



TEXAS
Health and Human
Services

**Texas Department of State
Health Services**

EMSTR Data Quality Webinar Series: Thorough Documentation When It Matters Most

September 11, 2025

The Emergency Medical Services and Trauma Registries (EMSTR) Team

Today We Remember



Members of the Texas A&M Task Force 1 at Ground Zero

📷 Credit: Courtesy photo

In the wake of the 9/11/2001 attacks on the U.S., the National Association of EMS Directors, in conjunction with the National Highway Traffic Safety Administration (NHTSA), recommended the development of a comprehensive EMS database.

In **2003**, all 50 states and two territories signed a Memorandum of Understanding committing to a specific set of data elements and standards for national submission.

EMS Registry Background

What is In EMSTR



TEXAS
Health and Human
Services

Texas Department of State
Health Services

About EMSTR

- EMSTR collects reportable event data from EMS providers, hospitals, justices of the peace, medical examiners, Long Term Acute Care (LTAC) facilities, and rehabilitation facilities. This data is maintained within four registries:
 - Emergency Medical Services Registry
 - Trauma Registry
 - Traumatic Brain Injury / Spinal Cord Injury Registry
 - Submersion Registry
- **25 Texas Administrative Code (TAC), [Rule 103.5](#)**, states EMS providers must report all EMS responses to the Texas Department of State Health Services (DSHS) EMSTR within ninety (90) calendar days of the EMS call for assistance.

NOTE: An EMS response is a resulting action from a call for assistance where an EMS provider is dispatched to, responds to, provides care to, or transports a person.

EMSTR Updates

- Final 2024 EMS and trauma data closeout:
 - EMS – 4,801,876
 - Trauma – 192,370
- 2025 EMS and trauma progress:
 - EMS – 3,495,498*
 - Trauma – 98,214*

Program is on track to exceed 2024 numbers.

*As of 09/10/2025



EMS Provider Reporting Requirements

- **Data Elements and Methods:**

- 1) Submit data elements defined by the appropriate data dictionaries to EMSTR's online registries.
- 2) If you have no calls for assistance in a month, you must provide a No Reportable Data (NRD) report to EMSTR for that month.

- **Third-Party Services Vendor:**

- 1) You may use a third-party services vendor to submit data to EMSTR. You must have a legally binding agreement between you and the third-party services vendor and provide that document to EMSTR before the third-party services vendor can submit the data to EMSTR on your behalf.
- 2) If you use a third-party services vendor, you are ultimately responsible for the complete, accurate, and timely reporting of data to EMSTR.

The National EMS Information System

National EMS Information System (NEMSIS) Primary Goal: To improve understanding of, confidence in, and support for EMS data collection and analysis across all target audiences within the EMS community; to provide a better understanding of NEMSIS data elements that will lead to EMS data being utilized more effectively to improve patient care.

Element Types:

Mandatory – A unique response is required. For example, the Agency ID number.

Required – A response is required but the null-value is permissible. For example, patient's home county.

Recommended – Validation rules are left to the State(s) to determine. For example, patient's first name.

Optional – The element is nationally available, but a response is not needed on each electronic patient care record (ePCR). For example, temperature method or external ID number.

Custom – Individual elements or validation processes made available on a state-by-state basis. There are very few custom elements in Texas.

EMS Case Definitions

According to NEMSIS, case definitions typically “cast a wide net” to successfully capture elements based on a variety of documentation styles and practices.

Case Definition Examples

Behavioral Health
Cardiac Arrest
Influenza-Like Illness
Micromobility
Motor Vehicle Crash—Car, Truck, or Bus
Motor Vehicle Crash—Motorcycle
Motor Vehicle Crash—Pedal Cycle
Motor Vehicle Crash—Pedestrian
Opioid Overdose
Patient Death
Seizure
Sepsis
STEMI
Stroke
Trauma Center Need

Stroke Inclusion Example from NEMSIS

Criteria Description - patient care reports (PCRs) where:

- Any symptom or impression is stroke **or**
- Stroke scale result is positive **or**
- Stroke protocol is used **or**
- A stroke destination team pre-arrival alert or activation is performed.

EMSTR Data Requests

- The Injury and Violence Prevention Analytics Branch fulfills data requests on a first come, first serve basis.
- [Data Analysis Request Form](#)
 - Use the form for specialized requests or a Public Use Data File (PUDF) request.
 - The PUDF provides a line-listing of each case for a given dispatch/calendar year with a combined list of de-identified variables (approximately 4.75 million cases/annually). The list of variables is pre-defined and you are not able to add in previously removed variables.
- Examples:
 1. [Bloomberg News](#) – Analysis of 2022, 2023, and 2024 EMS Response Times (time spent on scene, responding and transporting) in the greater San Antonio area.
 2. [Regional Advisory Council/Performance Improvement](#) – Analysis of Chief Complaints, Injury Severity, Mechanism, Age, and Contributing Factors for performance improvement.
 3. [Governor's EMS and Trauma Advisory Council \(GETAC\)](#) – Pediatric Committee project to evaluate the burden and timeliness of treatment of prehospital cardiac arrest patients at schools, interfacility transfer (timeliness) etc.

Stroke Care

Stroke Assessment

Severity Scoring Tools

Prehospital Alert

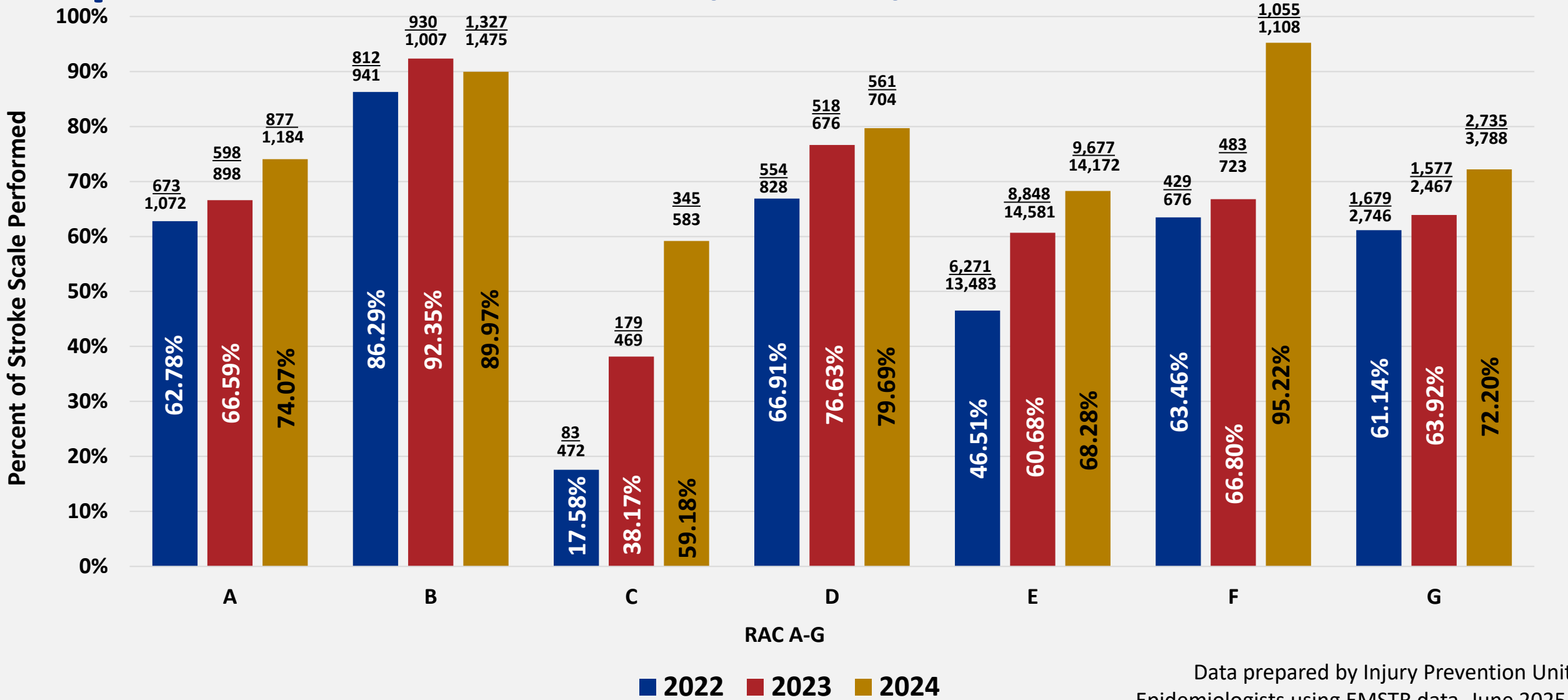
Destination Decision Information



TEXAS
Health and Human
Services

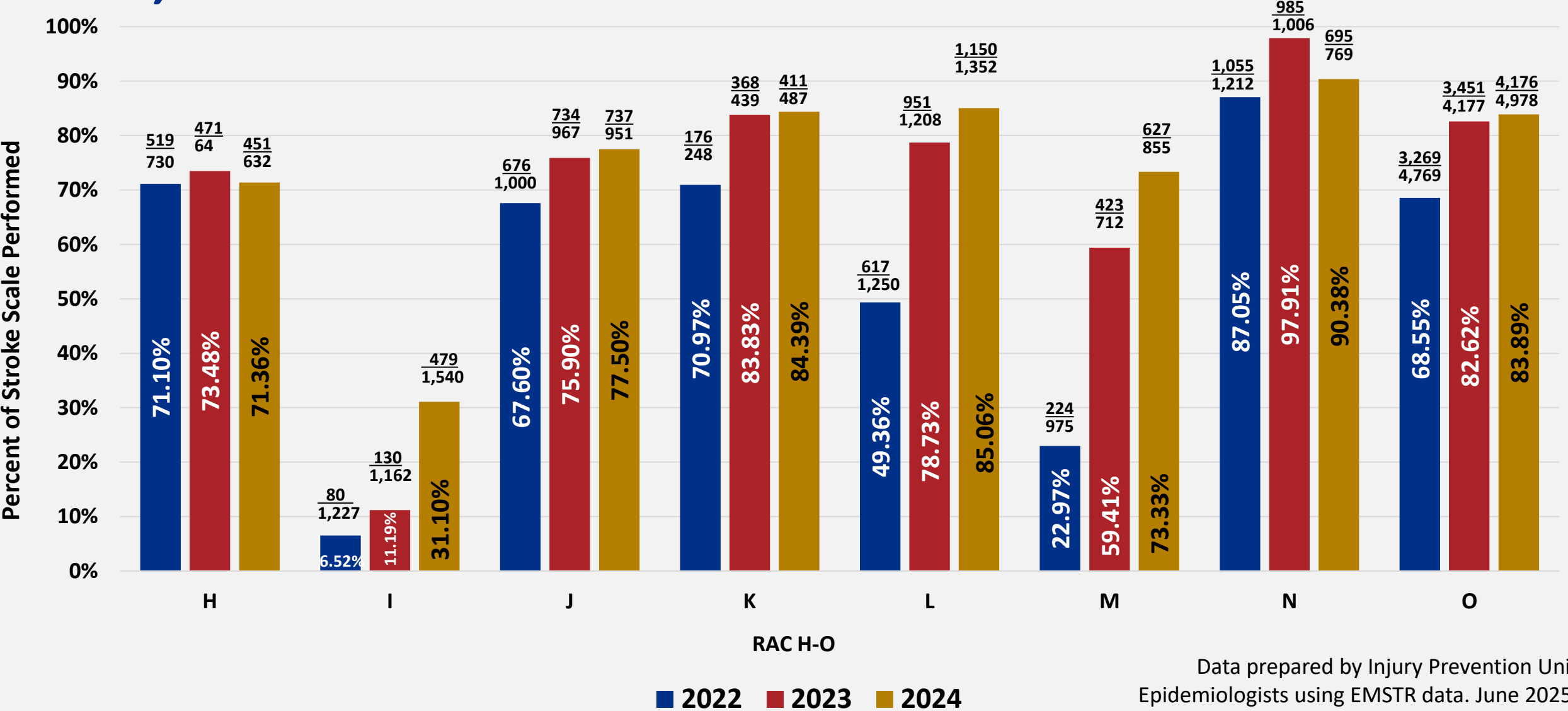
Texas Department of State
Health Services

Stroke Scale by Regional Advisory Council (RAC) A-G for Suspected Stroke Patients, Texas, 2022-2024

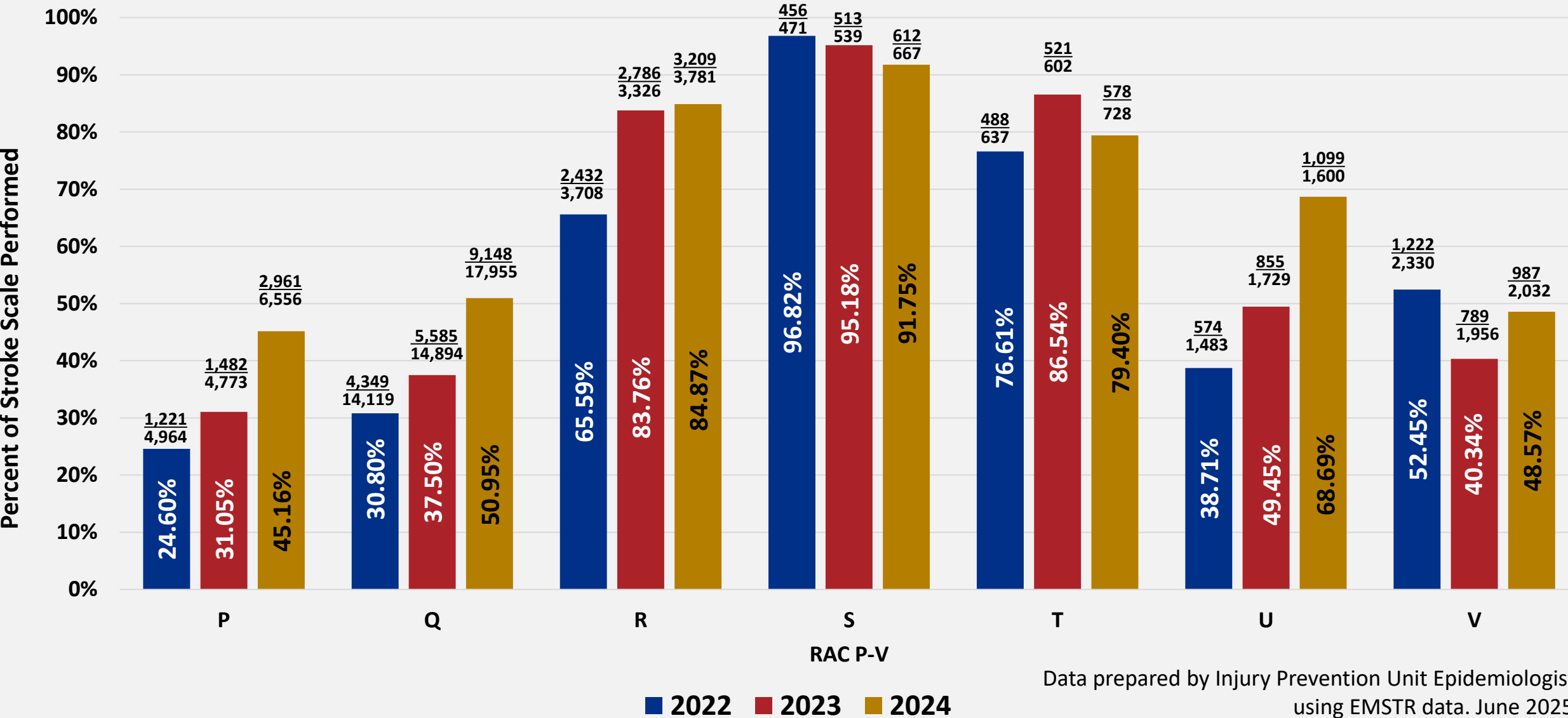


Data prepared by Injury Prevention Unit
Epidemiologists using EMSTR data. June 2025.

Stroke Scale by RAC H-O for Suspected Stroke Patients, Texas, 2022-2024



Stroke Scale by RAC P-V for Suspected Stroke Patients, Texas, 2022-2024

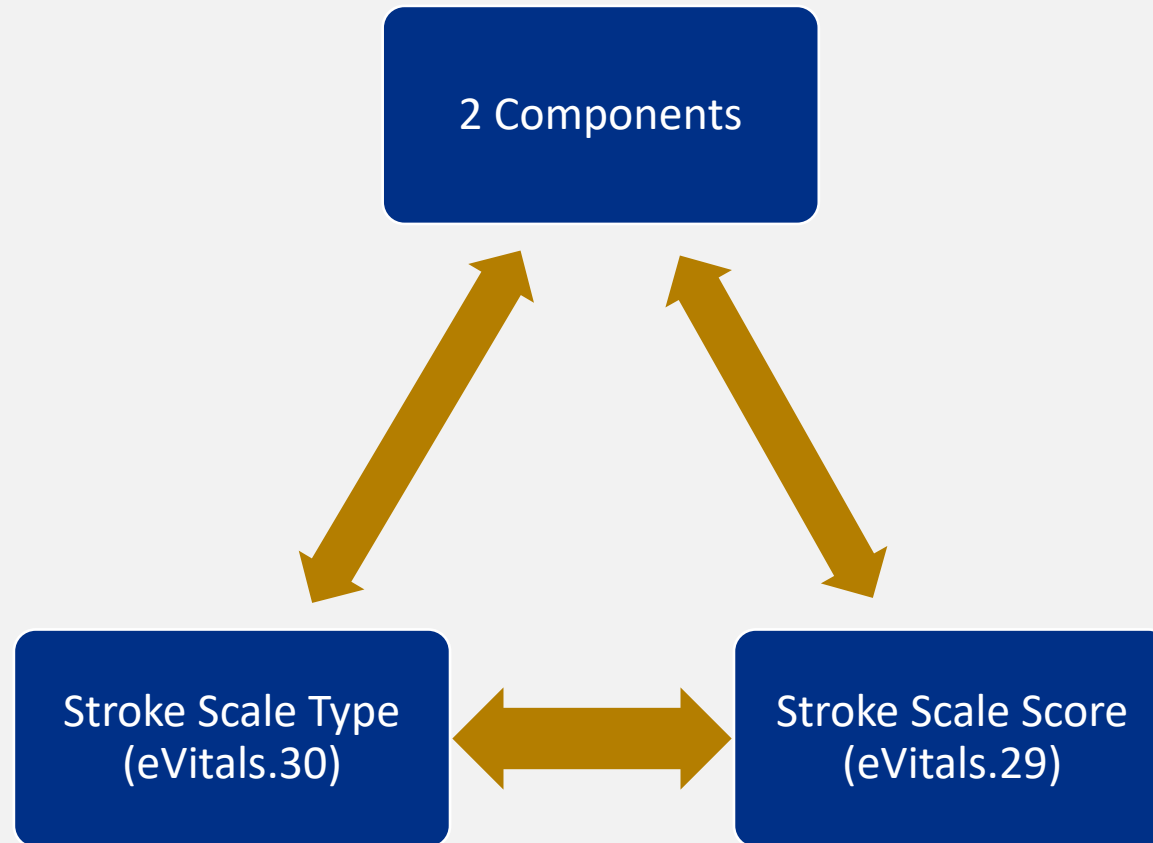


Stroke Scale Status for Suspected Stroke Patients, Texas, 2022-2024

Status	2022	2023	2024
Stroke Scale Performed	28,192	33,858	44,807
Percentage	47.18%	56.53%	64.82%
Not Applicable	11,326	0	0
Percentage	18.96%	0.00%	0.00%
Not Recorded	20,234	26,040	24,322
Percentage	33.86%	43.47%	35.18%
Totals	59,752	59,898	69,129

Data prepared by Injury Prevention Unit Epidemiologists
using data from EMSTR. June 2025.

Stroke Assessment and Scoring (1 of 2)

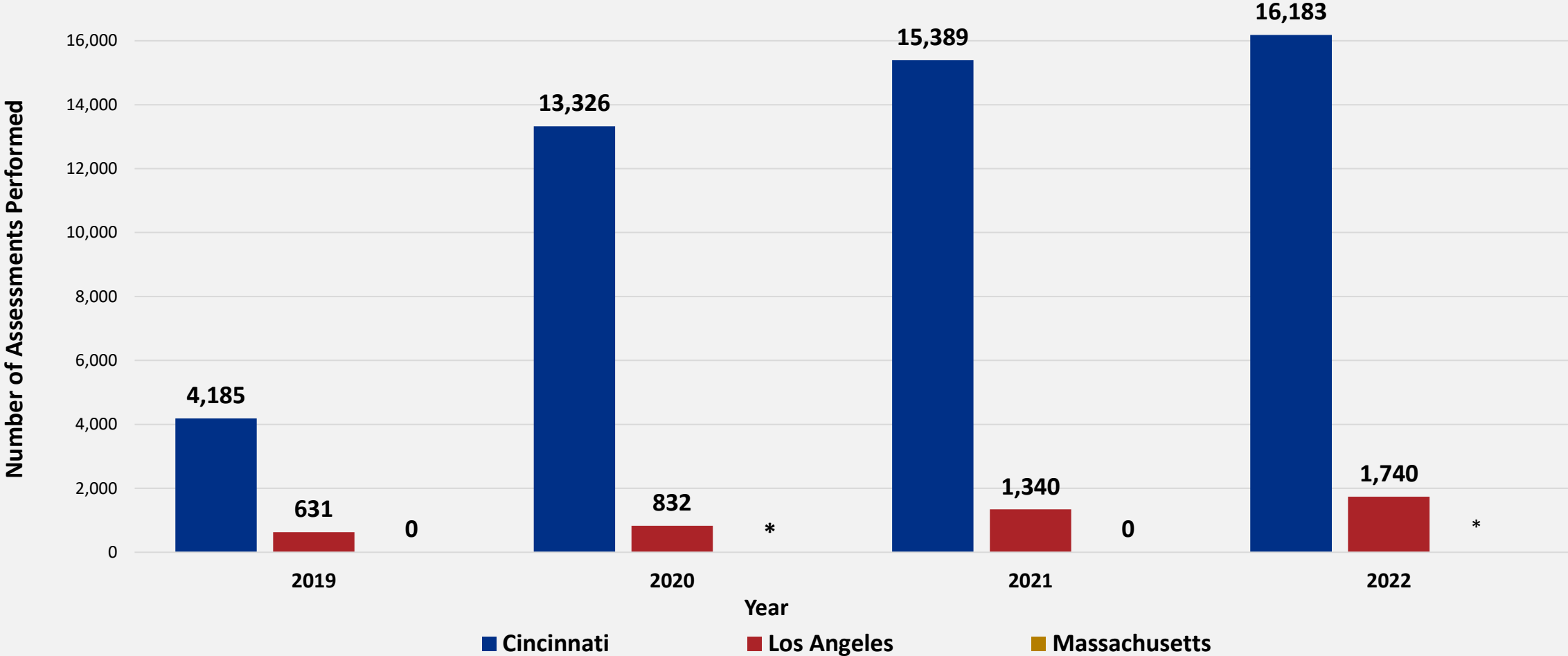


Based on 2022 EMS Data where the element, 'Providers_Primary Impression', was **Suspected Stroke/Transient Ischemic Attack (TIA)**:

- Only **39.41%** had a documented Stroke Scale type and score.
- **15.01%** were marked 'N/A' and **45.58%** 'Not Recorded'.

Stroke Assessment and Scoring (2 of 2)

Preference by Assessment Type



Consider contacting your EMS vendor if you believe this information is not available or in a logical location for your providers to document.

How We Improve Stroke Scale Scoring

- All Vital Signs fields (including Stroke Assessment) allow multiple responses:
- Each time a Stroke Assessment Type is selected, you will need to document a corresponding result.
 - There is no limitation on the combination of screening tools. For example, you can enter **Cincinnati + FAST-ED**.

eVitals.29

StateNational

eVitals.29 - Stroke Scale Score

Definition

The findings or results of the Stroke Scale Type (eVitals.30) used to assess the patient exhibiting stroke-like symptoms.

National Element	Yes	Pertinent Negatives (PN)	Yes
State Element	Yes	NOT Values	Yes
Version 2 Element	E14_24	Is Nillable	Yes
Usage	Required	Recurrence	1 : 1

Associated Performance Measure Initiatives

Stroke

Attributes

NOT Values (NV)
7701001 - Not Applicable7701003 - Not Recorded

Pertinent Negatives (PN)
8801019 - Refused8801023 - Unable to Complete

Code List

Code	Description
3329001	Negative
3329003	Non-Conclusive
3329005	Positive

eVitals.30

StateNational

eVitals.30 - Stroke Scale Type

Definition

The type of stroke scale used.

National Element	Yes	Pertinent Negatives (PN)	No
State Element	Yes	NOT Values	Yes
Version 2 Element		Is Nillable	Yes
Usage	Required	Recurrence	1 : 1

Associated Performance Measure Initiatives

Stroke

Attributes

NOT Values (NV)
7701001 - Not Applicable7701003 - Not Recorded

Code List

Code	Description
3330001	Cincinnati Prehospital Stroke Scale (CPSS)
3330004	Los Angeles Prehospital Stroke Screen (LAPSS)
3330005	Massachusetts Stroke Scale (MSS)
3330007	Miami Emergency Neurologic Deficit Exam (MEND)
3330009	NIH Stroke Scale (NIHSS)
3330011	Other Stroke Scale Type
3330013	FAST-ED
3330015	Boston Stroke Scale (BOSS)
3330017	Ontario Prehospital Stroke Scale (OPSS)
3330019	Melbourne Ambulance Stroke Screen (MASS)
3330021	Rapid Arterial occlusion Evaluation (RACE)
3330023	Los Angeles Motor Score (LAMS)

Consider using a **Severity** Assessment as part of your destination decision.

Additional Considerations

Prehospital Alert(s) -> eDisposition.24 + eDisposition.25 are indicated for cardiac arrest, trauma activation, STEMI*, sepsis, or stroke alert.

eDisposition.24 - Destination Team Pre-Arrival Alert or Activation			
Definition			
Indication that an alert (or activation) was called by EMS to the appropriate destination healthcare facility team. The alert (or activation) should occur prior to the EMS Unit arrival at the destination with the patient.			
National Element	Yes	Pertinent Negatives (PN)	No
State Element	Yes	NOT Values	Yes
Version 2 Element		Is Nillable	Yes
Usage	Required	Recurrence	1 : 1
Associated Performance Measure Initiatives			
Cardiac Arrest STEMI Stroke Trauma			
Attributes			
NOT Values (NV) 7701001 - Not Applicable 7701003 - Not Recorded			
Code List			
Code	Description		
4224001	No		
4224003	Yes-Adult Trauma		
4224005	Yes-Cardiac Arrest		
4224007	Yes-Obstetrics		
4224009	Yes-Other		
4224011	Yes-Pediatric Trauma		
4224013	Yes-STEMI		
4224015	Yes-Stroke		
4224017	Yes-Trauma (General)		
4224019	Yes-Sepsis		

eDisposition.25 - Date/Time of Destination Prearrival Alert or Activation			
Definition			
The Date/Time EMS alerted, notified, or activated the Destination Healthcare Facility prior to EMS arrival. The EMS assessment identified the patient as acutely ill or injured based on exam and possibly specified alert criteria.			
National Element	Yes	Pertinent Negatives (PN)	No
State Element	Yes	NOT Values	Yes
Version 2 Element		Is Nillable	Yes
Usage	Required	Recurrence	1 : 1
Associated Performance Measure Initiatives			
Airway Cardiac Arrest Pediatric STEMI Stroke Trauma			
Attributes			
NOT Values (NV) 7701001 - Not Applicable 7701003 - Not Recorded			
Constraints			
Data Type	minInclusive	maxInclusive	
dateTime	1950-01-01T00:00:00-00:00	2050-01-01T00:00:00-00:00	

Note the **time** you notified the receiving facility of the incoming stroke patient.

*STEMI = ST-Elevation Myocardial Infarction

Destination Information Considerations

- **Reason for Choosing Destination** (eDisposition.20) – Look at distance, specialty care, medical direction, etc.
- **Hospital Capability** (eDisposition.23) – Note the designation level (listed on the next slide) or thrombectomy capability*.
- Texas receiving facilities – [With DSHS ID Numbers:](#)
 - Hospital
 - Long term acute care (LTAC) facilities
 - Rehabilitation facilities

*Thrombectomy capable – when a hospital can perform endovascular (minimally invasive surgery) thrombectomy (blood clot removal) procedures (used during an acute TIA) and post-procedural care.

Stroke Destination and Facility Lists

- Comprehensive (**Level I**) stroke designation: The hospital must meet DSHS-approved national stroke standards of care for a Comprehensive Stroke Center, participate in the hospital's Regional Advisory Council (RAC) and regional stroke plan, and submit data to DSHS as requested.
- Advanced (**Level II**) stroke designation: The hospital must meet DSHS-approved national stroke standards of care for a non-Comprehensive Thrombectomy Stroke Center, participate in the hospital's RAC and regional stroke plan, and submit data to DSHS as requested.
- Primary (**Level III**) stroke designation: The hospital must meet DSHS-approved national stroke standards of care for a Primary Stroke Center, participate in the hospital's RAC and regional stroke plan, and submit data to DSHS as requested.
- Acute Stroke-Ready (**Level IV**) stroke designation: The hospital must meet DSHS-approved national stroke standards of care for an Acute Stroke-Ready Center, participate in the hospital's RAC and regional stroke plan, and submit data to DSHS as requested.

Blood Products

Procedures

Medications

Texas Wristband



TEXAS
Health and Human
Services

Texas Department of State
Health Services

Documenting Blood Products - eProcedures

eProcedure.03 – ‘parent’ element / procedure performed: Select “*Transfusion of Blood Product*”.

Sub-category elements under eProcedure.03:

- eProcedures.01 – Date/time procedure performed.
- eProcedures.02 – Procedure performed prior to this unit’s EMS care.
- eProcedures.05 – Number of procedure attempts.
- eProcedures.06 – Procedure successful.
- eProcedures.07 – Procedure complication.
- eProcedures.08 – Response to procedure.
- eProcedures.10 – Role/type of person performing the procedure.

NOTE: If multiple units of product are administered, please document as separate procedures (regardless of successful administration).

Documenting Blood Products - eMedication

eMedications.03 – ‘parent’ element / medication administered: Select Transfusion of Whole Blood or Packed Red Cells, Transfusion of Platelets when appropriate.

Subcategory elements under eMedications.03:

- eMedication.01 – Date/time medication administered.
- eMedication.05 – Medication administered dosage.
- eMedications.06 – Medication administered units – measure in milliliters (**ML**).
- eMedication.07 – Response to medication – document if the patient **improved**.
- eMedication.08 – Medication complications.
- eMedications.10 – Role/type of person administering medication.

NOTE: If multiple units of product are administered, please document as separate medications given (regardless of successful administration).

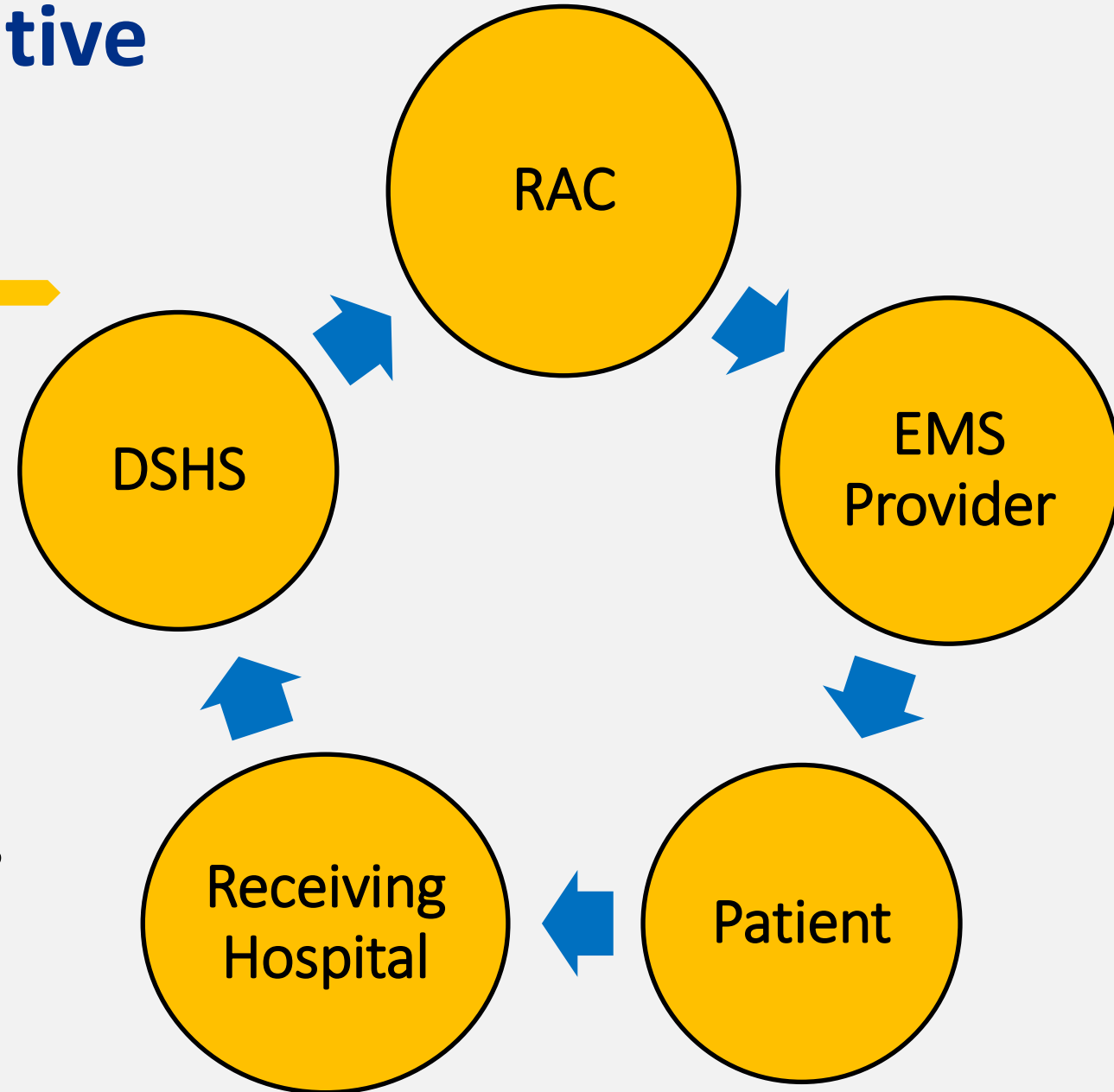
Texas EMS Wristband Initiative

Linked Data and Triage Opportunities

- Your local Regional Advisory Council (RAC) distributes Texas EMS Wristbands to EMS providers.

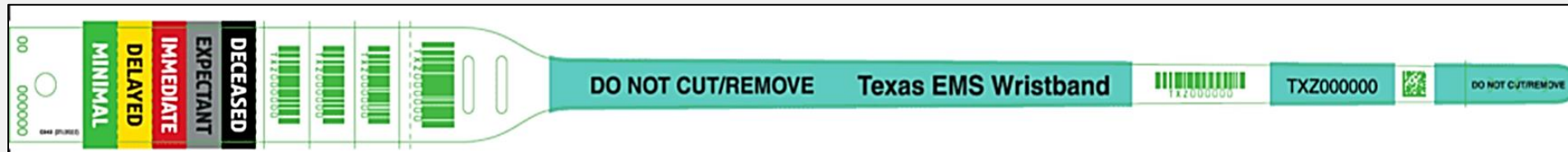
NOTE: Please contact your specific [RAC](#) with questions on procurement.

- The number is entered in [eOutcome.03](#) and [eOutcome.04](#).
- Starting **September 1st, 2025**, Texas hospitals are required to record the Patient Wristband in their trauma patient care report export.



Texas EMS Wristband Considerations

Linked Data and Triage Opportunities



- For eOutcome.03 (**External ID Type**): Select “Other”.
- For eOutcome.04 (**External ID/Number**): input the full wristband information (i.e., TXPH123456).

NOTE: Please include the alpha character(s) after the “TX” (i.e., TX~~AL~~123456) in your record.

- Alpha characters are manufacturer-specific.
- This is designed to prevent duplication.

EMSTR Quality Improvement

Real-Time Data

Data Completeness

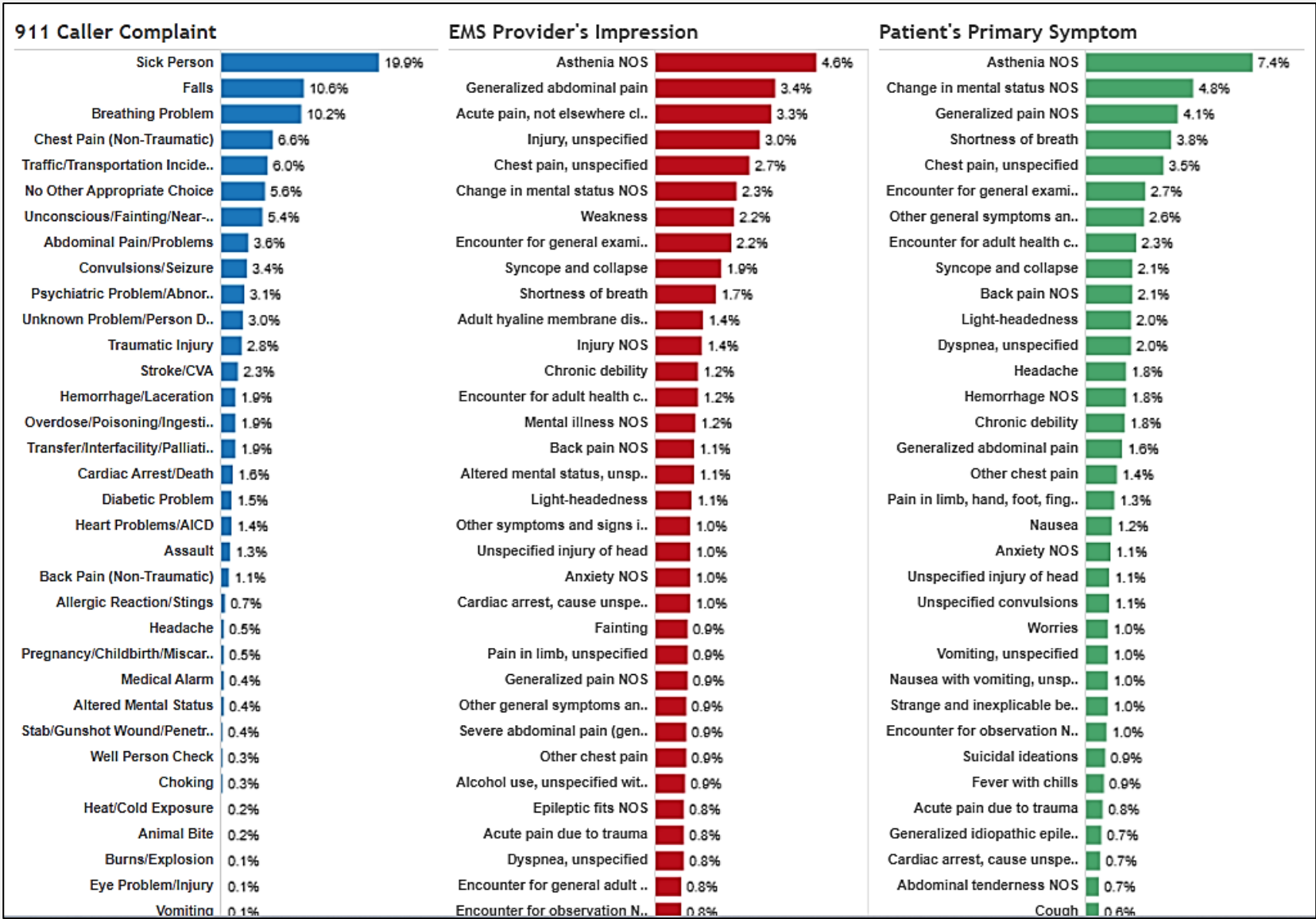
Quality of Care Improvement



TEXAS
Health and Human
Services

Texas Department of State
Health Services

Reasons Texans Call for an Ambulance



911 caller complaint = eDispatch.01 (complaint reported to dispatch).

Provider's impression denotes the documented result for eSituation.11 = primary impression.

Patient's Primary Symptom = eSituation.09.

Data Timeliness

Submission Lag – The time elapsed between the Public Safety Answer Point (dispatch) timestamp and the receipt of the patient record by NEMSIS:

- i. Requires the EMT/paramedic to submit records to their ePCR vendor.
- ii. Agency or vendor sends the record to EMSTR through a web service, file upload, or direct entry.
- iii. EMSTR Online receives and processes the file which can contain up to 500 unique patient contacts.
- iv. DSHS transmits records that pass validation to NEMSIS.

EMS

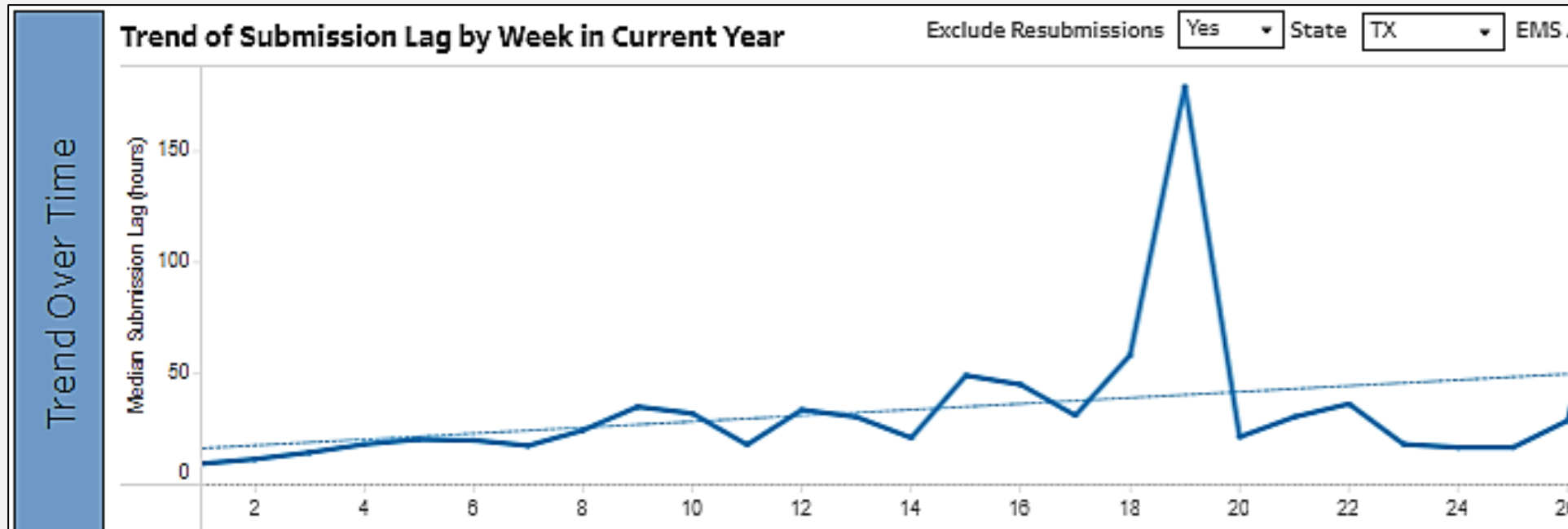
Vendor

EMSTR

NEMSIS

Data Timeliness Example

NEMESIS Tracking Example



Average Submission lag for Texas has decreased from 10 days in 2022 to approximately 30 hours for 2025 (YTD).

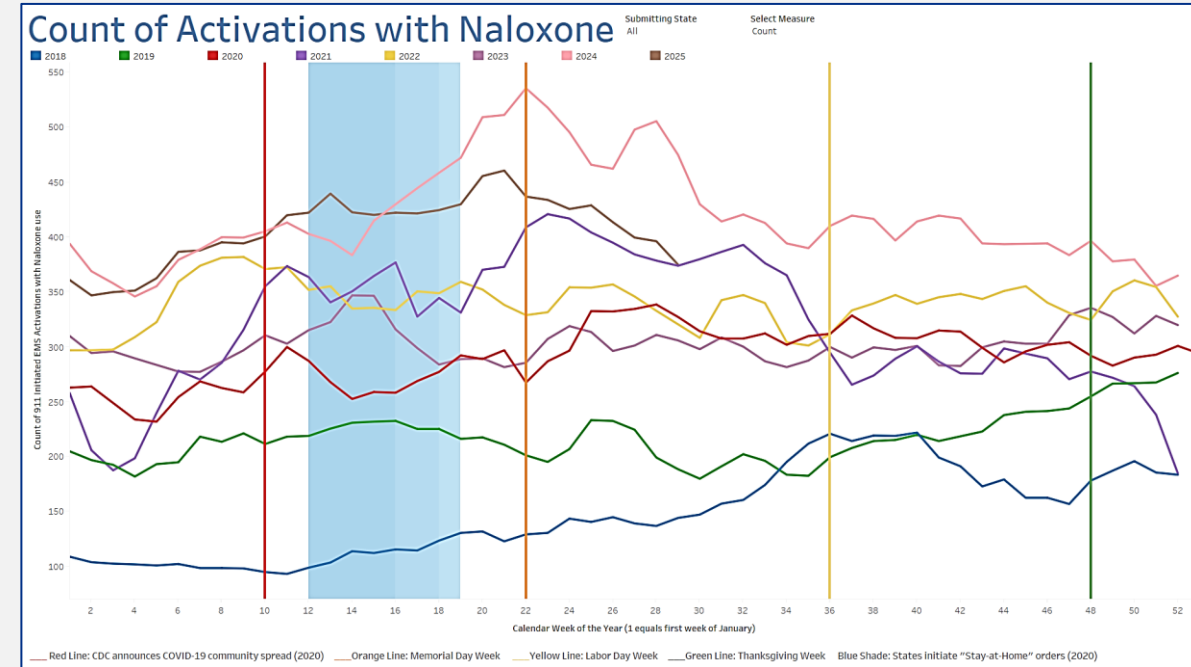
Approximately **80** large providers have driven this progress by sending records in 5-10 hours (real-time) including Dallas Fire, City Ambulance, and the San Antonio Fire Department.

Reasons to Submit in Real-Time*

- The system assigns a Universal Unique Identifier (**UUID**) to elements in every NEMESIS 3.5 record to make the chart easy to update upon resubmission.
- Records are overwritten in the state and national database:
 - Allows for easy incorporation of hospital outcome information.
 - Provides seamless incorporation of missing vitals, medications, billing info, etc.

***Real-Time:** When a provider submits the patient record/report within hours of the response.

Naloxone Activation Count Example



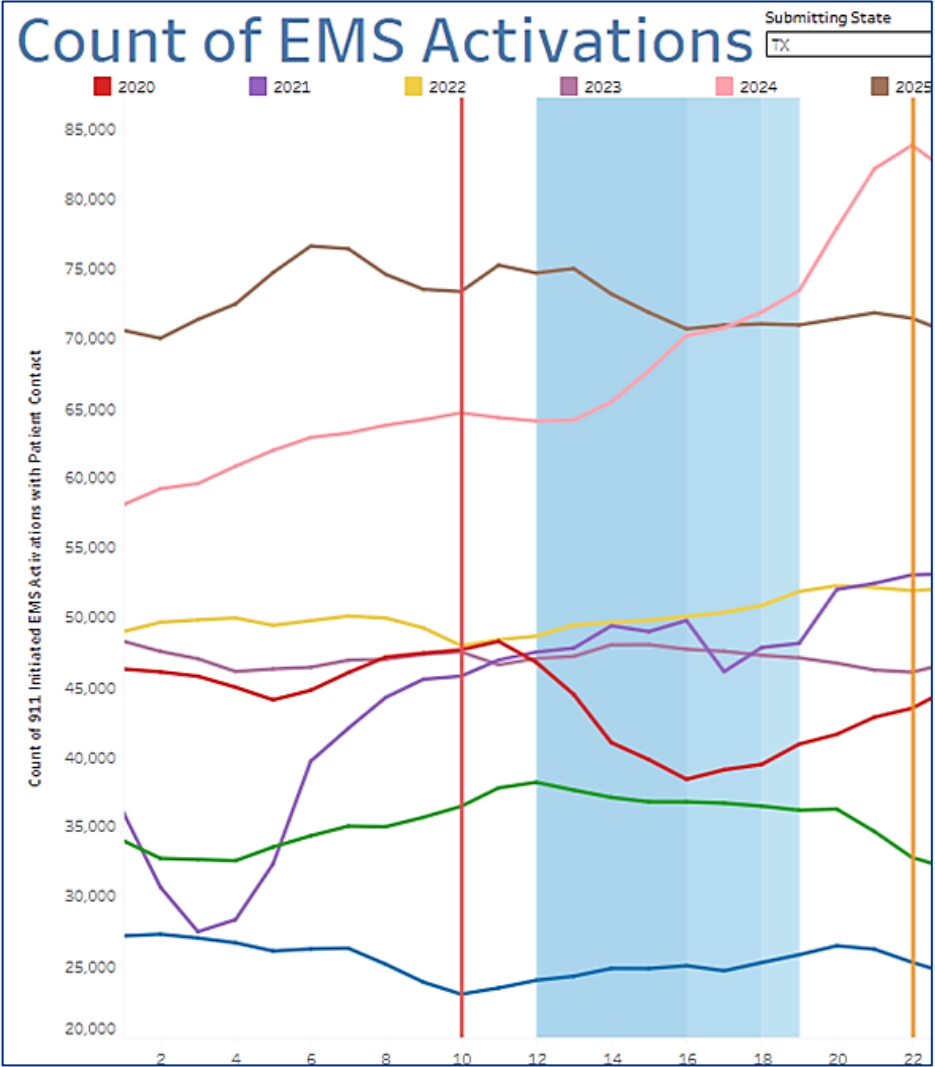
Consider your QA process:

- Are records being held after hospital transmission?
- Are charts with updates being resubmitted to EMSTR?
- Consult with your ePCR vendor if unsure!

Data Completeness

Performance Measure	2020	2021	2022	2023	2024 YTD
Number of unique Trauma Activations reported to EMSTR by the closure of the annual dataset	137,815	153,126	162,081	183,759	192,142

Performance Measure	2020	2021	2022	2023	2024 YTD	2025 YTD
Number of unique EMS Records Received by NEMSIS	3.989 Million	4.025 Million	4.004 Million	4.159 Million	4.796 Million	2.644 Million



Note: Only data through 4/25/2025 (week 17) was due at the time this report was pulled.

Data Quality Improvement Work

Performance Improvement Consultations

- Reached out to 100+ agencies with major documentation improvement needs.
- Main focus is on stroke scoring, cardiac arrest documentation, and hospital notification.

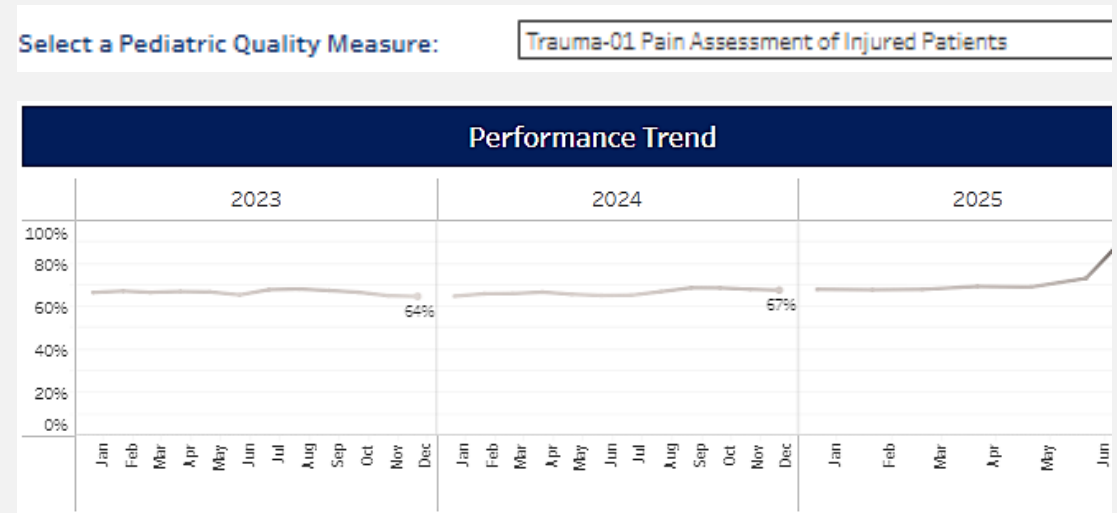
National Association of State EMS Officials – EMSTR is on the Data Manager’s Council, Safe Transport of Children Committee, and Rural EMS Committee, exploring additional data elements and validation systems to improve EMS record submissions.

Texas Water Safety Coalition – Drowning

- 100+ participating member agencies.
- Created a submersion algorithm for using EMS data.

Monitoring Performance Trends

- Individual agency consultation as needed.
- Working with software vendors.



Helpful Resources for Registry Users

- [SHARP Report Quick Guide](#) - Reports available to each user type.
- [EMSTR Reports SHARP Reporting Guide](#) - “How to” run each report available in EMSTR Online.
- [EMSTR FAQs](#) - Common questions and answers.
- [Online Submission Guide](#) - For direct patient entry providers.
- [Data Quality Webinar Series](#) – EMSTR hosts these webinars every 6-8 weeks.



Thank you!

EMSTR Data Quality Webinar Series:
Thorough Documentation When It Matters Most

injury.web@dshs.texas.gov