

Throughout the pandemic, the OEMS hosted stakeholder calls and led the prehospital/EMS team of the Healthcare Resilience Task Force as part of the FEMA and Health & Human Services (HHS)



SUPPORTING 911 SYSTEMS

Providing leadership and coordination to support and promote optimal 911 services

Relaunch of 911.gov

Last year saw the debut of the redesigned [911.gov website](https://www.911.gov) with improved accessibility and inclusion of a restructured resource section that features a variety of resources from organizations throughout the 911 community.

respond to more than 200 million calls every year.

Next Generation 911 for Public Safety Leaders and Telecommunicators

NG911 provides the ability to share voice and data-rich information that will improve first responders' ability to save lives, better ensure responder safety and protect property. NHTSA has published several resources to help EMS, fire service and law enforcement agencies explore specific benefits of the transition to NG911 and understand the impact an IP-based 911 system will have on the emergency communications ecosystem. Access these resources and more on [911.gov](https://www.911.gov).

911 System Interoperability

In order to create a true “system of systems” for 911 centers across the country, systems and their components must be able to communicate with one another and share information. Achieving interoperability will improve response times and help ensure safer responses for EMS clinicians and the communities they serve. To that end, in 2022 the National 911 Program is addressing three projects to help reach this goal: The **CAD Interoperability Assessment Project** is helping to deepen understanding of the disparate nature of computer-aided dispatch systems to identify the obstacles to interoperability. Similarly, the **GIS Assessment Project** is evaluating geographic information systems (GIS) across the country to determine how best to

implement a nationwide GIS data-sharing system for location data. And the **911 DataPath** program continued its work by undertaking a pilot project to evaluate a first-ever 911 data-exchange model at the local, state and regional level.

Automatic Crash Notification (ACN)/Advanced Automatic Crash Notification (AACN) Research Pilot Plan Project

ACN and AACN technologies have become widespread in vehicles across the U.S. To help demonstrate the benefits of such technologies, NHTSA’s Office of EMS contracted with a research firm to outline the requirements necessary for executing a pilot project to document and measure potential benefits of these technologies for crash response and post-crash care.



Federal Interagency Committee on EMS (FICEMS)

The Federal Interagency Committee on Emergency Medical Services was established by Congress to ensure coordination among Federal agencies supporting local, state, tribal, and territorial EMS and 911 systems, with the goal of improving the delivery of EMS throughout the Nation. The OEMS provides

administrative support to FICEMS. In 2022, OEMS hosted two public meetings and four executive-session meetings of FICEMS. To learn more and to find FICEMS reports and materials from FICEMS meetings, visit [ems.gov](https://www.ems.gov).



NEMSAC (National EMS Advisory Council)

The National EMS Advisory Council is a nationally recognized council of EMS representatives and consumers that provides advice and recommendations to NHTSA and FICEMS. The council provides a forum for a knowledgeable and independent perspective, but it does not make decisions directly affecting the programs on which it provides advice. Its advisories and recommendations have guided many EMS-related Federal activities since the council's creation.

The OEMS hosted four meetings of the NEMSAC in 2022. Council members tackled a number of topics and finalized several advisories, including:

- **Reducing Social Inequities in EMS through a National Out-of-Hospital Cardiac Arrest Registry**
- **Strengthening Emergency Medical Services (EMS) and Hospital Relationships to Improve Efficiencies and Positively Impacting Patient Outcomes**

- **Cybersecurity: What to Do When Technology Fails/How to Mediate in a Pro-Active Way**
- **The EMS Star of Rights**

NEMSAC published two letters in 2022. The first, a response to NHTSA's Associate Administrator for Research and Program Development, contains recommendations for how the **National Roadway Safety Strategy** should be implemented to improve post-crash care at the state and local levels. A second letter from NEMSAC to FICEMS requested support for the dissemination and implementation of updated Model EMS Clinical Guidelines and National Field Trauma Triage Guidelines at the state level. The Council also requested that a funding source be identified for future iterations of these guidelines.

To learn more about the council's members, advisories and recommendations, and to find minutes of past meetings, visit **NEMSAC on [ems.gov](https://www.ems.gov)**.

About NHTSA's Office of Emergency Medical Services (EMS)

Our Mission is to provide national leadership and coordination of comprehensive, data-driven, and evidence-based emergency medical services and 911 systems.

Consensus-building, collaboration and supporting significant national projects are the hallmarks of NHTSA's contributions to EMS and 911 systems development. Efficient emergency systems are integral to reducing injury and mortality on and off our Nation's highways and are key to ensuring prompt emergency response to any type of illness or injury. The Nation's best preparation for any incident, large or small, is comprehensive EMS and 911 systems, ready every day for every emergency.

For more information about the Office's programs and initiatives, visit **[ems.gov](https://www.ems.gov)**. There, you can sign up to receive **EMS Update**, the Office's official newsletter and to attend **EMS Focus**, the Office's webinar series.

