A LEGACY OF DATA,
A FUTURE OF CARE

NEMSIS
BETTER DATA. BETTER CARE.

CELEBRATING
25 YEARS
OF EMS DATA EXCELLENCE



25TH ANNIVERSARY

BETTER DATA // STRONGER SYSTEMS // BETTER CARE | NEMSIS.ORG

THANK YOU

Colleagues and friends for many years of collaboration.

Report written by Monet Iheanacho

Historical photos courtesy of the NEMSIS TAC

Table of Contents

Letter from the NEMSIS Founder . . . 3
Executive Summary . . . 4
NEMSIS Key Accomplishments & Impact . . . 4
Letter from the Founder of the Utah Data Coordinating Center (DCC) . . . 5
NHTSA Leadership Over the Years . . . 6
NEMSIS Directors Over the Years . . . 7
Our History . . . 8
The NEMSIS TAC Business Team . . . 9
EMS Data Collection in the United States . . . 10
Early NEMSIS Years . . . 12
NEMSIS Supporter of 21 Years . . . 15
Using Data on Social Media to Engage and Save Lives . . . 16
Improving Emergency Care Nationwide . . . 17
Growth & Expansion of NEMSIS V3 Standard . . . 18
Our Services . . . 19
NEMSIS Milestones in 2015 . . . 20
NEMSIS Releases EMS Software Standard, Version 3.4 . . . 22
NEMSIS Milestones in 2016 . . . 22
NEMSIS 2019 Leadership . . . 24
Data in Action . . . 25
Impact of COVID-19 in the United States . . . 26
National EMS Data Collection & 2020 Public-Release Research Dataset . . . 27
V3.5 Rollout . . . 27
All Fifty States Submit Data to the National EMS Repository . . . 28
NEMSIS Research Potential Continues to Grow . . . 29
Fighting the National Opioid Public Health Crisis . . . 32
NEMSIS Annual Meeting 2024 . . . 33
2025 NEMSIS Annual Meeting Honoring NEMSIS Founder, Dr. Greg Mears. . . . 35
NHTSA OEMS Leadership Message . . . 36
Prehospital Blood Transfusion: . . . 37
Advancing Trauma Care Through Data . . . 37
Partnerships that Unleash the Power of Data for Better Care . . . 38
NEMSIS TAC's Extensive Portfolio of Peer-Reviewed Journal Articles is Driving Research Forward . . . 39
The Future of NEMSIS . . . 40
THANK YOU . . . 41

Letter from the NEMSIS Founder



Greg Mears, MD
Physician, Professor of Emergency Medicine,
EMS Systems, Quality, and Health Informatics Specialist

Nothing of significance was ever achieved by an individual acting alone.

—John C. Maxwell

Congratulations on the 25th Anniversary of the National Emergency Medical Services Information System (NEMSIS). I am honored to have played a pivotal role in integrating Emergency Medical Services (EMS) into our communities and into the nation's healthcare system.

EMS serves as our nation's safety net, assuring professional emergency response and care 24/7/365. This service was designed to meet the unique needs of each community, extending into our formal healthcare system. The goal: Each individual patient receives the appropriate care at the appropriate time and location.

In the wake of September 11, 2001, the nation's emergency response capabilities were tested at an unprecedented level. The need for a more uniform approach to address disaster response and public health outbreaks, along with the ability to quickly extend and surge resources across any geographic area, became a priority.

To address these natural, political, and public health needs, EMS had to standardize its care delivery system. EMS professional education, capability, and resource utilization impact patient-centric outcomes. EMS needed a data system that standardized terminology, operations, education, and service delivery. Through data, we could measure service and clinical performance and their associated outcomes. NEMSIS empowered EMS as a leader and critical component of the United States healthcare model.

Funded by the National Highway Traffic Safety Administration's (NHTSA) Office of EMS, with support and coordination from multiple other federal departments, national professional organizations, and state governmental programs, NEMSIS was born. A framework for reliably collecting, storing, and sharing standardized EMS patient care data across the United States.

NEMSIS initially began as a cooperative agreement between NHTSA and the National Association of State EMS Officials (NASEMSO). As the NC State EMS Medical Director, I was honored to serve as the Principal Investigator. Through deep collaboration with stakeholders across EMS, community, policy, and compliance organizations, NEMSIS was defined, designed and supported by all 50 states.

Today, NEMSIS is maintained and supported by the NEMSIS Technical Assistance Center (TAC) in Salt Lake City, Utah. The NEMSIS TAC was founded by Dr. Clay Mann, who served alongside me as the NEMSIS co-investigator and is unrelenting in his commitment to EMS and NEMSIS.

It has been a privilege to learn, teach, collaborate, and observe so many true professionals, experts, advocates, and friends grow through these past 25 years.

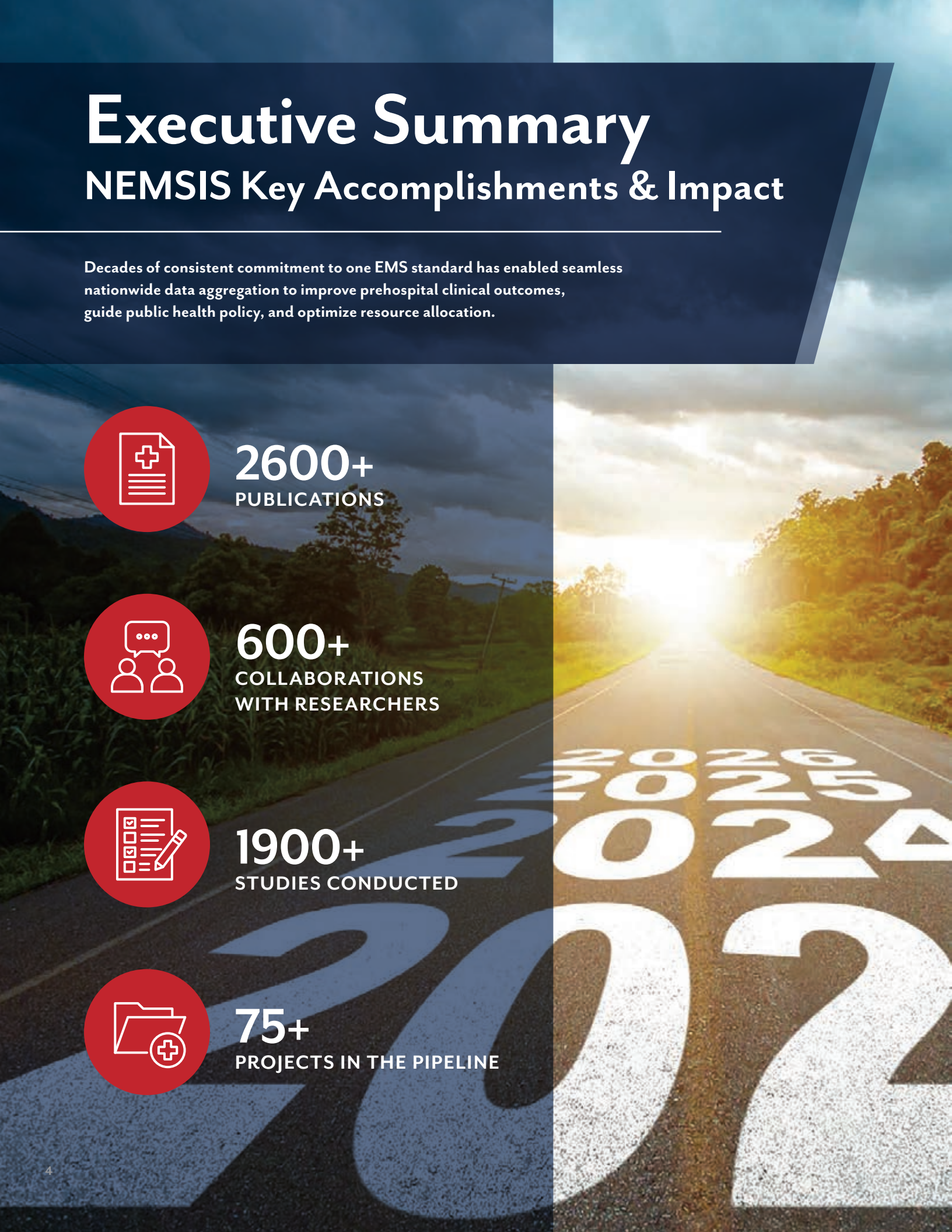
If you want to go fast, go alone. If you want to go far, go together.

—African Proverb

Executive Summary

NEMSIS Key Accomplishments & Impact

Decades of consistent commitment to one EMS standard has enabled seamless nationwide data aggregation to improve prehospital clinical outcomes, guide public health policy, and optimize resource allocation.



2600+
PUBLICATIONS

600+
COLLABORATIONS WITH RESEARCHERS

1900+
STUDIES CONDUCTED

75+
PROJECTS IN THE PIPELINE



Letter from the Founder of the Utah Data Coordinating Center (DCC)

Dr. J. Michael (Mike) Dean

Retired Chief of the Division of Pediatric Critical Care at the University of Utah

For 25 years, NEMSIS has provided the foundation for a more connected, informed, and evidence-driven EMS system. By establishing a common national standard and supporting the collection of consistent, high-quality data, NEMSIS has given EMS leaders, clinicians, researchers, policymakers, and public health partners a clearer view of prehospital care across the country. Its value extends well beyond data collection. NEMSIS helps the EMS community identify trends, evaluate performance, strengthen systems of care, support research, and make better decisions for patients and communities.

The NEMSIS Technical Assistance Center (TAC) is central to that work. Through sustained partnership with federal and state agencies, EMS organizations, software vendors, clinicians, and researchers, the TAC has helped translate a complex national standard into a practical and trusted resource for the field. The Utah Data Coordinating Center (DCC) is proud to support NEMSIS and the dedicated team behind it. We are honored to contribute to a program that has strengthened EMS data for a quarter century and remains essential to the future of emergency care.

NHTSA Leadership Over the Years



Susan McHenry

1996–2018

Former EMS Specialist, NEMSIS Program Director
National Highway Traffic Safety Administration (NHTSA)
Office of Emergency Medical Services (OEMS)



Gamunu Wijetunge

2022– Present

Director
National Highway Traffic Safety Administration (NHTSA)
Office of Emergency Medical Services (OEMS)



Noah Smith

2010–2017

Former EMS Specialist, NEMSIS Program Director
National Highway Traffic Safety Administration (NHTSA)
Office of Emergency Medical Services (OEMS)



Eric Chaney

2018–2025

Former EMS Specialist, NEMSIS Program Director
National Highway Traffic Safety Administration (NHTSA)
Office of Emergency Medical Services (OEMS)



David Bryson

1995 –2025

Former Emergency Medical Services and Highway Safety Specialist
National Highway Traffic Safety Administration (NHTSA)
Office of Emergency Medical Services (OEMS)



Jeremiah Kinsman

2018–2019 and 2025–Present

Emergency Medical Services and Highway Safety Specialist
National Highway Traffic Safety Administration (NHTSA)
Office of Emergency Medical Services (OEMS)

NEMSIS Directors Over the Years



Michael Schnyder — 2002–2004

Former Director, NEMSIS Technical Assistance Center
University of Utah School of Medicine
Department of Pediatrics



Dave Owens — 2007–2009

Former Director, NEMSIS Technical Assistance Center
University of Utah School of Medicine
Department of Pediatrics



Karen Jacobson — 2010–2018

Former Director, NEMSIS Technical Assistance Center
University of Utah School of Medicine
Department of Pediatrics



Lisa Young — 2018–2019

Former Director, NEMSIS Technical Assistance Center
University of Utah School of Medicine
Department of Pediatrics



Jullian Ehlers — 2019–2023

Former Director, NEMSIS Technical Assistance Center
University of Utah School of Medicine
Department of Pediatrics



Kevin Nicholes — 2024–Present

Director, NEMSIS Technical Assistance Center
University of Utah
Utah Data Coordinating Center

2000 Groundwork laid for a unified national EMS database

2001 NEMSIS Inception

2002 Bioterrorism Preparedness Act

2003 EMS MOU Signed by States

2005 NHTSA funds NEMSIS TAC

2010 First NEMSIS research publication

2012 First public-release dataset (v2)

2013 40 States provide national data

2015 States adopting NEMSIS v3

2016 30 million national submissions

2019 900 NEMSIS research publications

2019 COVID-19 Pandemic

2020 COVID-related data tracking; record-breaking dataset released

2021 Initial state adoption of v3.5

2022 All Fifty States Submit Data to the National EMS Repository

2024 Advancing EMS Data for Opioid Research

2025 63 million national submissions

2026 25th NEMSIS Anniversary Annual Meeting, October 5-9-2026



Our History

I am honored to have directed the NEMSIS Technical Assistance Center (TAC) over the past 25 years.

Today, the NEMSIS TAC is recognized as the premier national repository for EMS data and the home of the clinical standard. Our combined contributions are poised to impact society for years to come.

The NEMSIS TAC extends its gratitude to the collaborative efforts of the National Highway Traffic Safety Association (NHTSA), the NEMSIS team, and EMS Stakeholders for twenty-five years of support for the National EMS Data Standard. I would also like to thank our research partners and clinicians, whose contributions have significantly influenced our impact within individual neighborhoods and the research community.

25 YEARS
EXPERIENCE in DATA COLLECTION & RESEARCH

The NEMSIS TAC Business Team

FACULTY & STAFF

Led by Dr. Clay Mann, the NEMSIS TAC has twelve full-time staff members serving NEMSIS stakeholders across the country.



Clay Mann, PhD, MS, MBA
NEMSIS TAC Principal Investigator



Lisa Young, PMP, CCSGB, ITILv4
Director, Information Technology



Kevin Nicholes, MS
NEMSIS Director



Lauri Lunde, MEd
Technical Program Manager



Ben Fisher, MPA, NRP
Technical Product Manager



Monet Iheanacho, BS
Technical Business Analyst



Chris Hoffman, MBA
Social Networking/ Digital Media Specialist



Josh Nation, BS
Technical Business Analyst



John Britt, MPA, NRP
Technical Business Analyst



Amanda Pope, MS
Technical Business Analyst



Mengtao Dai, MS
Biostatistician IV

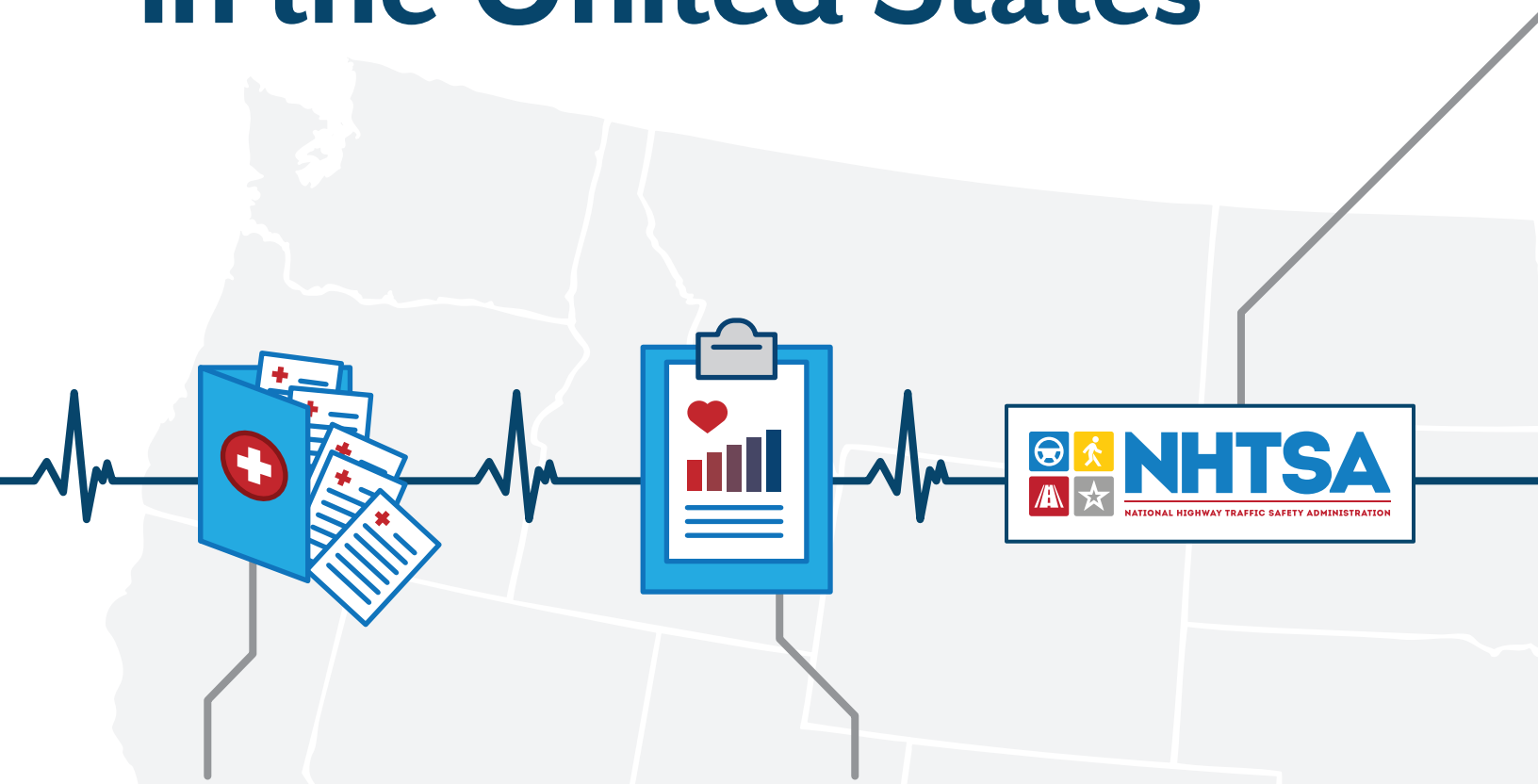


Bengie Alexandre, MS
Technical Business Analyst



Mischa Gergen, BS
Administrative Assistant

EMS Data Collection in the United States



1970s

The Era of Non-Uniform Data Collection

Following the passage of the Emergency Medical Services Systems Act of 1973, EMS systems expanded rapidly across the United States. States and local agencies began collecting EMS data, but without common definitions, formats, or reporting expectations. Data collection was often driven by compliance, funding, or billing requirements rather than system evaluation or patient outcomes. While inconsistent and fragmented, these early efforts marked an important realization; understanding EMS performance required data, even if the tools to standardize it did not yet exist.

1991

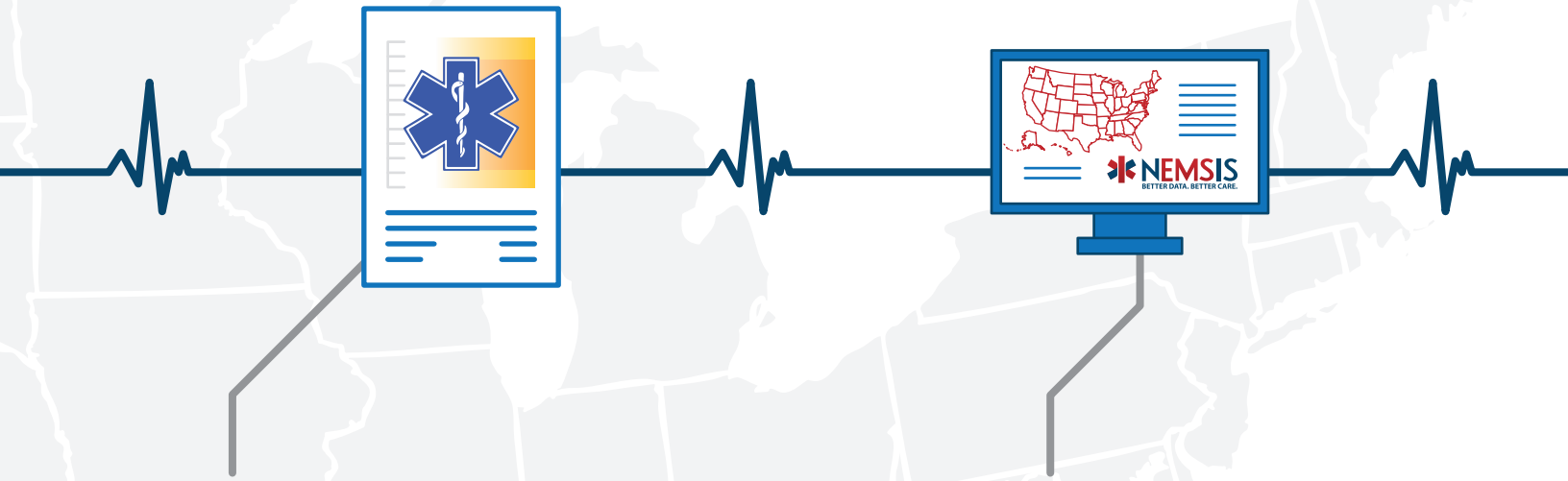
The Utstein Style for Uniform Reporting

The introduction of the Utstein Style in 1991 represented a watershed moment for EMS data standardization. Focused on out-of-hospital cardiac arrest, the Utstein templates established uniform definitions, time points, and outcome measures that enabled meaningful comparison across systems and regions. For the first time, EMS outcomes could be evaluated using a shared framework. Though limited in scope, Utstein demonstrated the power of standardized data to transform EMS from a response-driven service into an evidence-informed discipline.

1994

NHTSA Releases the Uniform Prehospital EMS Dataset Version 1.0

In 1994, the National Highway Traffic Safety Administration (NHTSA) released the Uniform Prehospital EMS Dataset Version 1.0, the first national effort to define a standardized set of EMS data elements applicable across a wide range of incidents. The dataset aimed to promote consistency in documenting patient demographics, clinical care, and system characteristics. While implementation varied and technological limitations remained, the dataset signaled a growing federal commitment to EMS data as a cornerstone of research, evaluation, and policy.



1996

The EMS Agenda for the Future

The EMS Agenda for the Future, published in 1996, reframed EMS as an integral component of the nation's healthcare and public health systems. It emphasized that high-quality, standardized data were essential for accountability, performance measurement, research, and system integration. The Agenda articulated a clear vision in which EMS data supported prevention, surveillance, and continuous improvement. Rather than viewing data as an administrative burden, it positioned information systems as a critical infrastructure for modern EMS.

Late 1990s

Laying the Groundwork for NEMSIS

By the late 1990s, advances in electronic patient care reporting and increasing demands for transparency made national standardization both feasible and necessary. Collaboration among federal agencies, states, researchers, and EMS leaders coalesced around the concept of a unified national EMS database. These efforts laid the foundation for the National Emergency Medical Services Information System (NEMSIS), which balances national consistency with state and local flexibility.

Early NEMSIS Years

2002

Public Health Security and Bioterrorism Preparedness and Response Act of 2002

In June 2002, in direct response to the September 11, 2001, terrorist attacks and the subsequent anthrax incidents, the US Congress passed the Public Health Security and Bioterrorism Preparedness and Response Act to strengthen the nation's public health and emergency preparedness capabilities.

The Act created the policy environment and federal priorities that led NHTSA, through its Office of EMS, to invest in a national EMS data standard. To support the Act's preparedness goals, NHTSA funded the development of NEMSIS, which enabled states and EMS agencies to share consistent information, measure response capabilities, support evidence-based improvements in patient care, and provide the national-level data needed for emergency preparedness planning and evaluation, which closely aligned with the Act's emphasis on improving surveillance, interoperability, and coordinated emergency response.

2003

Foundational MOU Agreement

A Memorandum of Understanding (MOU) led by the National Association of State EMS Officials (NASEMSO) was signed by all 50 U.S. states.

A National EMS Dataset (V2) was created. The 400-page document, and associated XML, included data elements, variables, definitions, and guidance for deploying the elements.

2005

Federal Funding & Launch

NHTSA, HRSA (EMSC), and CDC recognize the value of the standard and provide funding to establish the NEMSIS TAC. The contract is given to the University of Utah to partner with North Carolina to handle all customer service requests.

2009

National Adoption of the EMS Standard

NEMSIS experiences national adoption, with 21 states submitting approximately 8 million EMS activations to the national database. This event marks one of the first times NEMSIS reached broad, multi-state participation. The NEMSIS program demonstrated that the standard was being widely implemented. States were successfully submitting real-world EMS data to the national database, which was becoming viable for analysis and policy use.

2011

NEMSIS Annual Meeting: Pioneering Progress In EMS Data Collection








PATIENT CARE REPORT
EMS
Patient Name: John Doe
Age: 56
Sex: M
Incident #: 12345
Date: 5/12/08
Time: 14:32
Chief Complaint:
Chest Pain
Treatment:
Aspirin 324mg
O2 2L NC
Disposition:
Transport
John Q. Doe
EMS
XML
SOAP
Web Services
Schematron



NEMSIS Supporter of 21 Years

Josh Legler

EMS Consultant,
Former Utah EMS Data Manager

As a database administrator in the Utah EMS office in 2005, I saw firsthand the value of turning EMS data into meaningful information. At the same time, NEMSIS was emerging as a national effort to standardize EMS data through common definitions and innovative technology.

From the beginning, NEMSIS paired collaboration with innovation. By embracing emerging technologies such as XML and XML Schema, it created a foundation for standardizing EMS data nationwide. Its success came from recognizing the need for consistency, building consensus across diverse EMS systems, and using technology to turn that shared vision into reality.

The success of NEMSIS Version 2 revealed new opportunities. Version 3 responded by strengthening connections with healthcare, improving data exchange and validation, and adopting technologies such as healthcare terminologies, SOAP web services, and Schematron. With each advancement, the value of EMS data continued to grow.

For 25 years, NEMSIS has thrived through the remarkable collaboration of state EMS officials, software vendors, EMS clinicians, administrators, and many others working across diverse environments toward a common goal. As we celebrate this milestone, the work continues. The next chapter is an opportunity to expand that "consensus tent," strengthen connections between EMS and the broader healthcare community, and build on 25 years of innovation, partnership, and progress.

2012

Using Data on Social Media to **Engage and Save Lives**

NEMSIS launched its Facebook page in October 2012 to provide a more immediate, accessible way to connect with EMS data through the research and evidence-based publications from professionals across the nation. This social engagement platform fostered real-time discourse among stakeholders. NEMSIS leadership embraced this new, evolving technology to ensure we met the community where they were—strengthening engagement, transparency, and the impact of the National EMS Information System.

The first post that sparked community engagement highlighted that Halloween is the most dangerous night of the year for children. In 2012, almost twice as many children were hit by cars on Halloween as on any other day of the year.



NEMSIS BETTER DATA. BETTER CARE.

Improving Emergency Care Nationwide



The NEMSIS TAC debuted its first Public-Release Research Dataset in 2012. The TAC collected, stored, and analyzed data from 19.8 million EMS activations and more than 12,000 EMS agencies across 42 U.S. States and Territories. The dataset supports national research, planning, and benchmarking to assess EMS performance and support strategic planning for the EMS systems of tomorrow.

Continued Advancement of NEMSIS Version 3 Implementation

Significant progress was made in refining Version 3, including pilot testing and early adoption efforts, positioning EMS agencies for a more modern, standardized data system.

Growth in Data Volume and State Participation

More states and territories increased their data submissions, resulting in the largest collection of EMS patient care data to date and strengthening the national dataset.

Enhanced Data Quality and Validation Tools

NEMSIS introduced improved validation and data quality processes, helping agencies submit more accurate, consistent, and reliable data to support research, policy, and operational improvements.

2013

Growth & Expansion of NEMSIS V3 Standard

NEMSIS Milestones

1 Expansion and Nationwide Participation

By 2013, 45 states and territories were actively submitting EMS data to NEMSIS, marking a major step toward a truly nationwide dataset and significantly enhancing the ability to analyze EMS care across the country.

2 Release and Adoption of NEMSIS Version 3

NEMSIS made substantial progress toward implementing Version 3 of the data standard, a major upgrade designed to improve data quality, flexibility, and alignment with evolving healthcare data standards.

3 Increased Use of NEMSIS Data for Research and Policy

Researchers, federal agencies, and EMS leaders increasingly relied on NEMSIS data in 2013 to inform national reports, guide policy decisions, and support evidence-based improvements in emergency medical services.

Using NEMSIS Data for Crisis Surveillance

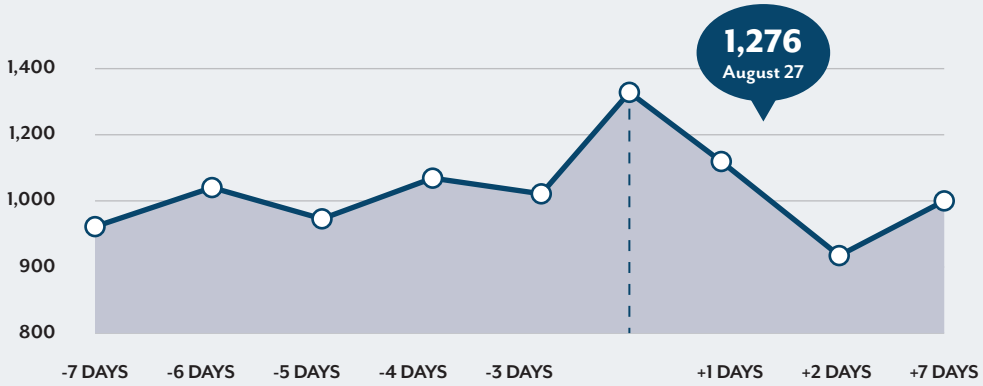
EMS Response During the 2013 Hurricane Season

During the 2013 hurricane season, NEMSIS data from Hurricane Irene in 2011 reinforced the value of EMS data during large-scale weather events.

The data showed that EMS events increased as sharply before Hurricane Irene made landfall as they did afterward, highlighting the critical role EMS serves throughout a developing crisis.

These findings inform EMS readiness by supporting early situational awareness and helping communities prepare for, respond to, and recover from dangerous weather.

911 ACTIVATED EMS EVENTS
BEFORE & AFTER HURRICANE IRENE



Our Services

The NEMSIS TAC provided comprehensive coordination services supported by a state-of-the-art "tech" backbone. We maintain extensive experience with:

Large Dataset Transformation & Management

Technical Assistance for National Data Systems

Statistics & Research

Data Visualization



The NEMSIS TAC specializes in project management, centralized document development, biostatistical expertise, large database design, quality management systems, and rigorous data analysis. Our extensive IT proficiency is a cornerstone of our services, enabling us to develop and oversee software applications, facilitate complex data transfers, and create impactful data visualizations. Positioned within the University, we benefit from access to the medical expertise of the University of Utah and its School of Medicine, as well as other valuable resources within our Research Community.

Areas of Expertise

- Machine Learning Models
- Data Security and Data Privacy
- Quantitative Research
- Data Transfer Solutions
- Probabilistic Linkage
- Sophisticated Dashboards

2015



NEMSIS Milestones in 2015

Broader Adoption of NEMSIS Version 3

2015 marked a pivotal transition year, with more states preparing for and beginning early implementation of Version 3, setting the stage for a more advanced, standardized national dataset.

Strengthened National Dataset and Reporting

The volume and consistency of submitted EMS data continued to grow, allowing NEMSIS to produce more robust national reports and deeper insights into patient care, system performance, and public health trends.

Expanded Use of NEMSIS for Research and Innovation

NEMSIS data gained increased recognition as a valuable resource for researchers, clinicians, and policymakers, supporting studies and initiatives aimed at improving EMS outcomes and advancing evidence-based care nationwide.

Connection Between NEMSIS and Advancing Pediatric EMS Readiness

Are US Hospitals and EMS agencies ready for kids?

The **EMSC Data Center** (EDC) facilitated readiness surveys in pre-hospital settings and within our nation's hospitals, pinpointing preparedness gaps and opportunities for quality enhancement.

NEMSIS collaborated with the EDC from the very start of the data collection journey.

EMS activations from over **15,000 EMS agencies in 54 U.S. states and territories** drove evaluation and change by estimating lives saved with proper training and equipment.

The results garnered attention from major media outlets such as the ***Wall Street Journal*** and **CBS Evening News.**

NEMSIS collaborates with Oregon Health Sciences University (OHSU)

The OHSU Center for Policy & Research in Emergency Medicine, led by Principal Investigator Dr. Craig Newgard, established a long-term collaboration with the NEMSIS TAC to study pediatric readiness outcomes in Emergency Departments (EDs) nationwide. Pediatric Readiness Study Group research projects have used NEMSIS data, NTDB data, state ED and inpatient data, vital statistics records, ED pediatric readiness data, and other data sources to study and evaluate pediatric outcomes in the prehospital, ED, inpatient, and post-discharge settings. These efforts have been supported by five federal grants (NICHD and HRSA) and a scientific community of over thirty investigators and staff across the U.S. who contributed to the science of pediatric readiness.



2016

NEMSIS Releases EMS Software Standard, Version 3.4

TRANSITION FROM NEMSIS VERSION 2 TO VERSION 3



NEMSIS Milestones in 2016

1 **Release of NEMSIS Version 3.4**

A major achievement, Version 3.4 was officially released, providing a significantly enhanced data standard with improved usability, better alignment with national healthcare data systems, data validation and greater flexibility for EMS agencies.

2 **States Execute New Data Use Agreements (DUAs)**

States began signing updated Data Use Agreements, reinforcing data governance, privacy protections, and enabling more consistent and secure sharing of EMS data at the national level.

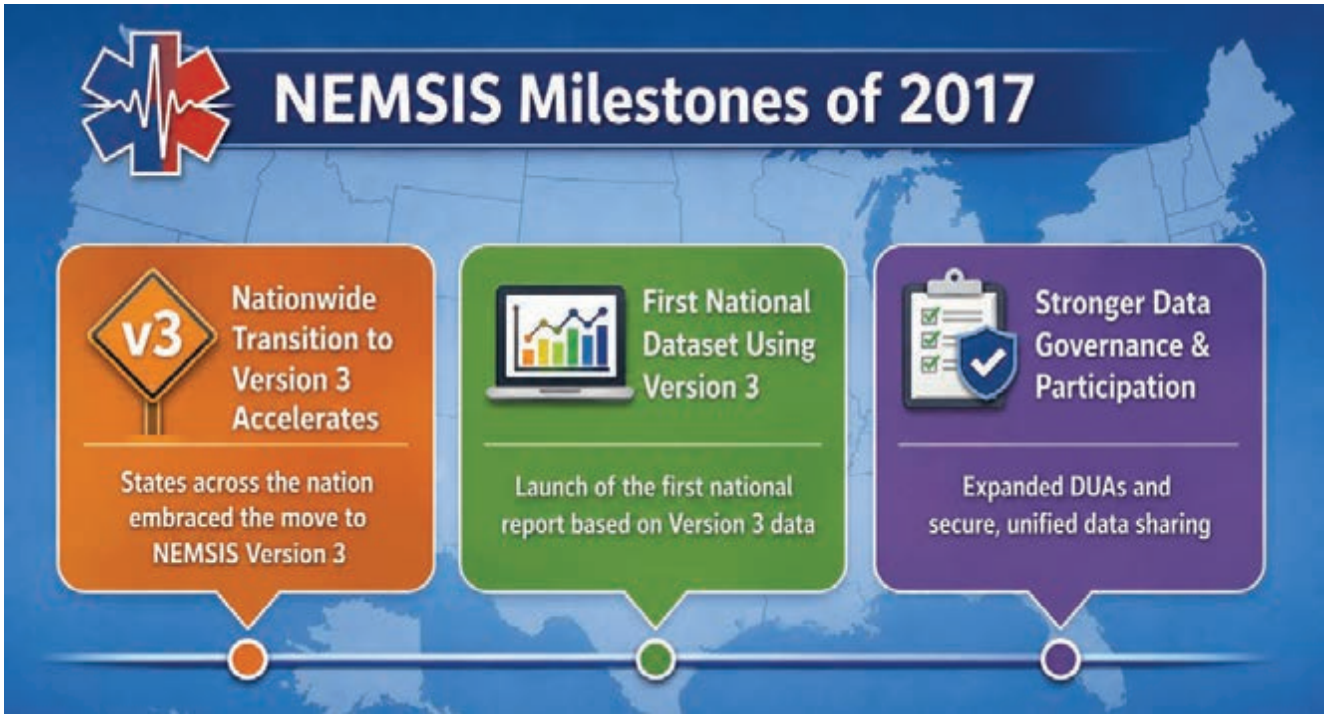
3 **EMS Software Vendors Achieve Version 3.4 Compliance**

EMS software vendors began achieving compliance with the NEMSIS Version 3.4 standard, ensuring agencies had certified tools capable of collecting and submitting high-quality, standardized data.

2017

Major Standard Upgrade (NEMSIS v3)

Full implementation of Version 3 began in 2017, and enhanced data elements, interoperability, and ePCR capabilities. States operationalized communication strategies to help guide EMS agencies on plans to transition to NEMSIS Standard v3.4.



2018

By 2018, the Center for Disease Control and Prevention was leveraging NEMSIS Version 3 data in Morbidity and Mortality Weekly Report publications to inform national surveillance, including analyses of suspected opioid overdoses.

NEMSIS v3.5 Annual Planning Meeting



2019



NEMSIS 2019 Leadership

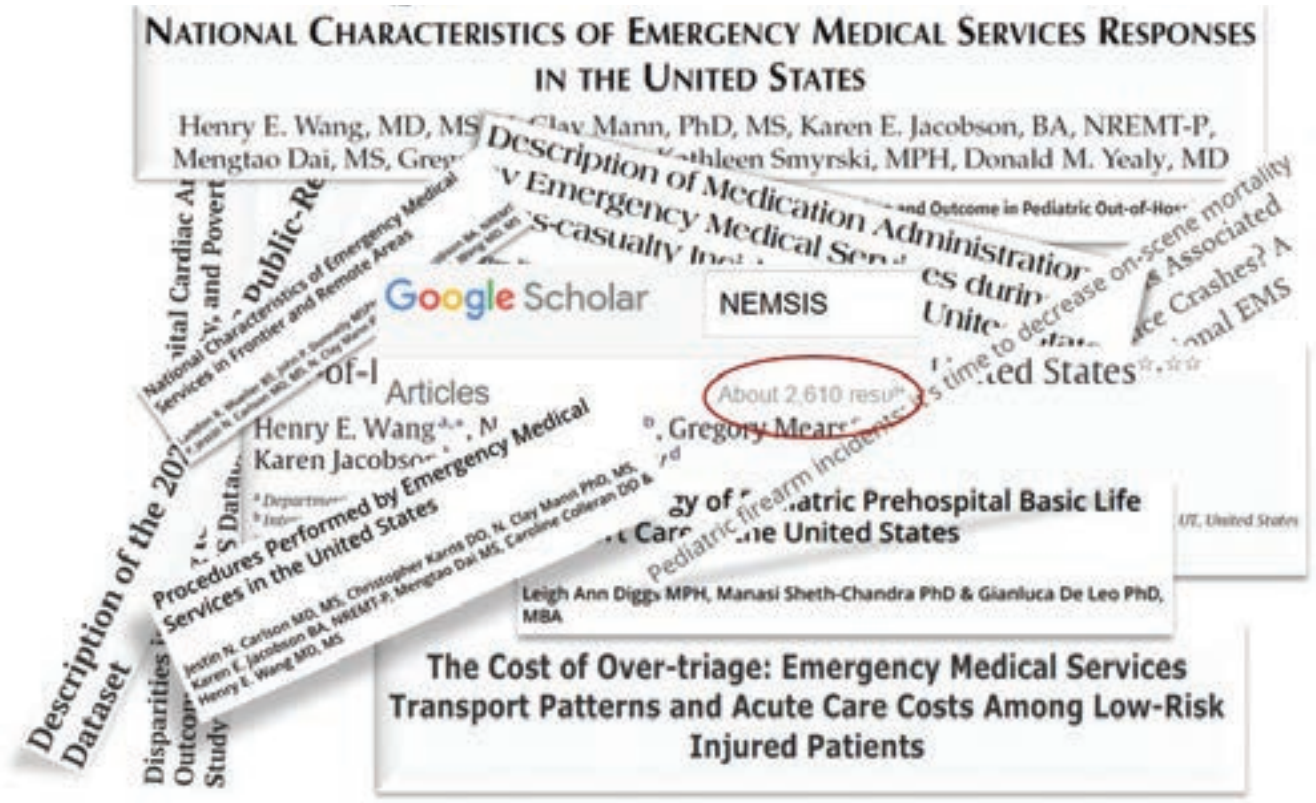
Dr. John Krohmer, NHTSA OEMS Director, is presenting the keynote address at the NEMSIS 2019 Annual Meeting.



Milestones for NEMSIS

- **Near-Nationwide Adoption of NEMSIS Version 3**
- **Release of the First Comprehensive National Reports Using Version 3 Data**
- **Expanded Public Health Surveillance and Partnerships**





Data in Action

NEMSIS Data Utilized in over 2,610 Published Research Articles

The primary value of the National Emergency Medical Services Information System (NEMSIS) in published research lies in its unprecedented scale and standardized structure, aggregating tens of millions of EMS activations annually across U.S. states and territories. By unifying electronic patient care records across thousands of participating agencies into a single repository, NEMSIS enables researchers to conduct national-level epidemiological surveillance and investigate complex public health trends that single-agency or localized studies cannot capture. Academic literature routinely leverages this dataset to evaluate system-level operational metrics, identify geographic disparities in care access, track evolving crisis patterns such as firearm injuries or substance overdoses, and analyze prehospital response dynamics across diverse urban and rural environments.

NEMSIS Research Has Led To:

- Improved understanding of cardiac arrest survival
- Better opioid overdose surveillance and naloxone evaluation
- Identification of racial, socioeconomic, and geographic disparities
- Enhanced trauma system performance measurement
- Real-time public health monitoring
- Evidence-based EMS protocol development
- Nationwide benchmarking using 60+ million EMS activations annually

2020



Impact of COVID-19 in the United States

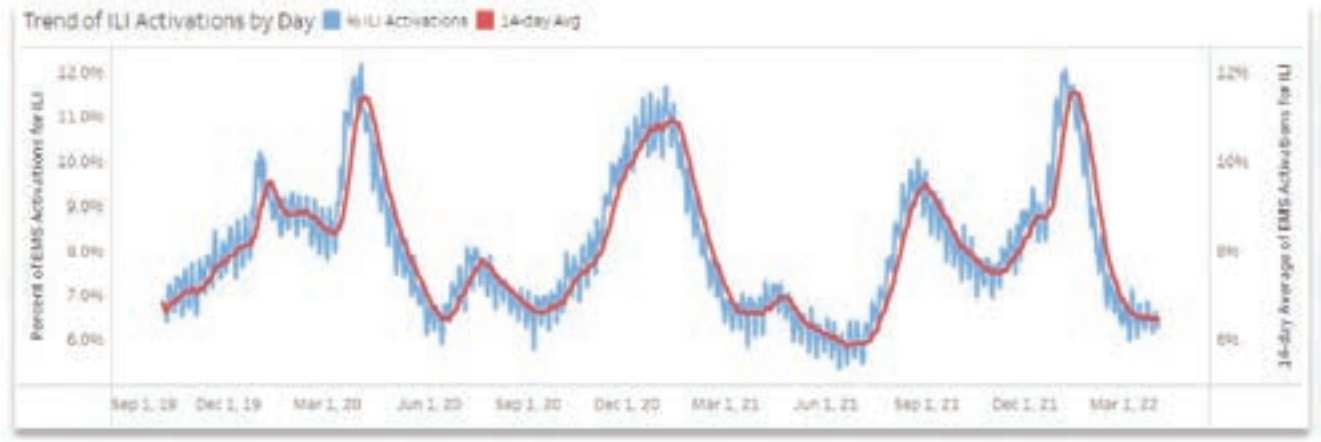


COVID-19 emerged as a prominent health concern in late 2019 and was declared a global pandemic in March 2020. During this time, approximately 83–84 million COVID-19 cases were confirmed worldwide. In the United States, about 20 million cases were reported by the end of 2020.



In 2020, NEMSIS was recognized as an important syndromic surveillance tool for tracking EMS responses related to COVID-19 (e.g., respiratory distress, suspected infections, PPE use, call volume changes). The infrastructure and Version 3 dataset, largely in place by 2019, enabled rapid public health surveillance once the pandemic began.

NEMSIS Tools Real-Time Tracking the Impact of Covid-19



NEMSIS
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2021



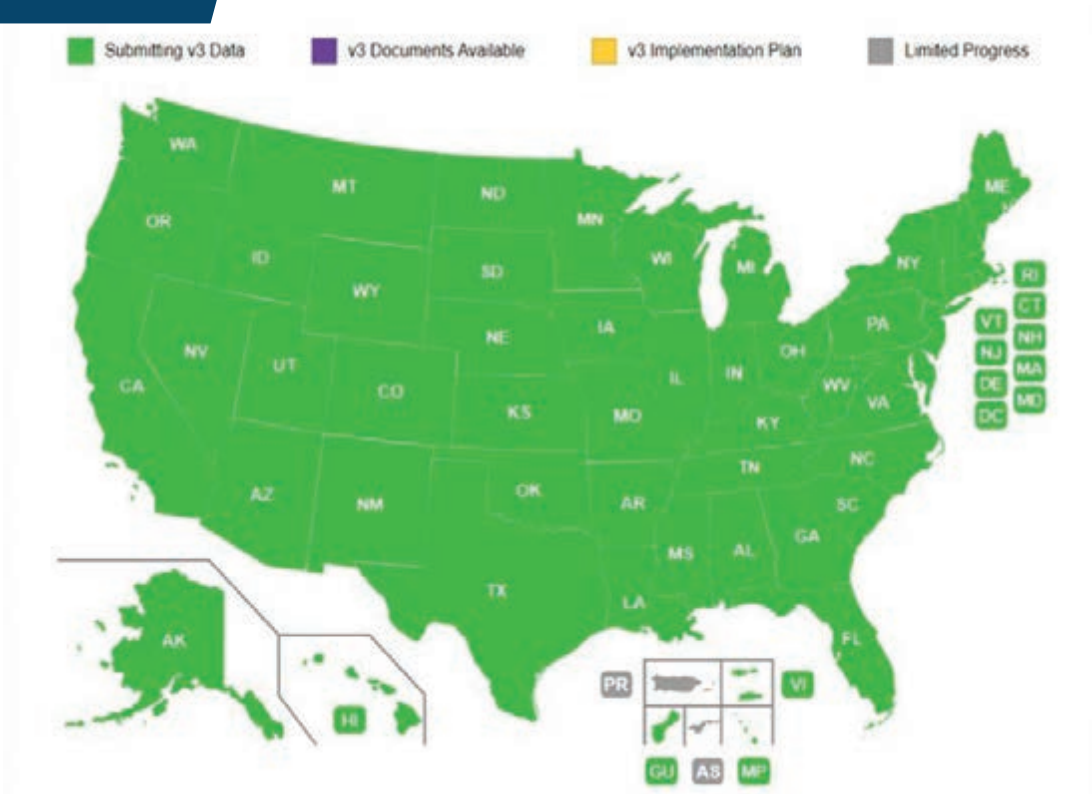
National EMS Data Collection & 2020 Public-Release Research Dataset

- 43.5 Million EMS Activations
- 12,319 EMS Agencies
- 50 States & Territories

V3.5 Rollout

Software vendors start compliance & certification

2022



All Fifty States Submit Data to the National EMS Repository

For the first time, all fifty states reached a shared milestone by submitting emergency medical services data to the National EMS Information System (NEMSIS) repository. By May, all states and 3 U.S. territories had joined the NEMSIS ranks, submitting Version 3 ePCR data to the NEMSIS Technical Assistance Center (TAC). What had been a complex, fragmented effort came together through coordination, persistence, and a collective commitment to improving patient care. This progress was further strengthened by the addition of incident geographic location to the national data visualizations, which energized policymakers, researchers, and public health officials, expanding the power of EMS data to inform health research, guide quality improvement, and shape better situational decision-making nationwide.

Nationally Recognized In Single Institutional Review Board Processes

Partnering with investigators to elevate research, the Utah IRB is nationally recognized as one of the leading developers of SIRB processes.

Fully AAHRPP accredited since 2007, the Utah SIRB leads the nation in education and performance.

SINGLE IRB
THE UNIVERSITY OF UTAH

NEMSIS
BETTER DATA. BETTER CARE.

2023



NEMSIS Research Potential Continues to Grow

NEMSIS was at the forefront of integrating a real-time emergency response data collection system into a cloud environment, ensuring FISMA Moderate security controls. This move has improved data security and provided new avenues for the presentation and sharing of NEMSIS data.

Our dedicated infrastructure and informatics teams remained pivotal in seamlessly integrating new technologies into our research processes, thereby enhancing the effectiveness and reach of NEMSIS focused research studies.

Research Infrastructure

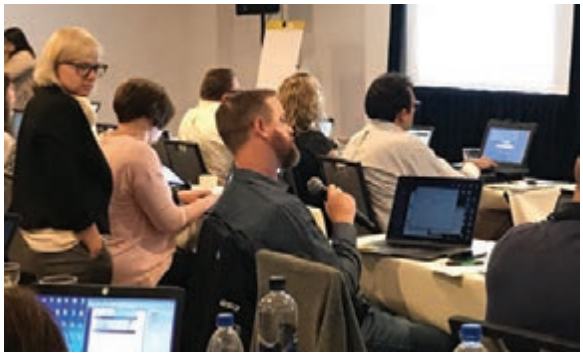
Making research user-friendly and implementable is a critical part of successful research. The NEMSIS TAC has developed a strong library of tools and approaches to accelerate clinical, systems, and geographical research that can be applied in a wide variety of settings. We bring a comprehensive set of approaches to all types of research.

54,190,579 EMS ACTIVATIONS **54** STATES AND TERRITORIES **14,369** EMS AGENCIES





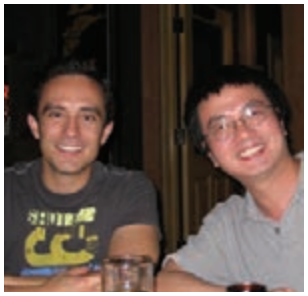








NEMSIS
BETTER DATA. BETTER CARE.

















2024

Fighting the National Opioid Public Health Crisis

Advancing EMS Data for Opioid Research

NEMSIS is integral to the National dashboard **for tracking non-fatal opioid overdoses,** launched by the **White House Office of National Drug Control Policy.** Extensive EMS data enables real-time, data-driven interventions and strategies, highlighting our commitment to advancing healthcare through the proactive use of data in public health.

5.5M
AMERICANS WITH OPIOID USE DISORDER

70%
DEATHS INVOLVE POLYSUBSTANCE

ANNUAL OPIOID MISUSE
9M
AMERICANS 12 YRS OR OLDER

ANNUAL DEATHS
>75K
FROM OPIOID DRUG OVERDOSE



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NEMSIS Stakeholders at the 2024 Annual Meeting.
Principal Investigator, N, Clay Mann, PhD, MS, MBA
Program Director, Kevin Nicholes, MS

NEMSIS Annual Meeting 2024

50th Anniversary of Freedom House Ambulance Service

At the 2024 NASEMSO Annual Meeting in Pittsburgh, the pioneering members of the Freedom House Ambulance Service were honored for establishing the foundation of modern paramedicine and transforming prehospital emergency care. Founded in 1967, before the advent of 911 systems and the modern paramedic profession, Freedom House became the nation's first ambulance service staffed by professionally trained emergency medical personnel who, working with Dr. Peter Safar, pioneered advanced prehospital care and helped establish the clinical practices and professional standards that continue to shape EMS today. The NEMSIS Technical Assistance Center proudly joined EMS leaders, historians, and the Pittsburgh community in recognizing the enduring legacy of Freedom House and its lasting influence on emergency medical services nationwide.



Freedom House Ambulance Services Founders and Staff in 1974



2025 NEMSIS Annual Meeting Honoring NEMSIS Founder, Dr. Greg Mears



Dr. Greg Mears was recognized for his decades of work in EMS at the NEMSIS Annual Meeting in 2025.

EMS State Data Managers & Directors

NEMSIS Compliant EMS Software Vendors

Fire Services and other EMS Stakeholders

Individual Investigators and Sponsors



NHTSA OEMS Leadership Message

NHTSA Office of EMS Initiatives Enabled by NEMSIS

Since its creation in 2001, the National Emergency Medical Services Information System (NEMSIS) has become a cornerstone of the National Highway Traffic Safety Administration (NHTSA) Office of EMS's efforts to improve emergency medical services through standardized, data-driven decision making. Today, NEMSIS data support numerous national initiatives that enhance patient care, guide policy, and improve roadway safety.

Post-Crash Care: A National Safety Priority in Action (Pathways to Safer Streets). As part of NHTSA's Pathways to Safer Streets action plan, post-crash care is recognized as one of the nation's critical roadway safety priorities. The plan identifies expanding prehospital blood transfusion programs as a federal priority and relies on NEMSIS data to measure EMS response, treatment, and system performance.

Evidence-Based Clinical Guidelines: NHTSA develops national evidence-based guidelines to improve EMS patient care. NEMSIS provides the standardized patient care data needed to evaluate guideline adoption, monitor clinical outcomes, and identify opportunities for continuous quality improvement.

National EMS Performance Measurement: NEMSIS serves as the nation's standardized EMS data system, enabling local, state, tribal, territorial, and federal partners to benchmark performance, identify trends, and evaluate the effectiveness of EMS systems using consistent national measures.

EMS Research and Public Health Surveillance: NEMSIS data support nationwide research on injury prevention, cardiac arrest, stroke, trauma, opioid overdose, pediatric care, and other public health priorities. Researchers and federal agencies use these data to better understand EMS care and inform future policy and clinical practice.



Gamunu (Gam) Wijetunge

Director, NHTSA Office of EMS

State EMS System Improvement: Through collaboration with State EMS Offices, NHTSA uses NEMSIS to strengthen statewide EMS systems by supporting quality improvement, strategic planning, resource allocation, and national interoperability. The common data standard allows every participating state to contribute to and benefit from a comprehensive national picture of prehospital care.

Together, these initiatives demonstrate how NEMSIS has evolved from a national data standard into an essential resource supporting NHTSA's mission to advance EMS, improve patient outcomes, and strengthen post-crash care across the United States.



Prehospital Blood Transfusion:
Advancing Trauma Care Through Data

Prehospital blood transfusion (PHBT) has become one of the most important advances in trauma care, allowing EMS clinicians to begin life-saving treatment for patients with severe hemorrhage before they reach the hospital. This is especially important following motor vehicle crashes, where uncontrolled bleeding remains a leading preventable cause of death. By administering blood products rather than relying solely on crystalloid fluids, EMS agencies can restore oxygen-carrying capacity, preserve clotting function, and improve a patient's chances of survival during the critical minutes after injury.

As PHBT programs expand nationwide, NEMSIS provides the national data standard for documenting these interventions and evaluating their impact. Standardized EMS data enable researchers, clinicians, and policymakers to better understand how prehospital blood improves outcomes and where these programs can have the greatest benefit, particularly in rural communities with longer transport times.

The field continues to evolve. In 2026, the U.S. Food and Drug Administration licensed the nation's first freeze-dried plasma product, an innovation expected to expand access to plasma in rural, remote, and other austere environments. NEMSIS will work with its partners to develop standardized methods for documenting its use, ensuring these advances can be measured and translated into evidence-based improvements in EMS care.

Every successful prehospital blood transfusion begins with the generosity of blood donors. Together, blood donors, EMS professionals, trauma systems, researchers, and NEMSIS are advancing post-crash care and supporting national efforts to reduce preventable deaths through better emergency medical care.

The Brave New World of Big Data



Partnerships that Unleash the Power of Data for Better Care

NEMSIS provides a robust, nationally representative dataset that enables evidence-base analysis of prehospital care across a wide range of clinical, operational, and public health issues. By capturing standardized EMS data at scale, it supports research, informs policy, identifies disparities, and drives improvements in patient outcomes and system performance.

Evidenced-based data deliver answers for state EMS managers and directors, clinicians, patients, speed cures to the bedside, and helps us architect solutions in the prehospital care environment.

Our success in the past two and a half decades demonstrates our consistent ability to propel ideas from data into successful research projects. Our careful data capture, analyses, and regulatory expertise will result in new guidelines based on robust and accurate data sources. Our ability to adapt and leverage novel approaches continues to position us to build solutions to complex research designs, not just give advice. We commit to grow and expand our capabilities to deliver cutting-edge research findings.

We continue working with our national EMS stakeholders, State EMS offices, NHTSA OEMS, and our University partners to drive our priorities and guide our development. We look forward to the next phase of NEMSIS. We believe there is a future for the NEMSIS TAC and Utah DCC in many other fields of research and communication.

As a nationally known and trusted Technical Assistance Center (TAC), we leverage our global science, our national and international reputation, and the resources and expertise of the NEMSIS TAC and University of Utah partners to plan a bright future in the continuation of EMS data.



NEMSIS TAC's Extensive Portfolio of Peer-Reviewed Journal Articles is Driving Research Forward

Using NEMSIS Data to Measure Rapid EMS Practice Change During COVID-19

Using the NEMSIS public-release dataset, researchers analyzed more than 150 million EMS records to examine how EMS agencies responded to early CDC guidance during the COVID-19 pandemic. NEMSIS data evaluates real-world changes in EMS clinical practice at a national scale.



Landmark NEMSIS-Based Publications

1. **Out-of-Hospital Cardiac Arrest in US Airports**
   JAMA Network Open
2. **Association of Volume and Prehospital Pediatric Care Quality in EMS: Retrospective Analysis of a National Sample**
   BMJ Quality & Safety
3. **Ambulance Deserts and Inequities in Access to Emergency Medical Services Care**
   Journal of Trauma and Acute Care Surgery
4. **Predictors of Non-Transport by EMS After a Nonfatal Opioid Overdose: A National Analysis**
   Health Affairs Scholar
5. **Changing Epidemiology of EMS Calls for Children in the United States During COVID-19 and Reopening**
   Prehospital Emergency Care
6. **Nationwide Trends in Prehospital Blood Product Use After Injury (2020–2023)**
   Transfusion
7. **Prehospital Cricothyrotomy for Emergency Airway Management**
   CHEST
8. **Disparities of Aspirin Administration for Prehospital Chest Pain and STEMI**
   Prehospital Emergency Care
9. **Increase in 9-1-1 Activations for Obstetric-Related Emergencies Following the Dobbs Decision**
   American Journal of Epidemiology
10. **Patterns in California Ambulance Patient Offload Times by Local EMS Agency**
    JAMA Network Open



The Future of NEMSIS

N. Clay Mann, PhD, MS, MBA

Professor, NEMSIS TAC Principal Investigator
University of Utah school of Medicine

The extraordinary commitment and close collaboration among EMS clinicians, State EMS Offices, and NHTSA Office of EMS have transformed prehospital care by establishing NEMSIS as the gold standard for healthcare data in the United States. By standardizing documentation from the patient's side to national repositories, this shared dedication ensures that prehospital data are not only exceptionally robust but delivered with unprecedented timeliness. EMS clinicians on the front lines provide the essential clinical insight, State EMS Offices drive vital regional oversight, and software vendors supply the innovative tools needed to make seamless integration possible. Together, this united effort empowers researchers, policymakers, and medical leaders to analyze trends in real time, elevate patient care quality, and build a safer, more responsive emergency healthcare system nationwide.

The next-generation EMS will only become more data-driven through integration of artificial intelligence, real-time telemetry, and autonomous logistics, shifting the traditional model from basic transit to high-tech, point-of-care emergency medicine. AI-powered dispatch, automated documentation, treatment in place, advanced diagnostics and therapeutics, wearables and drones... all will require simultaneous data exchange and real-time dataset streams to function seamlessly.

It will be our joint mission to preserve this commitment as we innovate together to ensure NEMSIS data continues to inform patient care, clinician safety, and community wellness.


PARAMEDIC
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THANK YOU
25TH
ANNIVERSARY

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