TEXAS Health and Human Services | Texas Department of State Health Services

AGENDA
Governor's EMS and Trauma Advisory Council (GETAC)
Department of State Health Services (DSHS)

Friday, August 22, 2025
8:00 AM
DoubleTree by Hilton Austin, Phoenix Central Ballroom
6505 N Interstate 35
Austin, TX 78752

This meeting will be conducted live and virtually through Teams. Virtual meeting links are posted to the GETAC webpage at www.dshs.texas.gov/dshs-ems-trauma-systems/governors-ems-trauma-advisory-council.

Meeting Notice: The use of artificial intelligence (AI) bots is prohibited in this meeting. In accordance with HHS policy, the use of Artificial Intelligence (AI), also known as "AI notetakers," is expressly prohibited. Producers will not admit a 'bot' or other autonomous agent into the meeting. If a 'bot' should inadvertently gain entrance, it will be removed from the meeting by one of our producers.

1. Call to order – Alan Tyroch, MD, Chair

2. Roll call – DSHS Staff

3. Reading of the GETAC vision and mission – Alan Tyroch, MD, Chair

   GETAC Vision:
   A unified, comprehensive, and effective Emergency Healthcare System.

   GETAC Mission:
   To promote, develop, and advance an accountable, patient-centered Trauma and Emergency Healthcare System

4. Review and approval of minutes – June 2025

5. Chair announcements – Alan Tyroch, MD, Chair

6. State reports
   a. DSHS EMS/Trauma Systems (EMS/TS) Section
   b. DSHS Injury Prevention Unit - EMS and Trauma Registries (EMSTR)

Discussion, public comment, and possible action on the following items:
(Public comment time may be limited at the Chair's discretion.)

7. Discuss and evaluate: Recommendations regarding the use of health information exchanges (HIEs) for radiological image sharing for patient transfers to enhance patient care by enabling secure, efficient, and real-time access to diagnostic imaging, reducing duplication of studies, and facilitating advanced care planning at receiving facilities.

8. GETAC committee action items – Committee Chairs
   a. Air Medical and Specialty Care Transport
      A. Approve: DPS Trooper Education

B. Approve: NSA/Aircraft Utilization Guidelines
C. Approve: Pulsara Implementation Guidelines for the Air Medical Provider

b. Cardiac Care
c. Disaster Preparedness and Response
   A. Update: Pre-hospital Whole Blood Task Force
d. Emergency Medical Services
   A. Approve: Workplace Violence in EMS survey
e. EMS Education
f. EMS Medical Directors
   A. Update/Approve: Red Lights & Sirens (RLS) Position Statement
g. Injury Prevention and Public Education
   A. Approve: Workplace Violence Position Statement
h. Pediatric
   A. Approve: Pediatric Consideration for Consultation and Transfer document
   B. Approve: Public resource for the Pediatric Imaging Guideline
   C. Approve: Public resource for the Magnet/Battery Ingestion Toolkit
   D. Approve: Public resource for the Sudden Cardiac Arrest/Death Toolkit
   E. Update: TX Pediatric Readiness Improvement Project
i. Stroke
   A. Approve: Pediatric Stroke Triage Algorithm resource documents
   B. Approve: Pediatric Stroke Task Force tip sheet
   C. Approve: Rural Stroke Needs Assessment Survey
j. Trauma Systems

9. System Collaboration for Outcomes Review (SCOR)
   a. Update: Q3 performance data
      A. Prehospital Stroke Screening Performance Report
      B. Hospital Stroke Management Performance Report
10. GETAC Task Force and workgroup update and action items
   a. Burn Care Task Force
   b. EMS Wall-Times Task Force
   c. Deconfliction workgroup

11. Summary of Executive Committee activities

12. Texas EMS Trauma Acute Care Foundation (TETAF) report

13. Discuss: 2026 meeting dates

14. Final public comments

15. Final announcements
   a. 2026 Committee Applications

16. Next meeting dates
   a. Strategic planning retreat
   b. Q4 – November 21-25, 2025, in conjunction with the Texas EMS Conference in Fort Worth.

17. Adjournment - Alan Tyroch, MD, Chair

Public Comment: The Texas Department of State Health Services (DSHS) welcomes public comments on topics related to Emergency Health Care. Public members are encouraged to participate in this process by providing written public comments to DSHS by emailing deidra.lee@dshs.texas.gov no later than 5:00 PM, August 15, 2025. Please include your name and either the organization you represent or that you will speak as a private citizen. Written comments are limited

to three minutes and will be read during the meeting for consideration by the Council. The request must contain your name, the name of the organization you represent (or an indication that you are speaking as a private citizen), and your direct phone number.

Public comment is limited to three minutes. Speakers must state their name, affiliation, and on whose behalf they are speaking. Public members using handouts are asked to provide an electronic copy in accessible PDF format that will be distributed by DSHS staff to Council members and state staff and for public distribution. Handouts are limited to two documentation pages (paper size: 8.5" by 11", one side only). Handouts must be emailed to DSHS by 5:00 PM, August 15, 2025, and include the name of the person commenting.

Note: These procedures may be revised at the discretion of DSHS.

Contact: Questions regarding agenda items, content, or meeting arrangements should be directed to Jorie Klein, DSHS, at 512-535-8538 or Jorie.Klein@dshs.texas.gov. People with disabilities who wish to attend the meeting and require auxiliary aids or services should contact Jorie Klein at 512-535-8538 or Jorie.Klein@dshs.texas.gov at least 72 hours before the meeting so appropriate arrangements can be made.

TITLE 25 HEALTH SERVICES
PART 1 DEPARTMENT OF STATE HEALTH SERVICES
CHAPTER 157 EMERGENCY MEDICAL CARE
SUBCHAPTER C EMERGENCY MEDICAL SERVICES TRAINING AND COURSE APPROVAL

~~§157.33. Certification.~~

~~(a) Certification requirements. A candidate for emergency medical services (EMS) certification shall:~~

~~(1) be at least 18 years of age;~~

~~(2) have a high school diploma or GED certificate:~~

~~(A) the high school diploma must be from a school accredited by the Texas Education Agency (TEA) or a corresponding agency from another state. Candidates who received a high school education in another country must have their transcript evaluated by a foreign credentials evaluation service that attests to its equivalency. A home school diploma is acceptable;~~

~~(B) an emergency care attendant (ECA) who provides emergency medical care exclusively as a volunteer for a licensed provider or registered FRO is exempt from paragraph (2) of this subsection.~~

~~(3) have successfully completed a Department of State Health Services (department) approved course; and~~

~~(4) The candidate has completed a state approved jurisprudence examination to determine the knowledge on state EMS laws, rules, and policies.~~

~~(5) submit an application, meeting the requirements in §157.3 of this title (relating to Processing EMS Provider Licenses and Applications for EMS Personnel Certification and Licensing), and the following nonrefundable fees as applicable:~~

~~(A) $60 for emergency care attendant (ECA) or emergency medical technician (EMT);~~

~~(B) $90 for AEMT or EMT-paramedic (EMT-P); and~~

~~(C) EMS volunteer--no fee. However, if such an individual receives compensation during the certification period, the exemption ceases and the individual shall pay a prorated fee to the department based on the number of years remaining in the certification period when employment begins. The nonrefundable fee for ECA or EMT certification shall be $15 per each year remaining in the certification. The nonrefundable fee for AEMT or EMT-P shall be $22.50 per each year remaining in the certification. Any portion of a year will count as a full year;~~

~~(6) provide evidence of current active or inactive National Registry certification at the appropriate level. National Registry First Responder certification is considered the appropriate corresponding certification level for an ECA; and~~

~~(7) submit fingerprints through the state approved fingerprinting service to undergo an FBI fingerprint criminal history check.~~

~~(b) Length of certification. A candidate who meets the requirements of subsection (a) of this section shall be certified for four years beginning on the date of issuance of a certificate and wallet-size certificate. A candidate must verify current certification before staffing an EMS vehicle. Certification may be verified by the applicant's receipt of the official department identification card, by using the department's certification website.~~

~~(c) Scheduling authority for certification examinations.~~

~~(1) Examinations shall be administered at regularly scheduled times in various locations across the state.~~

~~(2) The candidate shall be responsible for making appropriate arrangements for the examination.~~

~~(3) The department is not required to set special examination schedules for a single candidate or for a specific group of candidates.~~

~~(d) Time limits for completing requirements.~~

~~(1) An initial candidate for certification shall complete all requirements for certification no later than two years after the candidate's course completion date. The application will expire two years from the date the mailed application is postmarked, or the date a faxed, online submission or hand- delivered application is received at the department.~~

~~(A) The National Registry certification described in subsection (a)(5) of this section must remain current until the final requirement for state certification is met.~~

~~(B) The applicant shall update the application if any changes occur between the time of original submission and the time the final requirement for certification is met.~~

~~(2) A candidate who does not complete all requirements for certification within two years of the candidate's initial course completion date must meet the requirements of subsection (a) of this section, including the completion of another initial course to achieve certification.~~

~~(e) Non-transferability of certificate. A certificate is not transferable. A duplicate certificate may be issued if requested with a nonrefundable fee of $10.~~

~~(f) A candidate may apply for a lower level than the level of National Registry certification held.~~

~~(g) Voluntary downgrades.~~

~~(1) An individual who holds a current Texas EMS certification or paramedic license may be certified at a lower level voluntarily for the remainder of the~~

~~certification period by submitting an application for the lower level certification and the applicable nonrefundable fee as required in subsection (a)(4) of this section.~~

~~(2) On the date the downgrade is final, the previous higher level of certification/license shall be surrendered. To regain the original higher level of certification, the candidate shall follow late recertification procedures according to §157.34(e) of this title (relating to Recertification), within one year after the surrender date.~~

~~(h) Inactive certification. A certified EMT, AEMT, or EMT-P may make application to the department for inactive certification at any time during the certification period or within one year after the certificate expiration date.~~

~~(1) The request for inactive certification shall be accompanied by a nonrefundable fee of $30 in addition to the regular nonrefundable fee in subsection (a)(4)(A) and (B) of this section. If the final requirement is completed during the one-year period after expiration, the application fees listed in §157.34(e) of this title will be required. Volunteers are not exempt from inactive fees.~~

~~(2) Period of inactive certification.~~

~~(A) The inactive certification period shall begin upon date of issuance of the notice of inactive certification and remain in effect until the end of the original active certification period for those candidates who are currently certified. The candidate's active certification is surrendered upon issuance of the notice of inactive certification.~~

~~(B) If the candidate is within the final year of active certification and chooses to renew with inactive certification, the inactive certification begins on the first day after the expiration of the current active certificate and shall remain in effect for four years.~~

~~(C) If the candidate applies during and/or completes the final requirement for inactive certification within one year after the expiration of active certification, the inactive certification period shall remain in effect for four years from the date of issuance of the notice of inactive certification.~~

~~(3) While on inactive certification, a person shall not practice other than to act as a bystander rendering first aid or cardiopulmonary resuscitation (CPR) or the use of an Automated External Defibrillator in the capacity of a layperson. Practicing in any other capacity for compensation or as a volunteer shall be cause for denial of reentry and decertification.~~

~~(4) An individual shall not simultaneously hold inactive and active certification.~~

~~(i) Reciprocity.~~

~~(1) A person who is currently certified by the National Registry but did not complete a department-approved course may apply for the equal or lower level Texas certification by submitting a reciprocity application and a nonrefundable fee of $120.~~

~~(A) Applicants holding National Registry AEMT certification may be required to submit written verification of proficiency of AEMT skills from an approved education program.~~

~~(B) National Registry first responder certification is not eligible for reciprocity at the ECA level.~~

~~(C) A candidate will not be eligible for reciprocity if the National Registry certification expires prior to the completion of all requirements for certification as listed in this section.~~

~~(D) A candidate who meets the requirements of this section shall be certified for four years beginning on the date of issuance of a certificate and wallet-size certificate.~~

~~(E) The candidate has completed a state approved jurisprudence examination to determine the knowledge on state EMS laws, rules, and policies.~~

~~(2) A person currently certified by another state may apply for equal or lower level Texas certification by submitting a reciprocity application and a nonrefundable fee of $120.~~

~~(A) The candidate must pass the National Registry assessment exam.~~

~~(B) Applicants holding AEMT out-of-state certification must submit written proof of proficiency on all of the AEMT skills signed by a Texas certified EMS coordinator or instructor.~~

~~(C) All applicants shall submit fingerprints through the state approved fingerprinting service to undergo an FBI fingerprint criminal history check.~~

~~(D) The applicant has completed a state approved jurisprudence examination to determine the knowledge on state EMS laws, rules, and policies.~~

~~(E) Reciprocity is not allowed for the ECA level.~~

~~(F) A candidate will not be eligible for reciprocity if the out-of-state certification expires prior to the completion of all requirements for certification as listed in this section.~~

~~(G) A candidate who meets the requirements of this section shall be certified for four years beginning on the date of issuance of a certificate and wallet-size certificate.~~

~~(3) Personnel receiving department issued certification through reciprocity must recertify prior to the expiration of the certificate by following the requirements in §157.34 of this title.~~

~~(j) Equivalency.~~

~~(1) Candidates meeting the following criteria may apply for certification only through the equivalency process as described in this subsection:~~

~~(A) an individual who completed EMS training outside the United States or its possessions;~~

~~(B) an individual who is certified or licensed in another healthcare discipline;~~

~~(C) an individual whose department issued EMS certification or license has been expired for more than one year; or~~

~~(D) an individual who has held department issued inactive certification for more than four years.~~

~~(2) A candidate applying for certification by equivalency shall:~~

~~(A) submit a copy of the curriculum and work history completed by the candidate to a regionally accredited post-secondary institution approved by the department to sponsor an EMS education program for its review;~~

~~(B) obtain a course completion document that verifies that the program is satisfied that all curriculum requirements have been met. Evaluations of curricula conducted by post-secondary educational institutions under this subsection shall be consistent with the institution's established policies and procedures for awarding credit by transfer or advanced placement;~~

~~(C) the candidate may then apply for initial certification with the department as described in subsection (a) of this section; and~~

~~(D) The applicant has completed a state approved jurisprudence examination to determine the knowledge on state EMS laws, rules, and policies.~~

~~(k) For all applications and renewal applications, the department is authorized to collect subscription and convenience fees, in amounts determined by the Texas Online Authority, to recover costs associated with application and renewal application processing through Texas Online.~~

~~(l) Applicant immunization history.~~

~~(1) If the applicant's immunization history is included in the immunization registry as defined by Health and Safety Code §161.007, the department shall provide the applicant notice of the applicant's immunization history using information from the immunization registry.~~

~~(2) If the applicant's immunization history is not included in the immunization registry, the department shall provide:~~

~~(A) details about the program developed under Health and Safety Code, §161.00707; and~~

~~(B) the specific risks to emergency medical services personnel when responding rapidly to an emergency of exposure to and infection by a potentially serious or deadly communicable disease that an immunization may prevent.~~

~~(m) Responsibilities of the EMS personnel. During the license period, the EMS~~

~~Personnel responsibilities shall include:~~

~~(1) making accurate, complete and/or clearly written patient care reports including documenting a patient's condition upon the EMS personnel's arrival at the scene and patient's status during transport, including signs, symptoms, and responses during duration of transport as per EMS provider's approved policy;~~

~~(2) reporting to the employer, appropriate legal authority or the department, of abuse or injury to a patient or the public within 24 hours or the next business day after the event;~~

~~(3) following the approved medical director's protocol and policies;~~

~~(4) taking precautions to prevent the misappropriation of medications, supplies, equipment, personal items, or money belonging to the patient, employer or any person or entity;~~

~~(5) maintaining skill and knowledge to perform the duties or meet the responsibilities required of current level of EMS certification; and~~

~~(6) notifying the department of a current and/or valid mailing address within 30 days of any changes.~~

TITLE 25 HEALTH SERVICES
PART 1 DEPARTMENT OF STATE HEALTH SERVICES
CHAPTER 157 EMERGENCY MEDICAL CARE
SUBCHAPTER C EMERGENCY MEDICAL SERVICES TRAINING AND COURSE APPROVAL

§157.33. Certification.

(a) Certification rules. To become certified in emergency medical services (EMS), a candidate must:

(1) be at least 18 years old;

(2) have a high school diploma or a general educational development (GED):

(A) the high school diploma must be from an approved school;

(B) if a candidate went to high school in another country, the applicant must have a transcript checked to match Texas standards;

(C) a home school diploma is acceptable; and

(D) if the applicant is an emergency care attendant (ECA) and volunteers for a licensed provider or registered first responder organization (FRO), the applicant does not need to follow paragraph (2) of this subsection;

(3) successfully complete a Texas Department of State Health Services (department)-approved course;

(4) complete a state-approved jurisprudence examination to determine the applicant's knowledge of state emergency medical services (EMS) laws, rules, and policies;

(5) submit an application that meets the requirements in §157.3 of this chapter (relating to Processing EMS Provider Licenses and Applications for EMS Personnel Certification and Licensing), and submit the following nonrefundable fees as applicable:

(A) $60 for ECA or emergency medical technician (EMT);

(B) $90 for advanced EMT (AEMT) or EMT-paramedic (EMT-P); and

(C) no fee for EMS volunteer, however;

(i) if an EMS volunteer gets compensated during the certification period, the volunteer loses the fee exemption and must pay a prorated fee to the department based on how many years are left in the certification period when the volunteer starts getting paid;

(ii) the nonrefundable fee for ECA or EMT certification must be $15 per each year remaining in the certification;

(iii) the nonrefundable fee for AEMT or EMT-P must be $22.50 per each

year remaining in the certification; and

(iv) any portion of a year must count as a full year;

(6) provide evidence of current active or inactive National Registry certification at the appropriate level (National Registry First Responder certification is considered the appropriate corresponding certification level for an ECA); and

(7) submit fingerprints through the state-approved fingerprinting service to complete a Federal Bureau of Investigation (FBI) fingerprint criminal history check.

(b) Length of certificate. If a candidate meets the rules in subsection (a) of this section, the applicant gets a certificate and is certified for four years from the day the candidate receives the certification. Before working on an EMS vehicle, the candidate must check that their certificate is still valid. They can do this by looking at their official identification card from the department or by checking the department's certification website.

(c) Scheduling authority for certification examinations.

(1) Examinations must be administered at regularly scheduled times in various locations across the state.

(2) The candidate is responsible for making appropriate arrangements for the examination.

(3) The department is not required to set special examination schedules for a single candidate or for a specific group of candidates.

(d) Time limits for completing requirements.

(1) An initial candidate for certification needs to finish all the steps within two years after the date the candidate completes the course. The application expires two years after the date a mailed application is postmarked, or the date the department receives a faxed, online submission, or hand-delivered application.

(2) If a candidate does not finish all the certification steps within two years after finishing their course, they must meet the requirements in subsection (a) of this section, including taking another initial course to get certified.

(e) Non-transferability of certificate. The certificate cannot be given to someone else. A candidate may request and be given a duplicate certificate by paying $10.

(f) If a candidate holds a National Registry certification, they may apply for a lower level of certification.

(g) Voluntary downgrades.

(1) If an individual has a current Texas EMS certification or paramedic license, the individual can choose to get a lower-level certification for the remainder of the certification time. To do this, the individual must apply and pay the required fee under subsection (a)(5) of this section.

(2) When the downgrade is final, the candidate has to give up the higher certification or license. To get the higher certification back, the candidate must follow the requirements under §157.34(e) of this subchapter (relating to late recertification), within one year after the date the candidate gave back the certification or license.

(h) Inactive certification. A certified EMT, AEMT, or EMT-P may submit an application to the department for inactive certification at any time during the certification period or within one year after the certificate expiration date.

(1) If an individual wants to be inactive, the individual needs to pay a nonrefundable fee of $30 along with the regular fees mentioned in subsection (a)(5)(A) and (B) of this section. If the individual finishes the final requirement during the one-year period after the certification expires, the individual needs to pay the fees listed in §157.34(e) of this subchapter. Volunteers must pay the inactive fees.

(2) Time for inactive certification.

(A) The inactive certification period starts when the notice is issued and remains inactive until the original active certification period ends. When the notice is issued, the active certification is expired.

(B) If the candidate is in the last year of their active certification period and decides to renew with inactive certification, the inactive certification starts the day after their current active certificate expires and lasts for four years.

(C) If the candidate applies and finishes the final step for inactive certification within one year after their active certification ends, the inactive certification lasts for four years after the date it is approved.

(3) While on inactive certification, a candidate must not work in their certified role except to help out as a bystander doing first aid, CPR, or using an Automated External Defibrillator. Working for pay or as a volunteer in any other way can lead to losing their certification and being denied recertification.

(4) An individual cannot have both inactive and active certification at the same time.

(i) Reciprocity.

(1) If a person has a current certification from the National Registry but has not finished a department-approved course, they can still apply for a Texas certification at the same or lower level by filling out a reciprocity application and paying a nonrefundable fee of $120.

(A) If an applicant has an AEMT certification from the National Registry, the applicant needs to show written proof that the applicant is competent at all the AEMT skills. This proof must be from an approved education program.

(B) National Registry First Responder certification cannot be transferred at

the ECA level.

(C) A candidate cannot apply for certification if the candidate's National Registry certification expirers before finishing all the steps listed in this subsection .

(D) The applicant must pass a state-approved jurisprudence examination to show knowledge of the state's EMS laws, rules, and policies.

(E) If a candidate meets the requirements in this subsection, the candidate gets a certificate that lasts for four years after the date it is issued.

(F) The candidate must complete approved training courses on human trafficking.

(2) A person who is currently certified in another state can apply for a Texas certification at the same or lower level. The person must fill out a form and pay a $120 fee.

(A) The candidate must pass the National Registry assessment exam.

(B) An applicant with an AEMT certification from another state must show written proof that they are proficient at all the AEMT skills. This proof must be signed by a Texas-certified EMS teacher.

(C) All applicants must get their fingerprints taken by the state's approved service to have their criminal history checked by the FBI.

(D) The applicant must pass a state-approved jurisprudence examination to show they know the state's EMS laws, rules, and policies.

(E) Reciprocity is not allowed for the ECA level.

(F) If a candidate's out-of-state certification expires before the candidate finishes all the requirements listed in this subsection, the candidate cannot apply for reciprocity.

(G) A candidate who meets the requirements in this subsection gets a certificate that is valid for four years after the date it is given.

(3) People who get their certification from the department through reciprocity must renew their certification before it expires by meeting the requirements of §157.34 of this subchapter (relating to Recertification).

(j) Alternative licensing for military service members, military spouses, and military veterans.

(1) This subsection is for all licenses the department issues under Texas Health and Safety Code (HSC) Chapter 773 or Texas Occupations Code (TOC) Chapter 55.

(2) A military service member, military spouse, or a military veteran can ask for a department-issued occupational license or temporary license if the applicant:

(A) has a current license from another jurisdiction with similar licensing requirements as Texas and the license is in good standing; or

(B) has had the same Texas license in the past five years; and

(C) gives fingerprints to a state-approved fingerprinting service for an FBI background check.

(3) A military service member or military spouse must show proof of living in Texas by giving a permanent change-of-station order that assigns the service member to a Texas military base.

(4) An applicant under this subsection must meet all the requirements for the license, including credit for training, education, and work experience.

(5) The department looks at the following things to see if the other jurisdiction's licensing requirements are similar as Texas requirements:

(A) whether a test is needed to show job skills;

(B) whether job experience is needed;

(C) whether education requirements must be met;

(D) if the license allows similar job duties; and

(E) whether a test on state EMS rules and policies is needed.

(6) When the department gets a complete application, it will either give a license or a provisional license until it decides about the full license.

(7) A provisional license issued under subsection (j) of this section ends on the earlier of two dates:

(A) the date the department approves or denies the full license; or

(B) 180th day after the date the department issues the provisional license.

(8) The department does not charge a fee for the license under this subsection. The applicant only pays for the required background check.

(k) Equivalency.

(1) Candidates who meet the following criteria can apply to get certified only by using the special process described in this subsection:

(A) an individual who completed EMS training outside the United States or its territories;

(B) an individual who has a certificate or license in another healthcare job;

(C) an individual whose department-issued EMS certification or license has been expired for over a year; or

(D) an individual who has held a department-issued inactive certification for more than four years.

(2) A candidate applying for certification by equivalency must:

(A) send a copy of classes the candidate finished and work history to a college approved by the department and the college checks if EMS program requirements are met;

(B) get a certificate that shows the school agrees that all the requirements have been met; schools must follow their own rules when deciding if a student gets credit for their work; and

(C) provide documentation to the department as explained in subsection (a) of this section.

(l) For all applications and renewal applications, the department can charge subscription and convenience fees to cover the costs of processing these applications through Texas Online. These fees are set by the Texas Online Authority.

(m) Applicant immunization history.

(1) If the applicant's immunization history is included in the immunization registry as defined by HSC §161.007, the department gives the applicant a notice of their immunization history using information from the immunization registry.

(2) If the applicant's immunization history is not included in the immunization registry, the department gives:

(A) details about the program developed under HSC §161.00707; and

(B) the risks to EMS workers when responding quickly to an emergency where they might get exposed to or infected by a serious or deadly disease that an immunization can help prevent.

(n) Duties of EMS Workers. During the license period, EMS workers must:

(1) complete patient care reports, including noting the patient's condition when the EMS worker arrives and how the patient is doing during transport, including signs, symptoms, and responses as per the EMS policy;

(2) tell the employer, appropriate legal authority, or the department about any harm or abuse to a patient or the public within 24 hours or the next business day after it happens;

(3) follow the rules, protocols, and guidelines set by the medical director;

(4) make sure that medications, supplies, equipment, personal items, or money belonging to the patient, employer, or anyone else are not stolen or misused;

(5) keep up with skills and knowledge to perform the duties or meet the

responsibilities required of the current level of EMS certification; and

(6) let the department know of address changes within 30 days.

TEXAS
Health and Human Services

Texas Department of State Health Services

Emergency Medical Services and Trauma Registries (EMSTR) Program Updates and Texas Rural Trauma Deaths

Governor's EMS and Trauma Advisory Committee (GETAC)
August 22, 2025

Jia Benno. MPH
Injury Prevention Unit Director

About EMSTR and Presentation Data

- EMSTR collects reportable event data from EMS providers, hospitals, justices of the peace, medical examiners, Long Term Acute Care (LTAC) facilities, and rehabilitation facilities.
- All submitters must report all EMS responses and reportable trauma events to EMSTR under 25 Texas Administration Code, Chapter 103 within 90 days.
- Urban, rural, and frontier data was based on rural/urban criteria from the Texas Demographic Center Texas populations estimate:
  - Urban included large central metro, large fringe metro, medium metro, and small metro areas.
  - Rural included micropolitan (10,000-50,000 people) and noncore (<10,000 people) areas.
  - Frontier was defined as six or less people per square mile.
- For 2013, 2014, and 2017, the data were unavailable due to data standard changes and variable availability.

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 – 2024 to Present

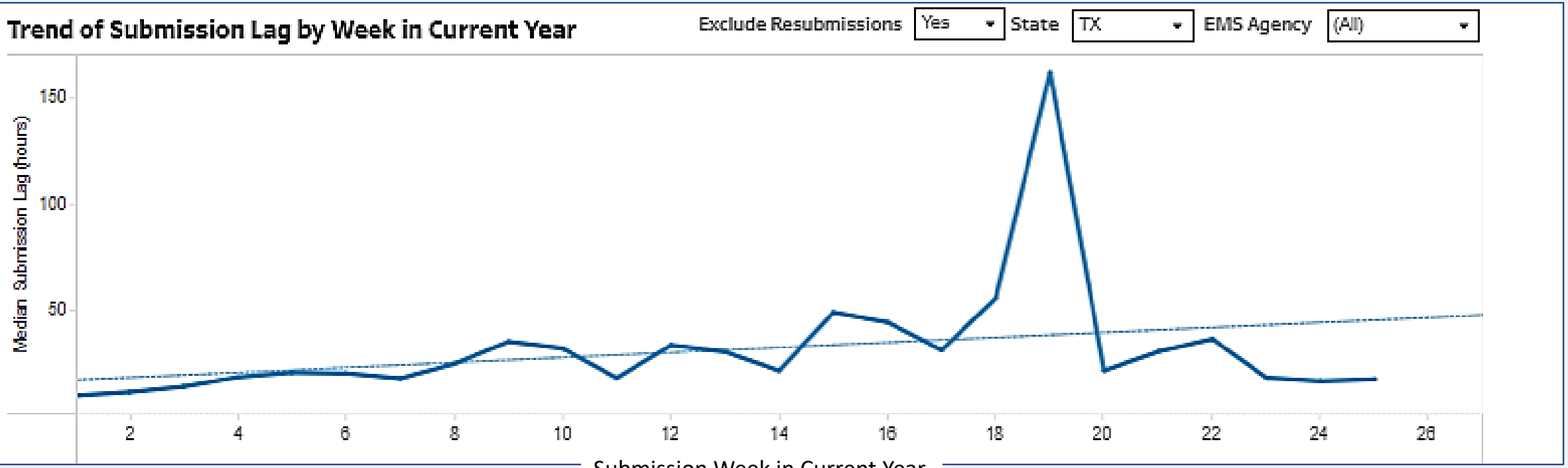
EMSTR Updates*

- 2024 EMS and trauma data closeout:
  - EMS – 4,801,876 records
  - Trauma – 183,759 records
- 2025 EMS and trauma progress:
  - EMS – 3,302,337 records
  - Trauma – 69,175 records

*As of 08/04/2025

Active Surveillance (1 of 2)

Trend Over Time



Major improvements in timeliness and **completeness**:

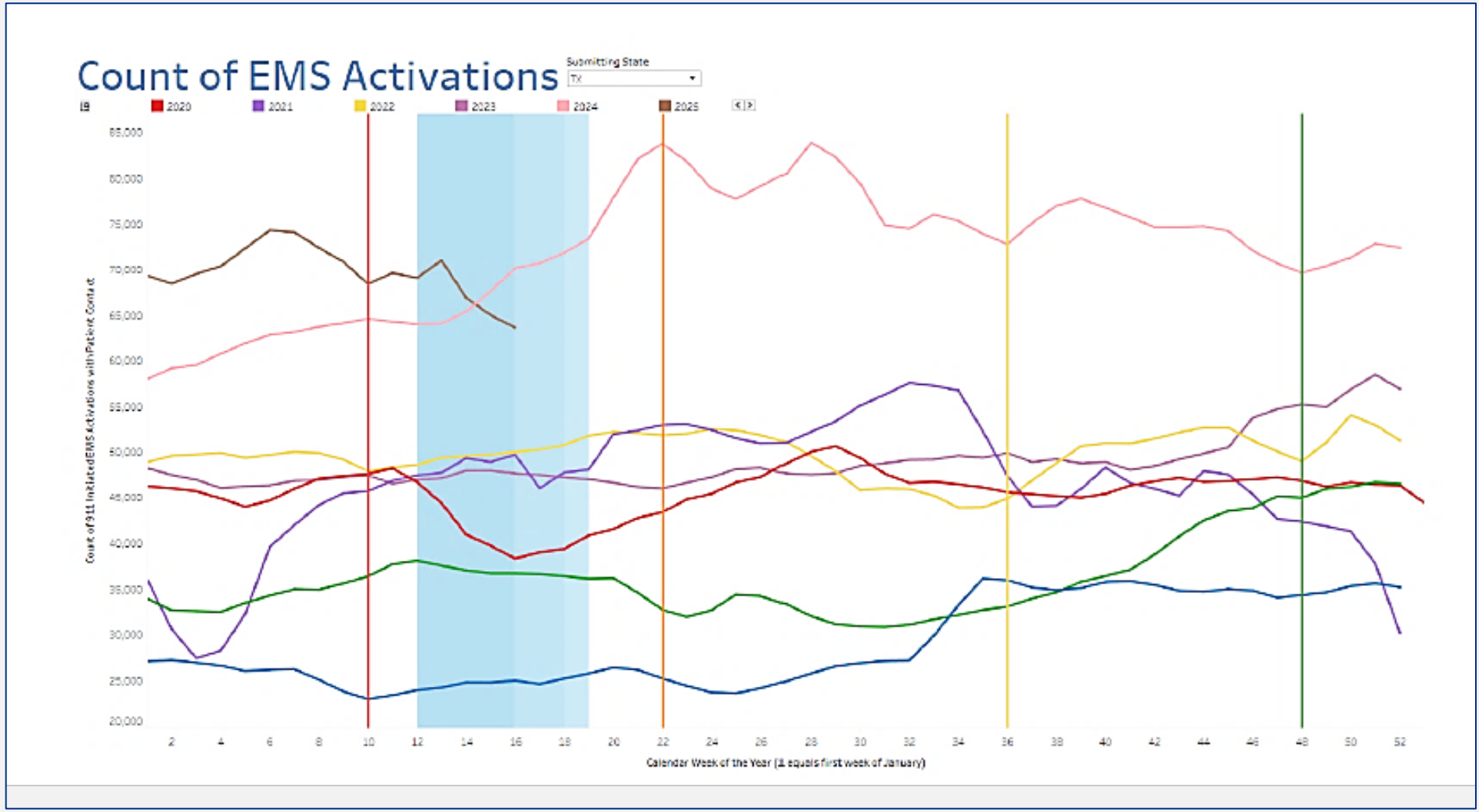
- Approximately 85 Texas EMS providers are sending data in real time.
- EMSTR recognized the top performers in the July/Summer EMS Newsletter.
- The state **submission lag** reduced from a 10-day turn-around time to 37 hours between Calendar Year (CY)2022 and CY2025 (year-to-date).

Data pulled July 2025 from the National EMS Information System (NEMSIS).

Active Surveillance (2 of 2)

- Monthly Communications: From January through July, EMSTR contacted over 200 EMS providers and 50 trauma facilities with missing data.
- 85 EMS facilities and 30 trauma centers have regained full compliance.

EMS Activation Tracking Example



Data pulled July 2025 from NEMSIS.

Data Quality Webinar Series

Webinars are held every 6-8 weeks:

- EMSTR prepares trainings that focus on areas of performance improvement.
- Attendance varies between 100-150 facilities.

Hospital

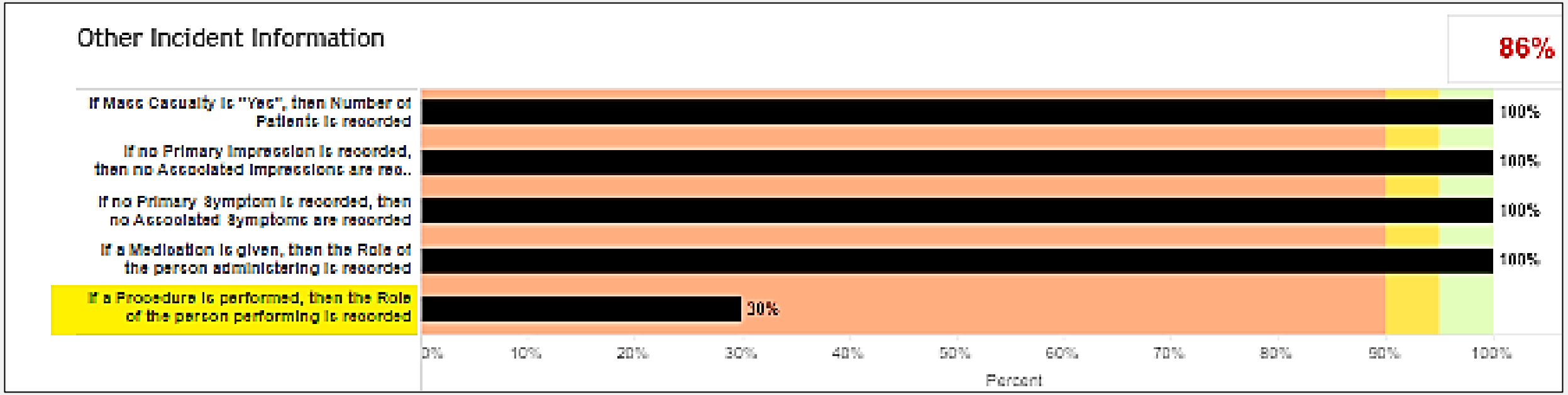
- Universal Unique Identifier (UUID), Texas Wristband, and prehospital information.
- Abbreviated Injury Score (AIS) and procedure coding improvements.

EMS

- Stroke Severity Scoring and Pre-Arrival Alert documentation.
- Blood product documentation and improving clinical times reliability.

Drilling Down on Quality Issues (1 of 4)

Example of How NEMSIS Can Help Identify Quality Issues



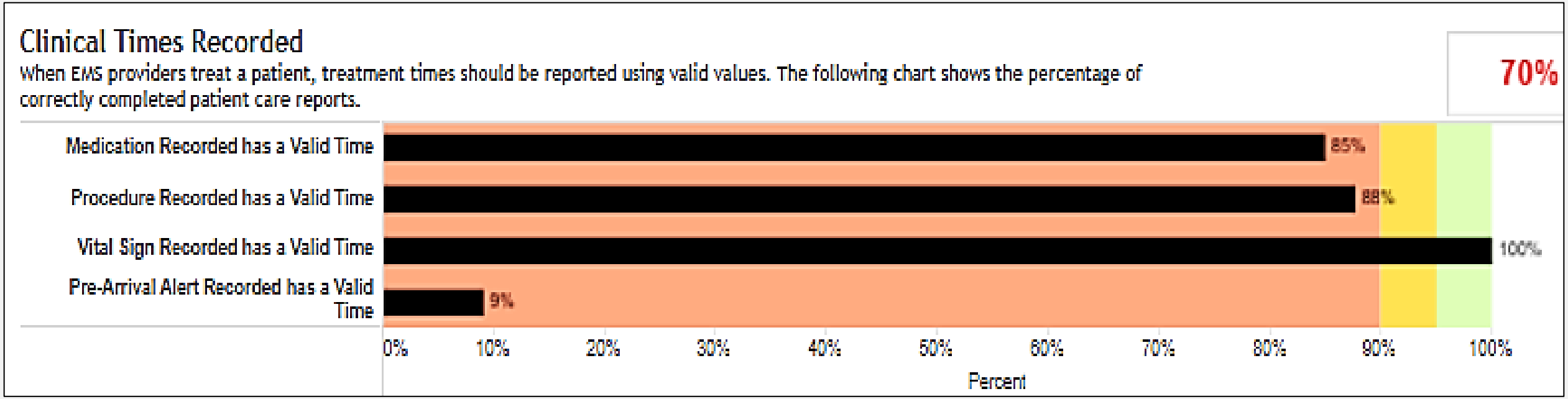
EMSTR:

- Can provide individual agency consultation.
- Is collaborating with third-party vendors.
- Identified and counseled approximately 120 providers with quality issues in the areas shown.

Data pulled July 2025 from NEMSIS.

Drilling Down on Quality Issues (2 of 4)

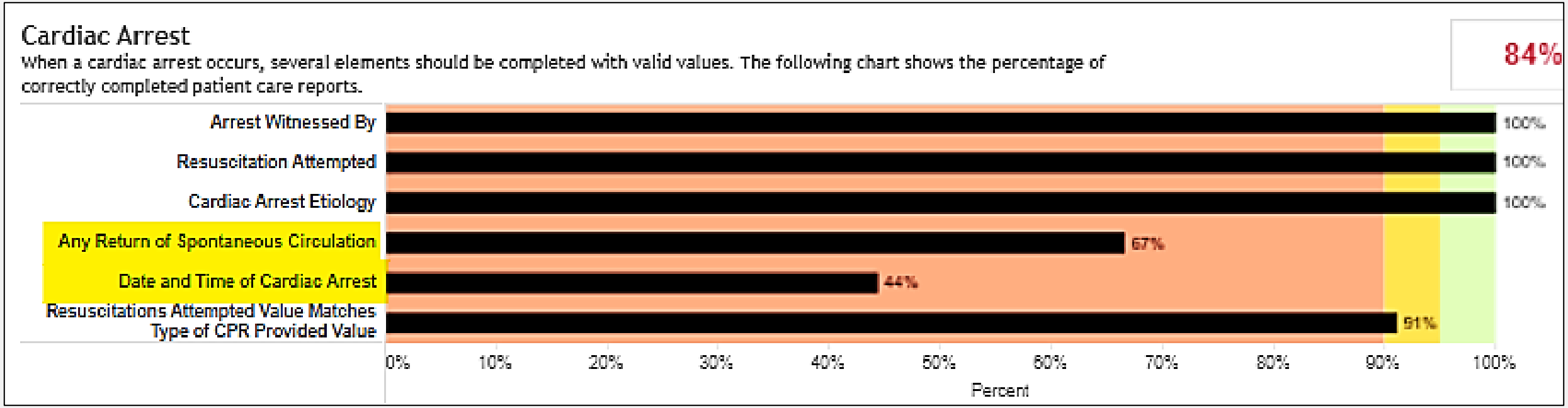
Example of How NEMSIS Can Help Identify Quality Issues



Data pulled July 2025 from NEMSIS.

Drilling Down on Quality Issues (3 of 4)

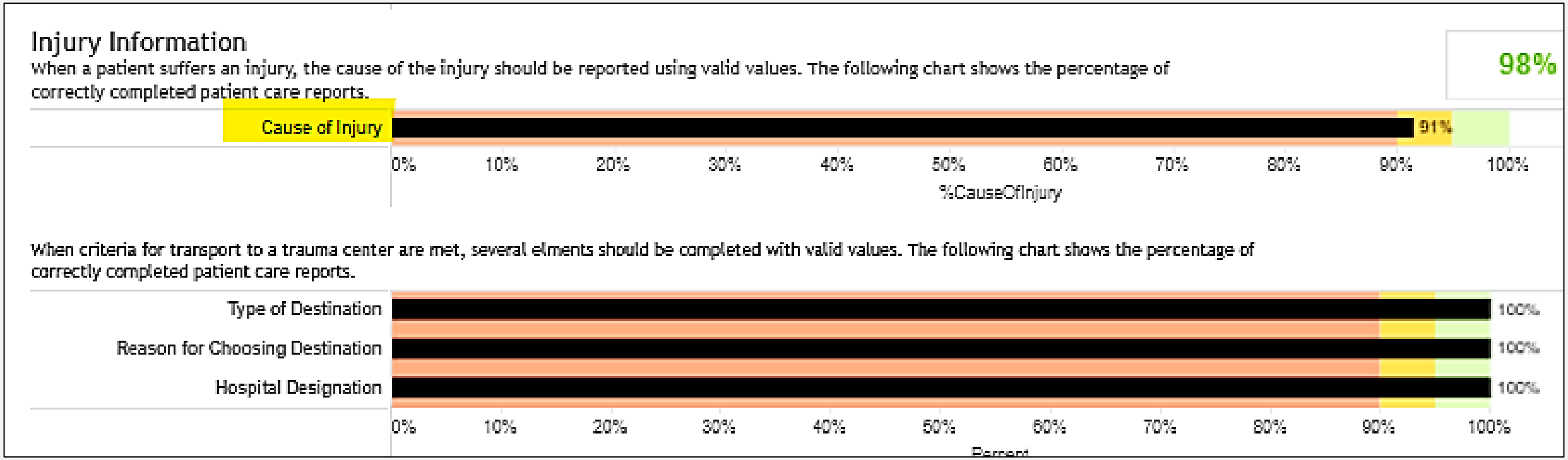
Example of How NEMSIS Can Help Identify Quality Issues



Data pulled July 2025 from NEMSIS.

Drilling Down on Quality Issues (4 of 4)

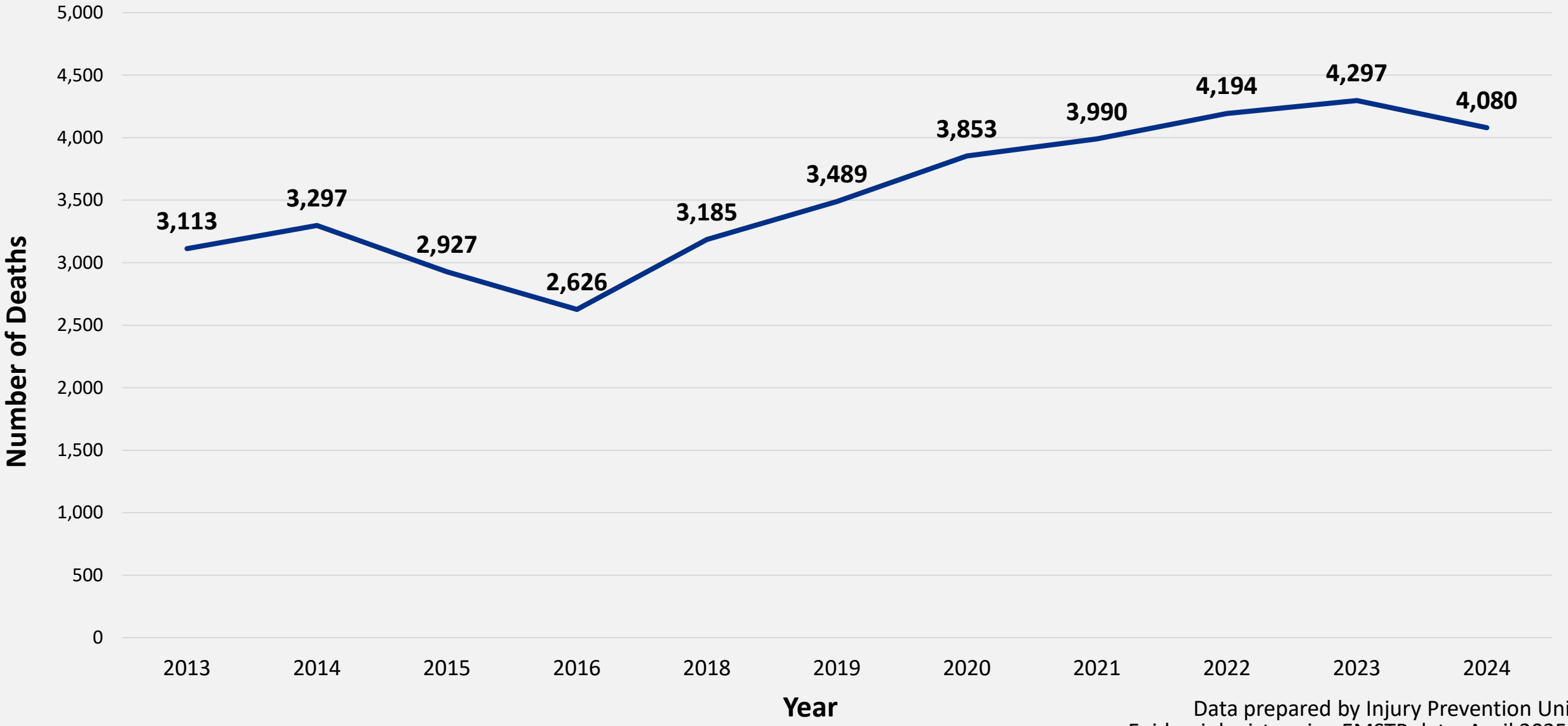
Example of How NEMSIS Can Help Identify Quality Issues



Data pulled July 2025 from NEMSIS.

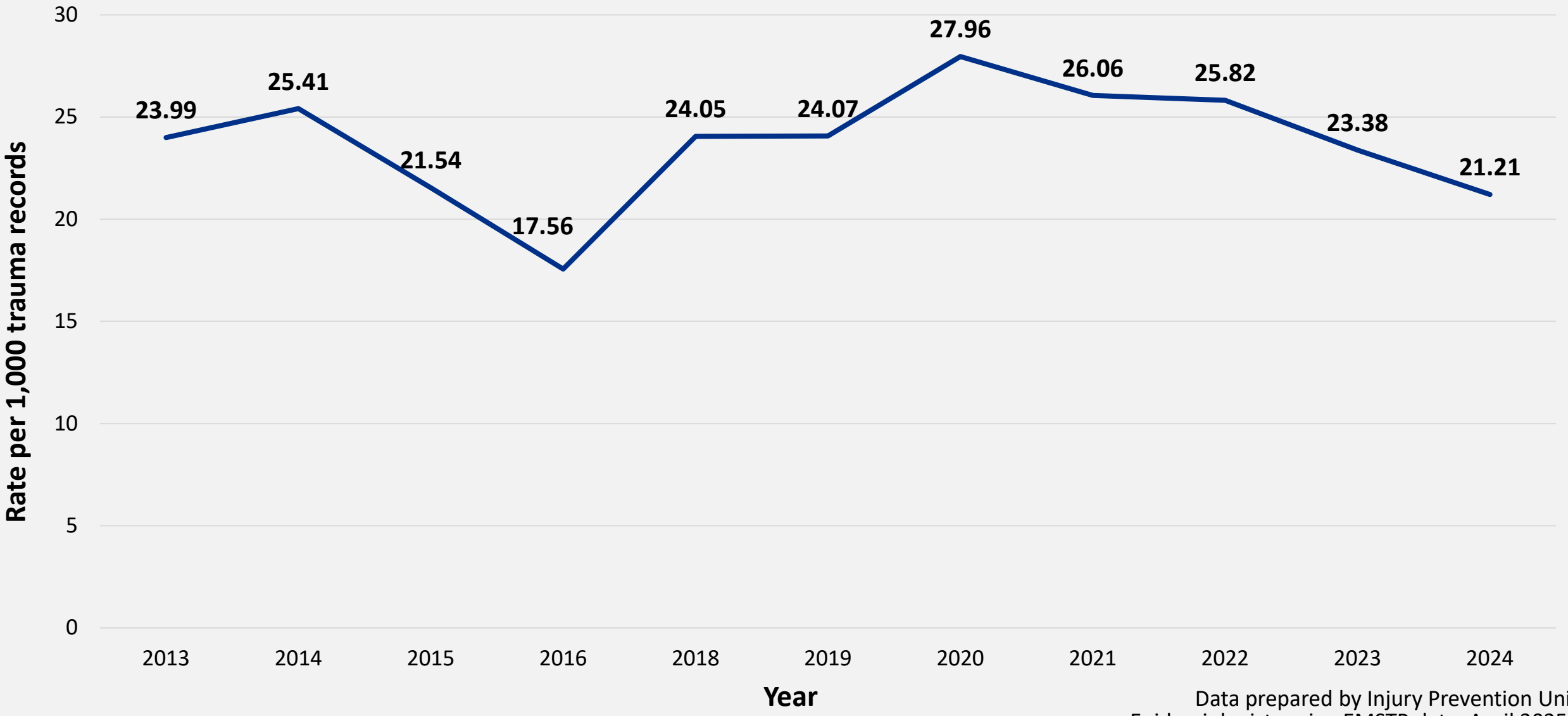
Texas Transfer Deaths Over Time 2013-2024

Total Trauma Deaths, Texas, 2013-2024



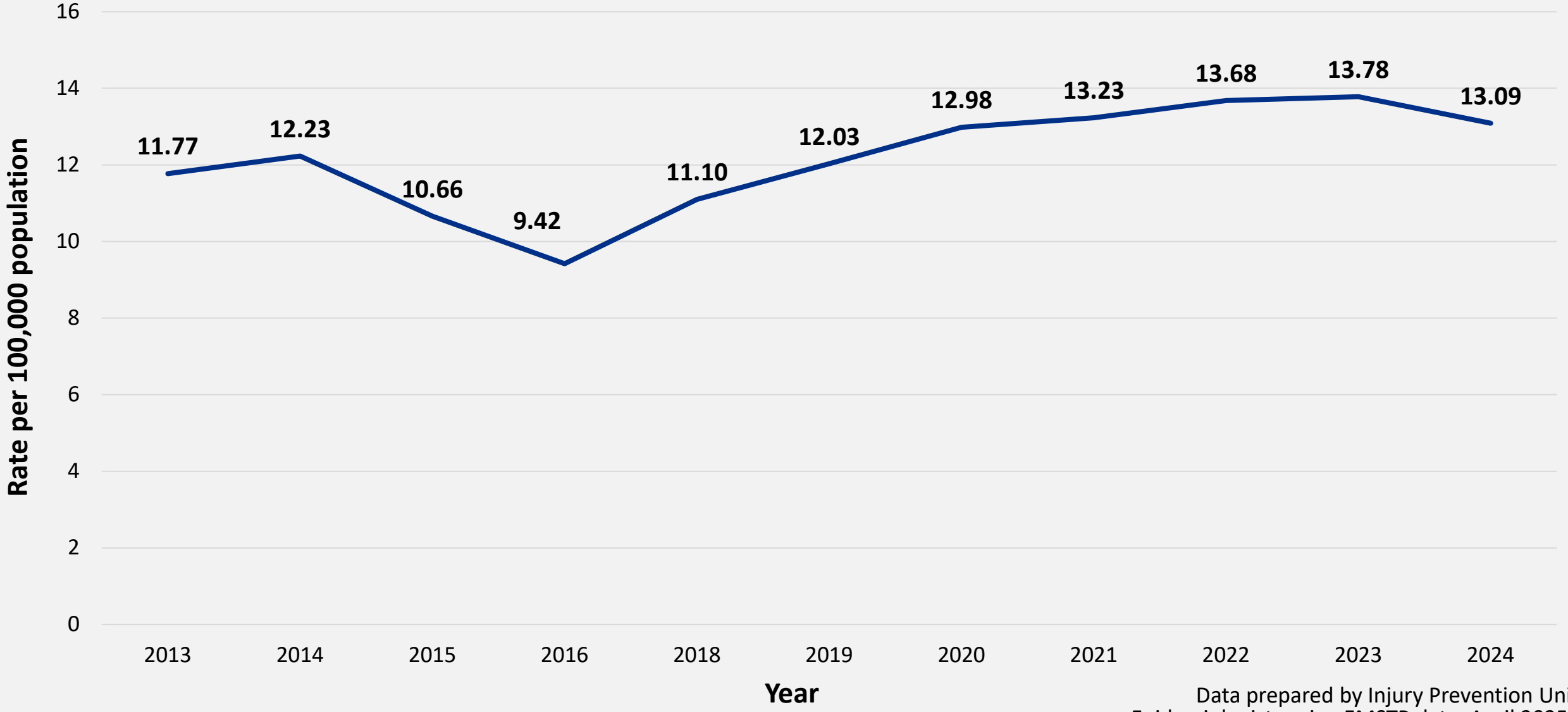
Data prepared by Injury Prevention Unit Epidemiologists using EMSTR data, April 2025.

Trauma Death Rate by Records, Texas, 2013-2024



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

Trauma Death Rate by Population, Texas, 2013-2024



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

Trauma Deaths By Area Characterization, Texas, 2013-2024

Year	Total	Urban	Rural	Frontier
2013	3,113	2,793	154	8
2014	3,297	2,926	205	20
2015	2,927	2,531	248	22
2016	2,626	2,293	189	25
2018	3,185	2,870	117	8
2019	3,489	3,111	177	20
2020	3,853	3,474	193	10
2021	3,990	3,536	222	7
2022	4,194	3,802	172	17
2023	4,297	3,954	186	13
2024	4,080	3,767	149	19

Note: The remaining deaths were missing area characterization.

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

Rural Trauma Deaths 2019-2024

Rural Trauma Deaths by Age Group

Year	Age <15	Age 15-64	Age 65+	Missing
2019	12	107	58	0
2020	15	113	65	0
2021	21	124	77	0
2022	13	102	57	0
2023	9	113	58	6
2024	11	67	51	20

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

Rural Trauma Deaths – Signs of Life

Year	Dead on Arrival	Arrived with Signs of Life	Signs of Life Missing
2019	142 (80.2%)	34 (19.2%)	*
2020	149 (77.2%)	44 (22.8%)	0
2021	182 (82.0%)	39 (17.6%)	*
2022	134 (77.9%)	38 (22.1%)	0
2023	156 (83.9%)	30 (16.1%)	0
2024	124 (83.2%)	25 (16.8%)	0

*Number suppressed <5.

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

Patient Arrived with Signs of Life by Age

Year	Age <15	Age 15-64	Age 65+
2019	*	8 (7.5%)	25 (43.1%)
2020	0 (0%)	8 (7.1%)	36 (55.4%)
2021	0 (0%)	*	36 (46.8%)
2022	0 (0%)	6 (5.9%)	32 (5.6%)
2023	0 (0%)	*	26 (44.8%)
2024	0 (0%)	*	19 (37.3%)

*Number suppressed <5.

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

Injury Severity Score

The Injury Severity Score (ISS) is an anatomical scoring system providing an overall score for patients with multiple injuries. The ISS scoring categories are:

- ISS 1-8 = mild;
- ISS 9-15 = moderate;
- ISS 16-24 = severe; or
- ISS $\geq$ 25 = profound.

ISS - Limited to Signs of Life and 65+

	2019	2020	2021	2022	2023	2024
ISS 0	0	*	5	5	*	*
ISS 1-8	5	6	9	8	7	*
ISS 9-15	10	13	16	16	13	11
ISS 16-24	*	*	*	*	*	*
ISS 25+	*	6	5	*	*	*
Missing	6	7	0	0	0	0
Total	**24**	**36**	**36**	**32**	**26**	**19**

*Number suppressed <5.

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

Thank you!

EMSTR Program Updates and Texas Rural Trauma Deaths

Injury.web@dshs.texas.gov

EMS Helicopter Resources – The “How and Why” to Activate

INTRODUCTION

The GETAC (Governor's EMS and Trauma Advisory Council) Air Medical Committee is responsible for affecting and supporting **safe** air medical operations and high-quality clinical care provided by air medical transport services in Texas.

This committee provides guidance in the development and review of hospital and pre-hospital assessment tools, regional plans, treatment guidelines, and the committee SOP.

INTRODUCTION

The goal of this presentation is to enhance the knowledge and capabilities of Texas DPS State Troopers in requesting air medical support to optimize the efficiency and effectiveness of emergency medical response and ultimately improve patient outcomes and survivability.

OBJECTIVES

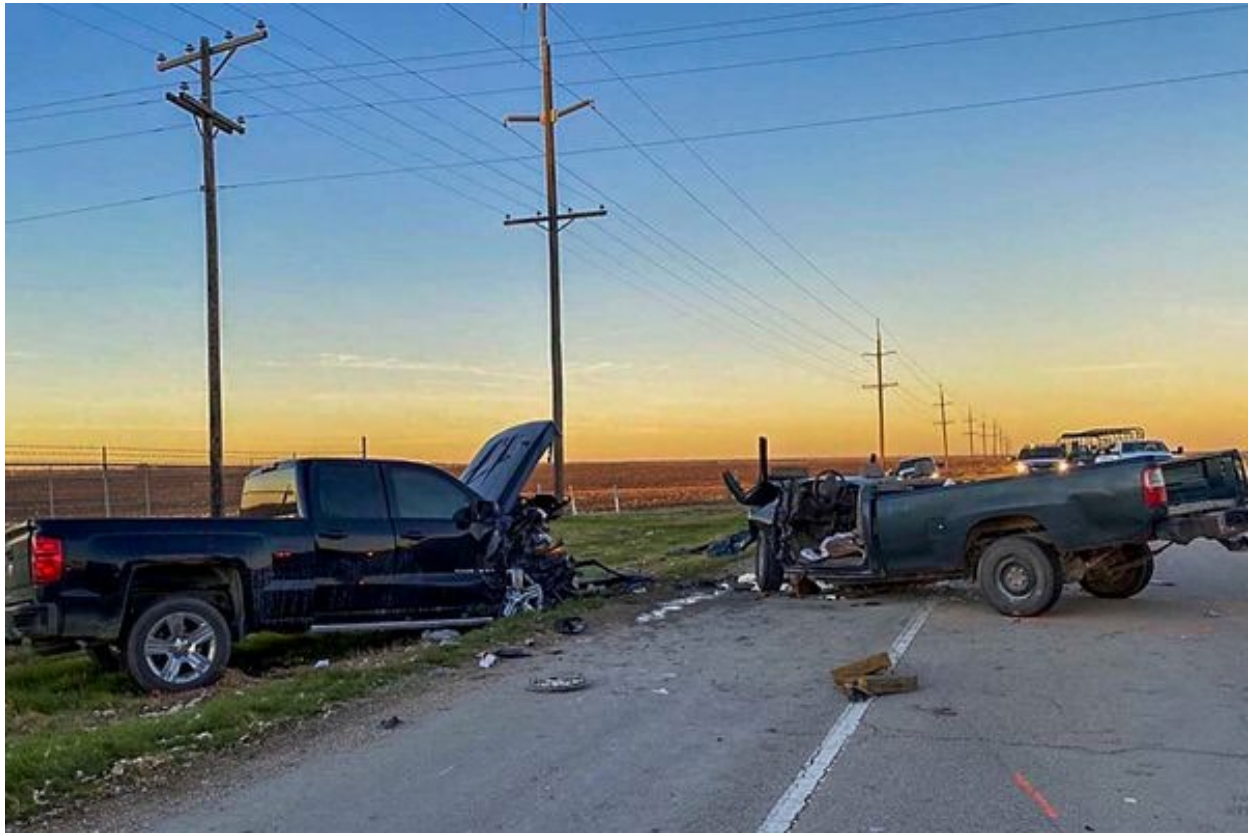
- Identify medical criteria for requesting an air medical asset prior to first responder arrival on scene
- Understand the steps required to launch an air medical asset
- Identify landing zone requirements
- Identify safety practices and security around an aircraft and within the landing zone
- Be able to utilize proper aircraft communication
- Recognize additional considerations during night operations

DISCLAIMER

This presentation is a state-wide, universal training for educational use only; this presentation does not provide a substitute for any agency-specific education or training.

We strongly encourage reaching out to your local air medical providers for further guidance.

Have you ever been the “first on scene” at a remote location and immediately known that air medical assets would be needed?



Were your first responder and EMS resources still enroute or delayed?

As a DPS State Trooper
YOU CAN
launch an aircraft without First Responders or EMS on scene but…

ARE THEY “BROKEN” ENOUGH TO FLY?

Early Activation Criteria

Motor Vehicle Accidents

- Fatalities on scene with survivors requiring transport
- MVAs with 3 or more patients & confirmed or suspected severe injuries
- Vehicle fires resulting in significant burns or burns to the face/neck

Early Activation Criteria

Injuries

- Severe bleeding
- Mangled, crushed, or amputated extremities
- Penetrating injuries to head, neck, or torso
- Paralysis
- Altered mental status or unresponsiveness secondary to significant mechanism

Elderly, pediatric, and pregnant patients require a higher index of suspicion and are more likely to require air medical transport.

ARE THEY "BROKEN" ENOUGH TO FLY?

If in doubt…Trust Your Gut!

Aircraft can always be disregarded/canceled if not needed. The minutes saved if you DO activate early can make a significant difference in how quickly the patient reaches definitive care.

Trust your gut!

REQUESTING AN AIRCRAFT

Requesting process may vary slightly between agencies, but a few things are consistent.

Making the Request
Notify your dispatch that air medical asset(s) will be needed on your scene.

Scene details
Your dispatch center will already know your location and will be able to provide city, county, an address, major cross streets, or location relative to an easily identifiable area/site.

GPS Coordinates
If readily available, GPS coordinates are beneficial but not necessary. Coordinates should be provided in:

Degrees, Minutes (DM.MM)
Latitude: 33° 10.90’ N
Longitude: 96°36.85’ W

REQUESTING AN AIRCRAFT

Requesting process may vary slightly between agencies, but a few things are consistent.

Patient info
Provide pt condition/injury. This does NOT need to be specific. “Three patients ejected, one entrapped & unconscious.” This is your scene size up.

**If you are unable to be this specific, just simply state that you need air medical asset(s). The details can be sorted out upon First Responder/EMS arrival

Upon First Responder/EMS Arrival on Scene

Immediately notify Fire and/or EMS that you have requested air medical asset(s).

If known, include air medical company name and the number of aircraft enroute.

Why?

- Prevents duplicate asset requests
- Mitigates risk of having unintended multi-agency responses

Establishing an LZ

In the rare circumstance that First Responders are not available to establish a safe and appropriate LZ, the following slides are applicable.

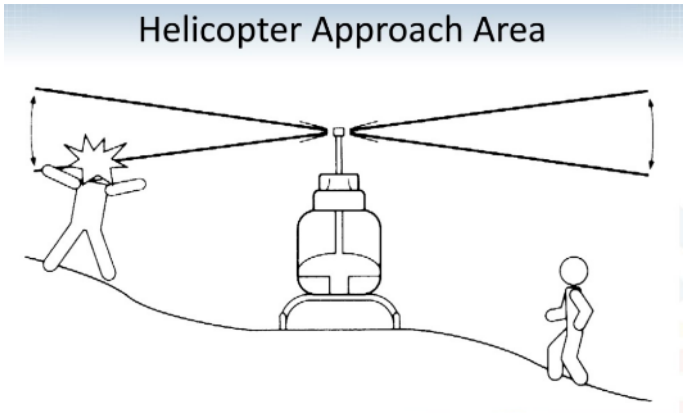
LANDING ZONE REQUIREMENTS

- Area should be a minimum of 100’x100’ with no overhead obstructions.
- Area surrounding LZ should also be as free as possible from obstructions/hazards.

- Landing area can be paved, dirt, or short grass and needs to be a firm surface with no hidden obstacles.
- Area can be marked with strobes, cones, or vehicle/personal lights. **NEVER USE ROAD FLARES!**

LANDING ZONE REQUIREMENTS

- Area should be a flat and level surface, a 3-degree grade or less with little to no slope.
- Prevents risk of aircraft rollover
- Prevents risk to responders



Examples of maximum acceptable slope

MULTI AIRCRAFT CONSIDERATIONS

- LZ requirements are designed for a single aircraft.
- If landing multiple aircraft, an additional LZ will be needed. Ground crew must ensure an adequate safety area is available between each LZ.
  - For example, two established LZs may require an additional 100’ in between them for the safety area.

SAFETY

The number one priority for any air medical operation!

- Safety applies to both those inside and outside of the aircraft.
- Vigilance is required by those on the ground and in the aircraft during take-offs and landings.
- LZ team members must eliminate all non-essential distractions (i.e., phones, cameras, etc.). Those responsible for the safety and security of the LZ should not engage photography or videography during the landing and departure of the aircraft.

PREPARING FOR ARRIVAL

- **Gear Up!** Wear safety glasses and hearing protection.
- Assign a tail rotor guard and/or LZ safety officer (this needs to be someone not actively involved in the pt treatment).
- Ensure the area is secured, and there are no pedestrians, animals, or vehicles within the landing area.
- Walk the area and remove any debris such as trash or any other items that could be easily blown around when the aircraft arrives.
- Observe for any possible obstructions around the landing area.
- Consider parking emergency vehicles under power lines. If this is done, be sure to park the vehicles **PARALLEL under the lines**. That communicates to the pilot exactly where the lines are located.

OBSTRUCTIONS/ HAZARDS

Power lines can be difficult to see from the air and create a safety concern for air medical operators. Keep all LZ markers away from power lines to avoid confusion and potential conflict during landing and takeoff.

Reminder that parking emergency vehicles ***PARALLEL*** under power lines helps air medical crews operate in a safe manner.

COMMUNICATION

Be clear and concise

Ex: LZ is a large open field North of the accident. We will be landing you in the grass, ground is firm and level. Winds are out of the NW (if known). LZ will be marked with flashing cones on all 4 corners. You have power lines along the road to the West and trees to the South. No other obstructions.

- Advise of any known obstructions or obstacles.
- Pt info is welcomed but not expected during pre-arrival instruction. LZ info is the priority.

COMMUNICATION
Be clear and concise

If your resources remain limited, the LZ instructions do not need to be elaborate!

- **What:** Large open field
- **Where:** North of the accident
- **Obstructions:** Powerlines along west side of road. Trees to the south. No resources available to walk field, please use caution. No other obstacles.

SAFETY - DRONE OPERATIONS

- An unmanned aircraft system (UAS), sometimes called a drone, is a safety risk to aircraft and should not be operated in the vicinity of air medical operations.
- If you observe one in the vicinity of the LZ, immediately notify the helicopter pilot and if applicable, request the drone operator to shut down the drone until the helicopter has safely departed the area.

COMMUNICATION – RADIO FREQUENCY

Label (Channel Name / Trunked Radio System Talkgroup)	RX Freq	RX Tone/NAC	TX Freq	TX Tone/NAC	Mode (A, D, M)	Use
VMED28	155.3400	156.7	155.3400	156.7	A	Medical Tactical & Air-to-Ground with Medical Aircraft

****If local frequencies or VMED 28 is unavailable, relaying the LZ info through DPS dispatch is recommended.**

Radio frequency is traditionally agreed upon during the aircraft request and is based upon the preferred frequency of the ground unit, if available by the air medical provider.

The Texas Statewide Interoperability Channel Plan states:

> "**VMED 28**, in addition to being a medical tactical and mutual aid channel, is also designated for Ground-to-Air communications with EMS helicopters and other aircraft that may be assigned to an incident or event."

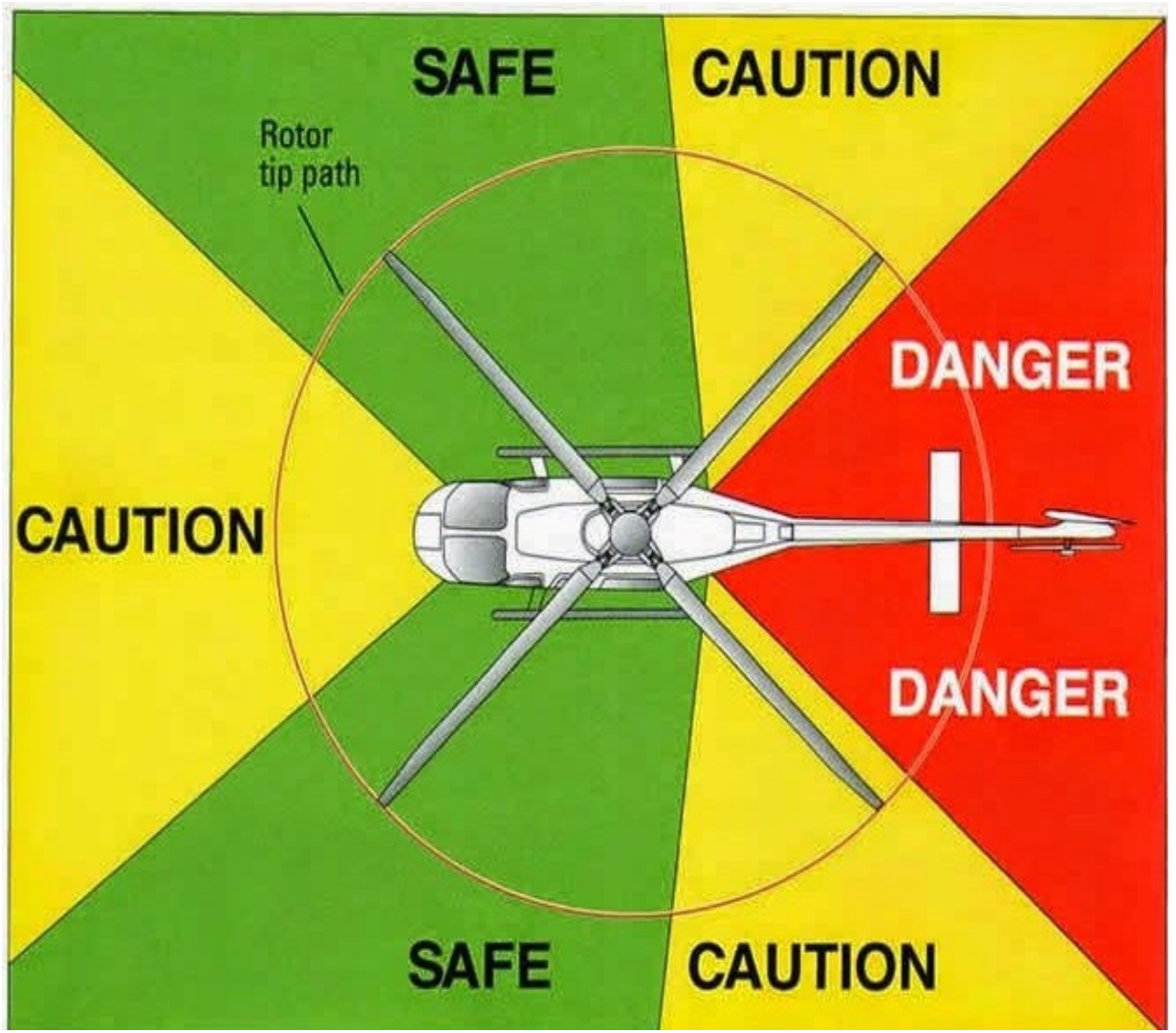
LANDING

CAUTION!
Rotor wash may send your hat sailing!

- Anticipate extremely high winds!
- Landing will almost always be done with the helicopter approaching into the wind.
- Notify the helicopter crew of any known obstructions.
- Maintain security within and around the landing area.
- A tail rotor guard is essential when the helicopter is on the ground and running.
- **DO NOT** approach the aircraft while it is running unless accompanied by the flight crew and/or only when directed to do so.

APPROACHING THE AIRCRAFT

- **DO NOT** enter the area unless accompanied by the flight crew and/or only when directed to do so.
- Utilize minimal amount of personnel needed to safely load.
- Remove any hats or loose items from your person.
- Enter/exit in the area shown in green after receiving approval from the pilot.
- **NEVER** approach from the tail!



APPROACHING THE AIRCRAFT

- If you must approach the aircraft, follow the steps below:
  - first obtain permission from the flight crew.
  - confirm the pilot is aware of your approach.
  - wait to approach until the pilot indicates it is safe to do so (make eye contact with the pilot and wait for approval, i.e. thumbs up).

LOADING/ UNLOADING

Assisting the flight crew with loading/unloading a patient will always be at the discretion of the flight crew. If requested to assist, all stretcher/sled movement will be directed by flight crew.

Cold Loading/Unloading

- Loading/Unloading is done when the engine is shut off and the blades have completely stopped turning.
- Safer, more controlled

Hot Loading/Unloading

- Loading/Unloading is done while the aircraft is running
- More common during scene responses
- Will always be at the flight crew's discretion as there are multiple factors involved in this decision

LOADING/UNLOADING

Side Load

Rear Load

LOADING/UNLOADING

Loading - Bell 407

Click to view the following videos of loading and unloading various airframes.

LOADING/UNLOADING

Loading - Bell 429

Unloading - Bell 429

LOADING/UNLOADING

Loading - EC 145

Unloading - EC 145

AIRCRAFT DEPARTURE

- Some air medical providers remain running or “hot” during scene responses. Some prefer to shut down on scene.
- If your provider shuts down, ensure area is secure and clear before start up.
- During start-up/take-off, ensure you are completely clear of the rotor system.
- Leave the area the same way you entered.
- Keep the tail rotor guard/LZ safety officer in place until the aircraft is clear of the area.
- Anticipate extremely high winds!

SPECIAL CONSIDERATIONS

Night Operations

NIGHT OPERATIONS CONSIDERATIONS

- Decreased visibility
- Night Vision Goggles (NVG's)
  - Improve vision
  - Can impair depth perception
  - Can cause difficulty in differentiating terrain
- Light control
  - Do not shine light directly into the cockpit or towards the aircraft
  - Excessive overhead lights may be problematic
- LZ/Helipad lighting is of increased importance

SPECIAL CONSIDERATIONS

Brown/Whiteout

BROWN/WHITEOUT CONSIDERATIONS

- A brownout is when dust, dirt, or sand obstructs the pilots' visual reference of the ground.
- A whiteout is the same as a brownout but is due to snow.
- Both can occur upon landing, and both are cause for aborting the landing attempt.
- If unable to wet the area (brownout) or blow the area out (either), the LZ will need to be relocated.
- Although the need for FD personnel to wet the area is uncommon, it should be done if there is a risk of a brownout or if it is needed to help identify the LZ.

SPECIAL CONSIDERATIONS

Specialty Aircraft

SPECIALTY AIRCRAFT CONSIDERATIONS

- Regions around Texas may need to consider LZ modifications to accommodate specialty aircraft (MH-65, UH-60, etc.).
- Each aircraft/organization may require different LZ and frequency considerations. It is recommended that you consult with applicable departments to best prepare for these specialty aircraft.

SUMMARY

By requesting air medical assets early, Texas DPS State Troopers can assist in optimizing the efficiency and effectiveness of emergency medical response.

- **SAFETY IS PRIORITY NUMBER 1 for any air medical operation!**
- LZ should be at least 100’x100’, on a flat firm surface, and as free of obstructions/hazards as possible.
- A tail rotor guard is essential when the helicopter is on the ground and running.
- Clear and concise communication is imperative.
- Keep landing areas free of debris.
- Anticipate high winds!

SUMMARY

- Never approach a running aircraft unless accompanied by the flight crew and/or only when directed to do so.
- Stay clear of rotor system during start-up and shutdown.
- Secure/remove any loose items.
- Risks increase at night.

SUMMARY

As Texas DPS State Troopers, your decision to request air medical assets early, appropriately, and safely can make a critical difference in patient care. Your actions may directly contribute to faster response times, more effective scene management, and, most importantly, better outcomes for patients.

THANK YOU for your service and for keeping us safe!

Texas Commission on Law Enforcement
TCOLE HOURS

- To obtain 1 XXXXXX hour for this course, please scan the QR code to complete the exam and evaluation.
- Alternately, the following link can be utilized: <insert link here>

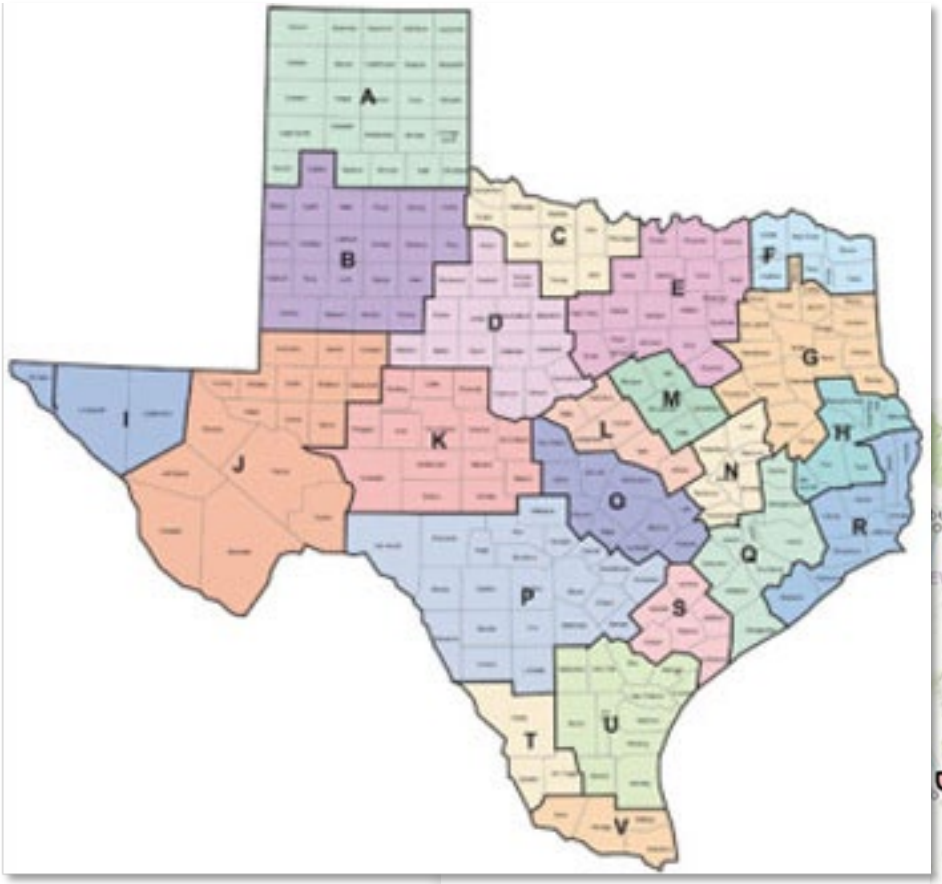
Insert
QR Code
Here

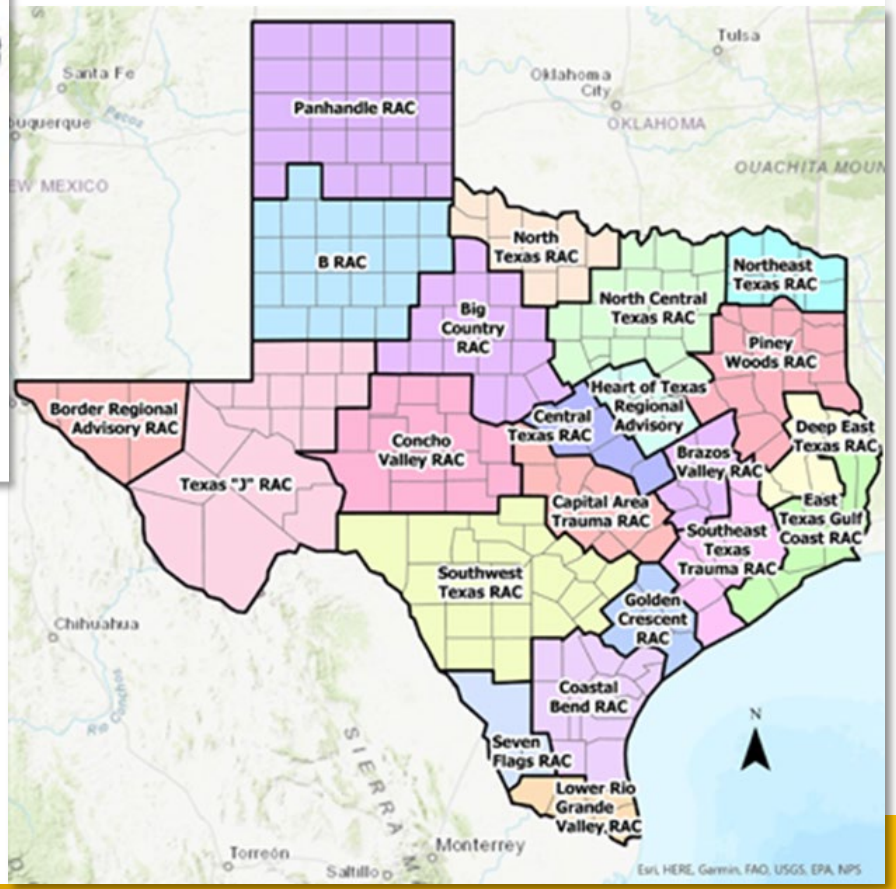
LOCAL PROVIDERS

As a reminder, this presentation is not meant as a substitute to in person training with your local providers. GETAC strongly recommends contacting your local air medical provider(s) to schedule that training.

If you require assistance in contacting your local air medical provider(s), please contact your RAC Chair.

Regional Advisory Councils





Special thanks to North Central Texas Trauma Regional Advisory Council for the presentation template and for their efforts to improve air medical safety.

For questions related to this presentation, please contact Lynn Lail at llail@CareFlite.org

TEXAS
Health and Human Services

Texas Department of State Health Services

DRAFT

GETAC Air Medical Services Utilization and Recommendations

DRAFT

Purpose

- Provide best practice for integration of air medical service resources into EMS system of care
- Understand variations in air medical providers so informed clinical decisions can be made

Acknowledgement

- This presentation is based on the article “Appropriate Air Medical Services Utilization and Recommendations for Integration of Air Medical Services Resources into the EMS System of Care: A Joint Position Statement and Resource Document of NAEMSP, ACEP, and AMPA.” We thank the authors for the joint position statement and their guidance to use evidence-based decision making for improved air medical utilization.
- John W. Lyng, Sabina Braithwaite, Heidi Abraham, Christine M. Brent, David A. Meurer, Alexander Torres, Peter V. Bui, Douglas J. Floccare, Andrew N. Hogan, Justin Fairless & Ashley Larrimore (2021) Appropriate Air Medical Services Utilization and Recommendations for Integration of Air Medical Services Resources into the EMS System of Care: A Joint Position Statement and Resource Document of NAEMSP, ACEP, and AMPA, Prehospital Emergency Care, 25:6, 854-873, DOI: 10.1080/10903127.2021.1967534
- Link to article: https://doi.org/10.1080/10903127.2021.1967534

Utilization Considerations

- Three major categories:
  - Clinical
    - Initiation or continuation of locally unavailable advanced or specialty care
    - Expedited delivery to definitive care for time-sensitive interventions
    - Extraction from physically remote or otherwise inaccessible area
  - Safety
    - Level of risk to patient and crew must be carefully weighed against the reasonably anticipated degree of medical benefit to the patient
  - System Integration and Quality Assurance
    - Requests for utilization and transport destinations should follow locally established guidelines
    - Applicable physician oversight

Utilization Considerations

- Variations in air medical providers
  - Aviation
    - **VFR** vs **IFR** with availability of potential IFR approach (helipad, airport, etc.)
      - **V**isual **F**light **R**ules -the pilot primarily controls and navigates the aircraft using outside visual references
      - **I**nstrument **F**light **R**ules - the aircraft is flown using only the instruments with no visual references to the outside world
    - **ETA** (Estimated Time of Arrival) vs. **ETE** (Estimated Time En Route)
      - ETA is a **clock time** - "We will land on your scene at 1147"
      - ETE is **flight time** - "We will be there in 22 minutes" - The ETE does NOT include the time it takes to lift off.
      - For further education on the utilization of ETA vs. ETE please utilize the following link:
        - https://www.dshs.texas.gov/sites/default/files/emstraumasystems/GETAC/PDF/GETAC-Position-2020A-StandardizedResponseTimeLanguage.pdf

Utilization Considerations

- Variations in air medical providers
  - Clinical
    - Level of care
    - Blood products
    - Standard of care vs “access to resources”
    - Aircraft configuration and quality of care (i.e. CPR)
    - Crew certification/licensure (nurse, paramedic, physician, etc.)
    - Level of care delivered to patients during transport may be more beneficial than speed
      - A large multicenter study of TBI patients transported by air medical providers suggests patients received greater benefit from early activation of critical care interventions by air medical provider clinicians rather than from the speed of transport (2).

Clinical Care

- Research has shown that patient benefit is gained from the clinical care capabilities of air medical services independent of potential time saved when transporting patients (3-9).
  - The level and quality of care delivered during transport may be more important than the speed of the transfer
- Consider using scoring system for air medical utilization
  - Utilization review highly recommended to determine efficacy of scoring system
- Resources vary significantly across the state so please learn what capabilities are available in your area and follow local protocols and/or regional guidelines
- Ground-EMS (GEMS) transport is preferred when it is able to provide the necessary level of care and timely transport to definitive care.

Clinical Care - AMPT

- The Air Medical Prehospital Triage Score is one example of a scoring system that identifies patients with improved survival following HEMS transport and should be considered in air medical triage protocols (8).

Air Medical Prehospital Triage (AMPT) Score

Criterion	Points
Glasgow Coma Scale <14	1
Respiratory Rate <10 or >29 breaths/min	1
Unstable chest wall fractures*	1
Suspected hemothorax or pneumothorax†	1
Paralysis	1
Multisystem trauma ‡	1
PHY+ANA §	2
Consider helicopter transport if AMPT score ≥ 2 points	

*Any chest wall instability or deformity including flail chest or multiple ribs fractures on physical exam

†Absence of breath sounds on affected hemithorax PLUS objective signs of respiratory distress (cyanosis, SpO2<92%, signs of tension physiology)

‡3 or more anatomic body regions injured

§any 1 physiologic criterion plus any 1 anatomic criterion present from American College of Surgeons Committee on Trauma national field triage guidelines

Clinical Care – Trauma

- Numerous studies have demonstrated that air medical transport improves survival in suburban and rural settings when compared to ground transport for various trauma patient populations (10-19)
- Multidisciplinary panel of experts created recommendations for the selection of prehospital trauma patients who would most likely benefit from air versus ground transport (3, 20 - 22).
- The Air Medical Prehospital Triage Criteria (AMPT) Score (7-9).
  - Increased survival odds regardless of whether air transport reduced transport time

Clinical Care – Cardiovascular

- Bypass of non-interventional facilities and/or long distance interfacility transfer of patients for percutaneous coronary intervention (PCI) has shown benefit over locally administered fibrinolytic agents when first medical contact to balloon time is less than 90 minutes (27, 28).
- Total ischemic time less than 120 minutes provides maximum patient benefit (29, 30), and thus to be clinically meaningful, the decision on use of mode of transport should focus on achieving this target.
- Air medical services may help expand access to ECMO, VADs, and balloon pumps via transport of specialty teams and equipment to the patient
- Variance in providers due to aircraft frame and ability to perform effective, high-quality chest compressions (31 - 36). Access to mechanical compression devices have shown an increase in ROSC (37, 38)

Clinical Care - Neurological

- Limited data to support for or against
- Overall, the use of air medical services for stroke has been shown to be cost-effective when examined per quality adjusted life year, additional studies are needed to determine specific subtypes of stroke patients for aircraft-based care and transport

Clinical Care – Obstetric & Neo

- Air medical providers may provide fetal monitoring, specialty neonatal care, and other interventions during transport that exceed the equipment and critical care capabilities of local ground EMS resources
- Scoring tools such as the Transport Risk Index of Physiological Stability
- (TRIPS) score or the Risk Score for Transport Patients (RSTP) aid in risk-stratifying neonates and may help support decisions on the best mode of patient transport (39 – 41)

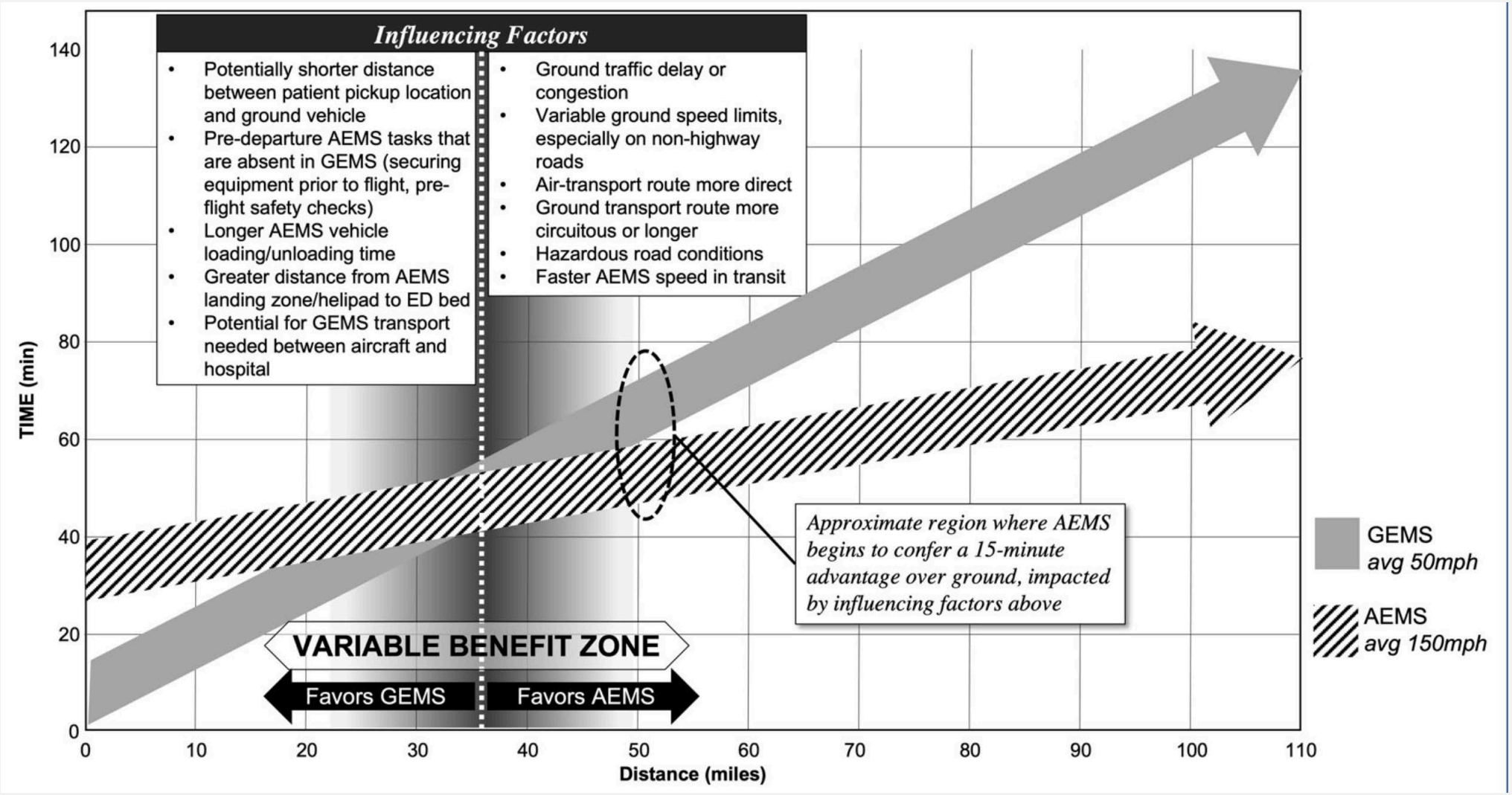
Clinical Care – Misc. Medical

- Limited studies to evaluate the use of air medical for other high acuity medical patients
  - Risk of airway deterioration: angioedema, epiglottitis, inhalation injury, etc.
  - Emergent need for medical therapy: hemodialysis, hyperbaric oxygen therapy, etc.
  - Emergent need for surgical intervention: aortic dissection/aneurysms, necrotizing fasciitis, limb reimplantation, etc.
  - Other need for critical care: complex mechanical ventilation, continuous titration of vasoactive medication, etc.
  - Specialty care: any required intervention not available at the referring facility

Temporal & Geographic Considerations

- True time of air medical transport includes lift off time, response time, scene time, patient load time, transport time, and patient off load time.
- Distance is an indirect measure of time
  - Construction, significant traffic, spontaneous events such as riots or civil unrest, geographic considerations (limited road access, need for ferry utilization, remote location otherwise inaccessible by ground, natural disasters, etc.),

Temporal & Geographic Considerations



Risk Identification & Mitigation

- Air and ground EMS utilization decisions must include a risk versus benefit analysis for both the patient and the system from both safety and economic perspectives (23)
- Patient based factors
  - Weight/girth
  - Hazards with appropriate PPE unconducive for flight operations
  - Behavior/agitation considerations

Helicopter Shopping

- **Helicopter Shopping** – refers to the practice of repeatedly contacting various helicopter services to secure a flight for a patient, often without informing the other services about the reasons for previous declines.
  - Can lead to safety concerns, as it may result in multiple flights being requested for the same patient, which can create confusion and increase the risk of unsafe conditions.
  - FAA definition: calling multiple operators until one agrees to accept the flight request without sharing the reasons for previous declines.
  - Strongly discouraged; however, consideration should be given to variance in air medical providers and capabilities
    - Clinical and aviation capabilities vary which may result in one air medical provider being able to safety transport the patient despite the request being turned down by another provider.
    - Examples include VFR vs IFR, weather variances between aircraft locations, specialized clinical care specific for patient request

Helicopter Shopping

- Reverse helicopter shopping – air medical providers contact sending provider to offer service after hearing another provider turned down the flight. This practice is highly discouraged

  - **If an air medical provider declines a flight, the entity requesting transport must inform all subsequent agencies of both the prior turndown and the reasons for the refusal (24).**

Economic Factors

- Air medical transport may introduce significant financial burdens to the patient and should be considered when contemplating air versus ground transport.
- There is a substantial variance in the charges/billing practices across independent, hospital-based, and for-profit air medical service agencies

Economic Factors - NSA

- No Surprises Act (42)
  - The No Surprises Act, a component of the Consolidated Appropriations Act, 2021, addresses surprise air ambulance bills, effective January 1, 2022. Privately insured patients will pay only the deductibles, and copayment amounts that they would have paid for in-network air ambulance providers.
  - It removes the patient from billing disputes, letting providers and insurers resolve payment issues directly.

System Integration & QA

- Air medical services integration into local and regional health care systems requires multifaceted approach with engagement of appropriate stakeholders, oversight, and protocol development.
  - Stakeholders – appropriate integration requires understanding of capabilities of various air medical services
    - Air medical directors, medical directors, EMS/FD & police leadership, hospital administration, as well as representatives from local, regional, and state advisory boards
    - Air medical provider medical directors should meet the guidelines outlined in the NAEMSP position statements Flight Physician Training Program – Core Content and Physician Oversight of Air-based EMS (25, 26).
  - Oversight – stakeholders must establish protocols addressing authorized requestors, dispatching, communication, and quality assurance.

Coordination and Communication

- Communication systems should promote the reliable and accurate flow of information among dispatch centers, air resources, ground EMS, public safety/security, local air traffic controller, and the receiving facility.
- Work with your local providers to ensure safe helipad/LZ operations
- On-scene personnel and hospital personnel should be educated about aviation safety and communication requirements
  - https://www.dshs.texas.gov/sites/default/files/emstraumasystems/GETAC/PDF/AirMed-Landing-Zone-Training.pdf

Conclusion

- To ensure optimal function of the system, entities that use and provide air medical services resources should work collaboratively to ensure these resources are used in a safe, clinically appropriate, professional, and integrated manner.
- Medical Director involvement is essential for determining criteria for appropriate aircraft utilization

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Pulsara Implementation
Guidelines for the Air Medical Provider

Background

Pulsara is being promoted as the standard for pre-hospital patient notification and communication statewide. While this is a little more straightforward for ground EMS operations, many questions routinely come up with regards to how Air providers would utilize Pulsara and what is allowed due to regulatory guidance. The following excerpts are meant to provide a starting point for agencies wishing to navigate how they would utilize Pulsara. Like HIPAA, great variance in interpretation exists depending on the person reading the guidance. For this reason, Pulsara does not recommend a hard and fast ruling and instead offers opportunities to utilize Pulsara whether an air operation is taking a less or more risk averse approach to utilizing Pulsara.

CAMTS Guidance on Mobile Devices

https://www.camts.org/wp-content/uploads/2023/10/Special-Operations-2023-Standards-Final.pdf

04.02.04 If cellular phones are part of the on-board communications equipment, they are to be used in accordance with FCC regulations. (See References) (RW/FW)

1. For aircraft, cellular phones must be shut off or placed in airplane mode whenever required by the AHJ and the notice according to FCC or other AHJ regulations must be posted in the aircraft. (RW/FW)

2. A policy prohibits the use of cellular phones or other communications devices without an acceptable, integrated hands-free system while the vehicle is in motion or while refueling COMMUNICATIONS Commission on Accreditation of Medical Transport Systems camts.org 2023 Special Operations – Medical Retrieval Accreditation Standards 4.2 ***Except for vital communications or as compliant with state or national regulations.*** Texting is strictly prohibited.(RW/FW/S)

3. Surface providers whose medical director(s) has established the requirement for transmission of biomedical telemetry may utilize the cellular telephone system for such communications.

4. A required policy on portable electronic devices that allows for their use only for safety related activities, such as flight/transport planning, refueling, transport vehicle inspections, or clinical use, while the vehicle is in motion.

Pulsara Implementation
Guidelines for the Air Medical Provider

FAA

https://www.ecfr.gov/current/title-14/chapter-I/subchapter-G/part-135/subpart-C/section-135.144
§ 135.144 Portable electronic devices.
(a) Except as provided in paragraph (b) of this section, no person may operate, nor may any operator or pilot in command of an aircraft allow the operation of, any portable electronic device on any U.S.-registered civil aircraft operating under this part.
(b) Paragraph (a) of this section does not apply to—
(1) Portable voice recorders;
(2) Hearing aids;
(3) Heart pacemakers;
(4) Electric shavers;
(5) Portable oxygen concentrators that comply with the requirements in § 135.91; or
(6) Any other portable electronic device that the part 119 certificate holder has determined will not cause interference with the navigation or communication system of the aircraft on which it is to be used.

Additionally, the FAA strongly recommends that transport aircraft are equipped with 5g compatible radar altimeters and, if compliant, this equipment significantly enhances the air services ability to meet 135.144 (b) 6

Less	Pulsara use by Flight Crews	More
☑	Scan Band at patients side	☑
☑	Create patient channel onscene	☑
☑	Med Control on the ground	☑
☑	Send notification prior to liftoff	☑
☑	Communication with ground ems	☐
☑	Communicate with hospital in flight	☐
☐	Allow flight following / dispatch to relay info via radio	☑
☐	Allow ground ems to send notification on behalf of Flight	☑
☑	Provide feedback and promote follow up communication after patient delivery	☑

The above diagram outlines how flight crews can utilize Pulsara in a variety of ways to accomplish interoperability and continuity of care with referral sources (hospitals and ground EMS) and receiving facilities, regardless of their risk aversion and local policy stance on mobile device use in flight.

There is a significant amount of functionality that can be consumed without using a mobile device in flight, while services who have determined they are safe to utilize in fight would simply enjoy more functionality.

Pulsara Implementation
Guidelines for the Air Medical Provider

Steps for implementation

1. Sign up for Pulsara (It's Free to sign up) https://www.pulsara.com/texas-resources
    a. Click Join the network
2. Review above background and guidance and determine level of risk acceptance to drive operational and clinical scope of use
3. Amend current policies and procedures if needed to align with adopted technology standards
4. Air Medical programs must comply with any specific requirements pertaining to the use of mobile communication or cellular devices in accordance with the aviation operator's (Part 135 Aviation Certificate Holder) General Operations Manual (GOM).
5. Leverage training videos and downloadable materials found at www.pulsara.com/academy
6. The Pulsara team is available for consultation to help with set up or to talk through the best adoption based on specific regional or operational concerns. help@pulsara.com

Workplace Violence in EMS Survey

GETAC EMS Committee

Potential Questions:

(sent to field personnel directly)

1. Have you ever experienced an act of violence from a patient, family member or other member of the public while on duty? Yes, but there was a credible medical explanation (diabetic patient hit you unintentionally/altered mentation) or yes, you felt this was intentional harm?

2. Do you feel empowered to report these incidents to your department when they occur?

3. Does your department have a reporting program where you can report acts of violence when they occur?

4. Have you ever experienced an act of violence from a patient, family member or other member of the public while on duty that you DID NOT report to your department?

5. Do you feel that acts of violence are taken as seriously by legal authorities as those same acts against other public safety officials? (Law enforcement, fire, etc).

6. Does your department provide any specific training regarding provider safety against acts of violence towards EMS providers?

Potential Questions:

(sent to AOR)

1. Does your department have a reporting system for providers to report acts of violence?

2. Does your department track reported acts of violence against your providers?

3. Has your department experienced an act of violence against a provider resulting in an injury where treatment or time off was required?

4. Does your department have a standardized training program for provider safety against acts of violence towards EMS providers?

Review and consider the EMS Medical Directors Committee's use of lights and sirens as a medical intervention statement:

> *The use of Red Lights and Sirens, occurring in over 85% of all responses to 911 scenes yet resulting in potentially lifesaving interventions only 7% of the time and being associated with increased number and severity of ambulance crashes, should be considered a medical intervention and used only when the considered clinical benefits outweigh the known risks, in collaboration with the Medical Director.*

Position Statement: Addressing Workplace Violence in Healthcare Settings

Workplace violence in healthcare is a pervasive and escalating crisis that not only endangers the safety, well-being, and effectiveness of healthcare professionals and patients. Workplace violence also contributes significantly to professional burnout and drives many dedicated individuals to leave the field they once felt called to serve. Leading healthcare organizations such as the American Nurses Association (ANA), American Hospital Association (AHA), Occupational Safety and Health Administration (OSHA), and The Joint Commission have recognized the critical need to address this crisis.

The Public Education & Injury Prevention Committee, in partnership with XXX Committees of GETAC, urges the Texas emergency healthcare system to strengthen existing frameworks and endorse a zero-tolerance approach to violence in healthcare settings. We call for coordinated, cross-sector efforts involving institutions, stakeholders, and communities to ensure a safer, more supportive workplace for all healthcare personnel.

1. Recognition and Definition

We recognize workplace violence as encompassing a broad spectrum of behaviors—including physical assault, verbal abuse, bullying, harassment, and threats—that occur within healthcare settings. In alignment with OSHA and The Joint Commission, we define workplace violence as:

"Any act or threat of physical violence, harassment, intimidation, or other threatening disruptive behavior that occurs at the work site."

Violence may originate from patients, visitors, or internal sources such as coworkers. Recognizing the full range and contextual nuances of violence is essential for effective prevention, identification, reporting, and/or intervention. It is important to adopt a definition of workplace violence to allow all staff to better understand the event and name it's occurrence.

2. Prevention and Risk Assessment

We affirm that workplace violence is preventable through proactive environmental design, staffing practices, and administrative controls. Drawing from existing best practices:

- Routine risk assessments should be conducted to identify vulnerable situations (e.g., behavioral or psychiatric emergencies, domestic violence or assault emergencies, presence of substance misuse, involvement of a crime scene or law enforcement requests, presence of large crowds or involvement of hostile individuals, understaffed resources or solo responders, events that contribute to high emotional tension or unpredictable environments)

- Environmental design measures—such as secure entry points or staff compartments, panic buttons, establishment of escape paths, emergency communications systems, surveillance systems, and clear signage—must be prioritized.
- Data-driven decision-making should be applied by using incident data to identify trends and target high-risk areas.

Organizational cultures should prioritize workplace violence prevention as a core operational tenant supported by adequate resources and leadership commitment.

3. Training and Education

Training and education are essential pillars in violence prevention. In alignment with ANA and OSHA guidelines, our position is that:

- All staff — patient-facing and non-patient-facing —must receive comprehensive training on de-escalation techniques, situational awareness, and personal safety.
- Training must be ongoing, scenario-based, and tailored to specific agencies, departments and roles of staff members.
- Leadership must be trained in trauma-informed management to support staff affected by violence. Education in trauma-informed care is recommended for all staff to foster empathy, resilience, and a culture of safety.

Educational programs should cultivate a shared understanding of violence, empower employees to respond safely, and reinforce that violence is never "part of the job."

4. Reporting and Support Systems

We echo the Joint Commission's call for a "culture of safety" that encourages transparent, blame-free reporting. To achieve this:

- Organizations must implement clear, accessible, and anonymous reporting mechanisms.
- Reports must be taken seriously, investigated promptly, and result in timely interventions.
- Affected employees must have access to psychological support, debriefing sessions, and legal assistance.
- Reporting systems should be linked to organizational learning, with regular feedback loops to inform policy and prevention efforts.

5. Incorporation of Policy Recommendations

We champion adoption of the robust federal and state legislation that protect healthcare workers from violence. Building on Texas' momentum and forward action with Senate Bill 463 (2025) Definition of Facility for Purposes of Workplace Violence Prevention Requirements, Senate Bill 240 (2023) Mandatory Violence Prevention Plans and Senate Bill 840 (2023) Criminal Penalties, and the federal initiatives of the "Workplace Violence Prevention for Health Care and Social Service Workers Act" (HR 1195), we support:

- Mandating OSHA standards specific to healthcare violence.
- Ensuring legal protections for workers who report incidents.
- Funding for the implementation of violence prevention programs and staff training.

We urge policymakers to recognize workplace violence in healthcare as a critical challenge and to provide regulatory frameworks that hold institutions accountable for both hospital protections and policies, but also parallel those efforts for first responders.

Conclusion

Workplace violence in healthcare is a systemic issue that demands a systemic response. By building on the foundational efforts of respected healthcare organizations, we commit to a comprehensive, prevention-oriented approach that centers on safety, accountability, and support. We call on healthcare institutions, professionals, legislators, and the public to work collaboratively toward a culture of zero tolerance for violence in healthcare settings.

Professional Healthcare Organizations with Workplace Violence Position Statements

1. American Association of Critical-Care Nurses (AACN)
   https://www.aacn.org/policy-and-advocacy/position-statements/preventing-violence

2. American Association of Nurse Anesthesiology (AANA), Association of periOperative Registered Nurses (AORN), and American Society of PeriAnesthesia Nurses (ASPAN)
   https://www.aorn.org/docs/default-source/guidelines-resources/position-statements/patient-workplace-safety/workplace-civility-1021.pdf?sfvrsn=75b62138_1#:~:text=AANA%2C%20AORN%2C%20ASPAN%20BELIEVE%3A&text=Civility%20in%20the%20perianesthesia%20and,a%20safe%20culture%20for%20all.&text=It%20is%20the%20responsibility%20of,%2C%20disruptive%2C%20or%20violent%20behaviors.

   https://www.aana.com/wp-content/uploads/2023/07/workplace-civility-white-paper_aana_aorn_aspan.pdf

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7. American Medical Association (AMA)
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   https://www.nursingworld.org/practice-policy/nursing-excellence/official-position-statements/id/incivility-bullying-and-workplace-violence/

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    https://tsaco.bmj.com/content/tsaco/9/1/e001580.full.pdf

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    https://www.cdc.gov/niosh/violence/about/index.html

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https://www.ena.org/practice-resources/workplace-violence

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https://www.iahss.org/page/wpvpb

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https://www.naemt.org/docs/default-source/advocacy-documents/positions/position-on-violence-against-ems-practitioners.pdf?sfvrsn=2

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https://www.nationalnursesunited.org/workplace-violence-prevention

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https://www.osha.gov/workplace-violence

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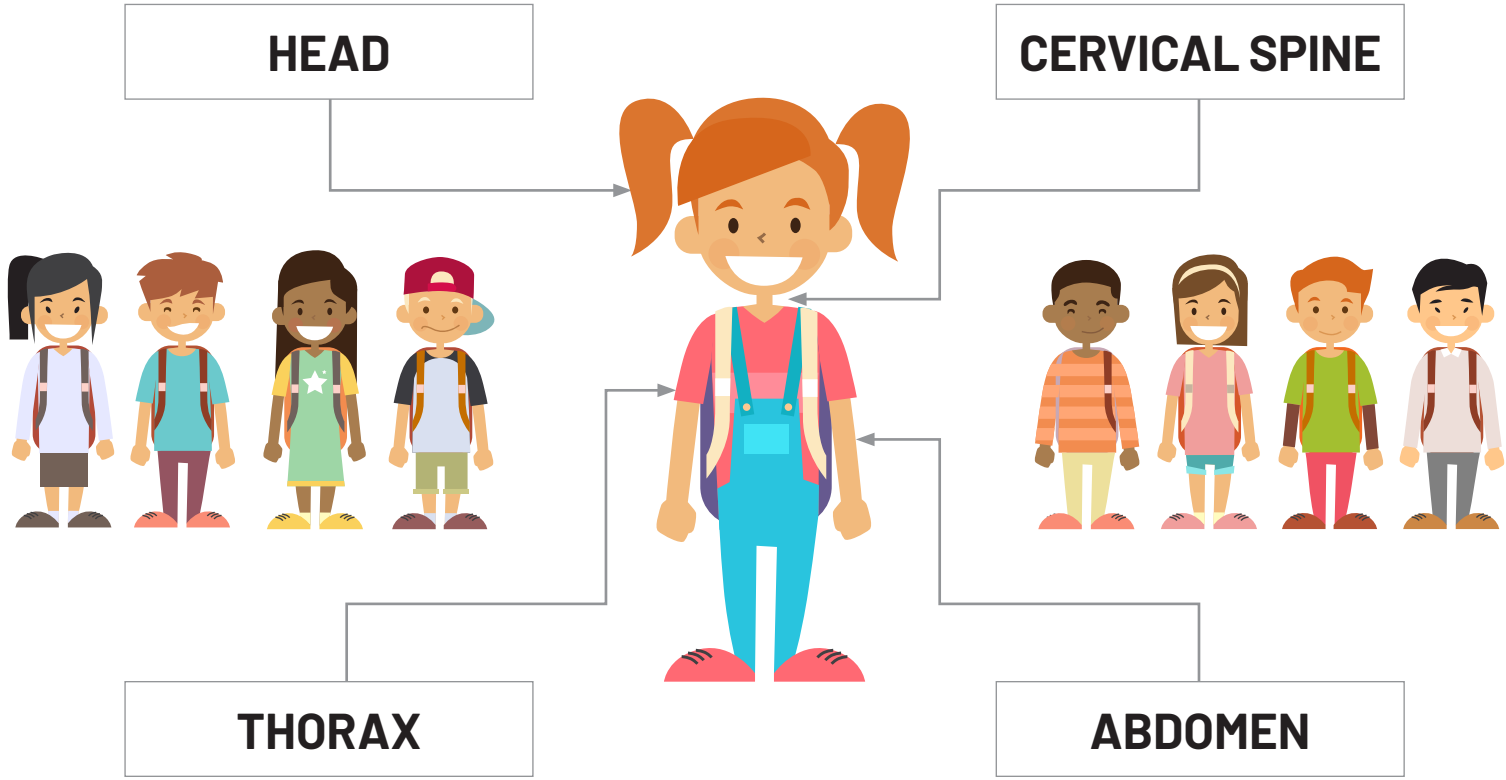
BEST PRACTICES IN PEDIATRIC TRAUMA IMAGING

EIIC
EMSC Innovation and Improvement Center

The EMSC Innovation and Improvement Center is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award (U07MC37471) totaling $2.5M with 0 percent financed with nongovernmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement by, HRSA, HHS or the U.S. government. For more information, visit HRSA.gov.

Imaging in Stable Pediatric Trauma



Identification of patients requiring transfer to Pediatric Trauma Center early

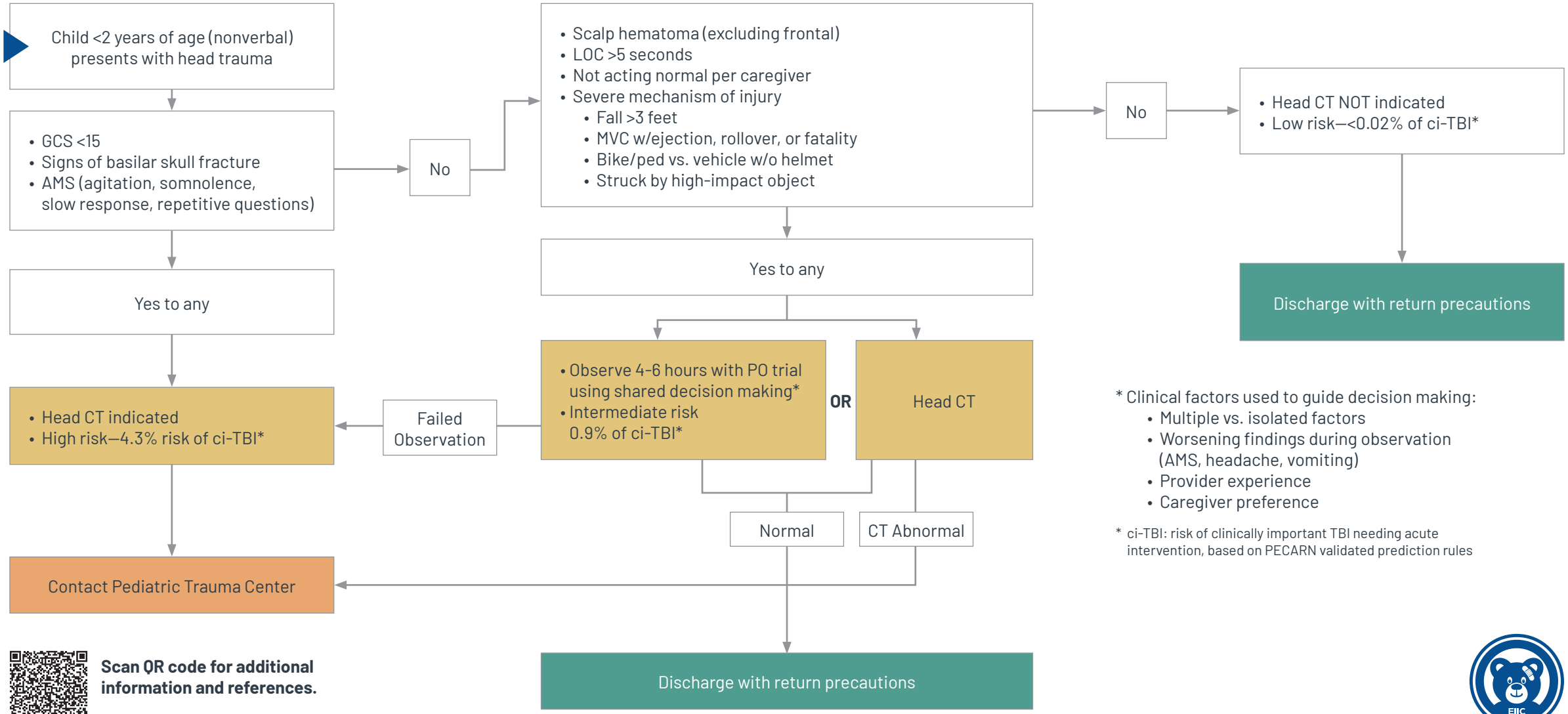
- For patients who have an identified indication for transfer, do not delay transfer to Pediatric Trauma Center (PTC) while awaiting CT
- Discuss with PTC if CT scans should be obtained while waiting for transport
- CT of thorax, abdomen/pelvis must be with IV contrast
- Utilize pediatric-specific dosing for all imaging studies

Routine whole body CT (WBCT) should NOT be routinely undertaken in pediatric trauma patients.

Pediatric Head Trauma Screening

for children under two years old (nonverbal) with blunt head trauma

<2 Years



* Clinical factors used to guide decision making:

- Multiple vs. isolated factors
- Worsening findings during observation (AMS, headache, vomiting)
- Provider experience
- Caregiver preference

* ci-TBI: risk of clinically important TBI needing acute intervention, based on PECARN validated prediction rules

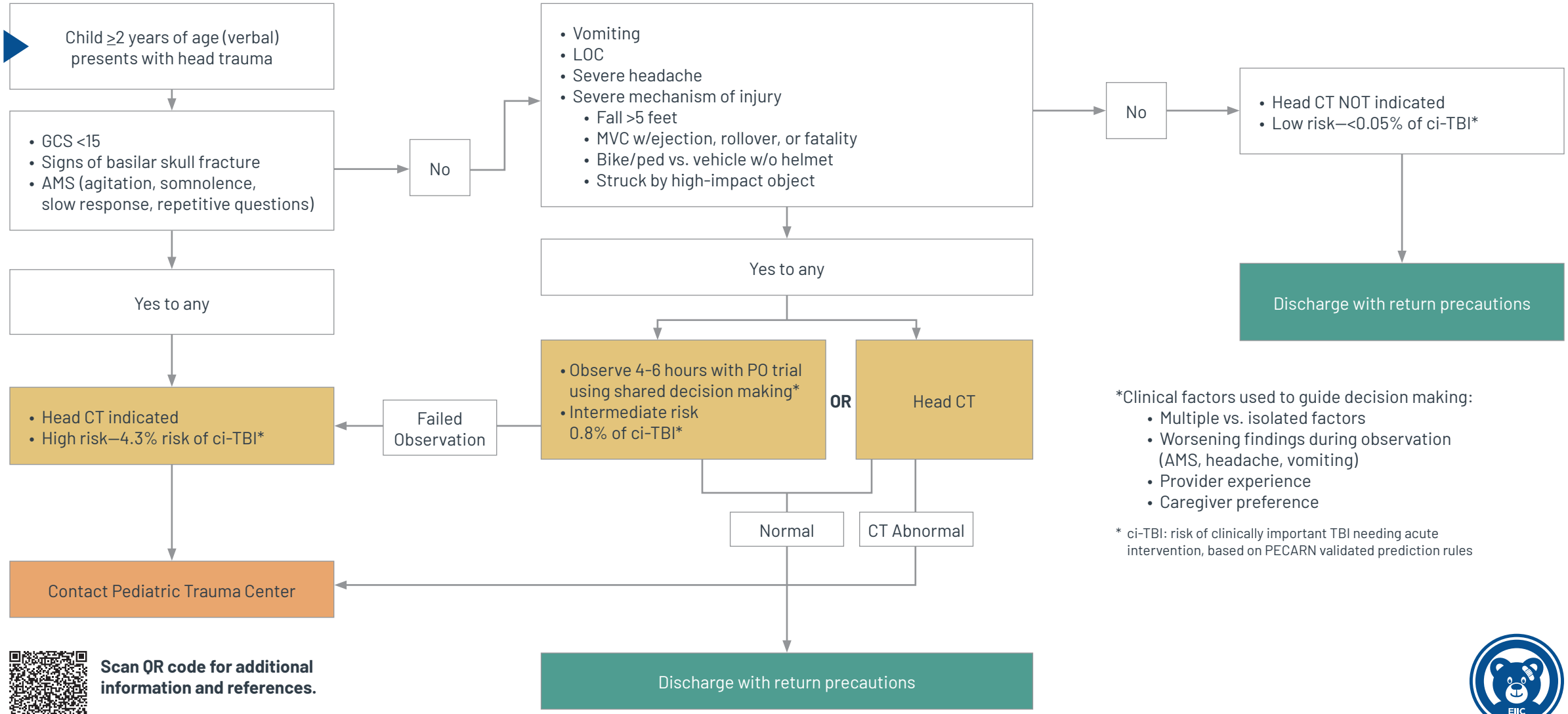
Scan QR code for additional information and references.

Algorithm is not intended for suspected child physical abuse.

Pediatric Head Trauma Screening

for children two years and older (verbal) with blunt head trauma

≥2 Years



*Clinical factors used to guide decision making:

- Multiple vs. isolated factors
- Worsening findings during observation (AMS, headache, vomiting)
- Provider experience
- Caregiver preference

* ci-TBI: risk of clinically important TBI needing acute intervention, based on PECARN validated prediction rules

Scan QR code for additional information and references.

Algorithm is not intended for suspected child physical abuse.

Pediatric Cervical Spine Injury Screening

Child presents with possible c-spine injury after blunt trauma

High Risk Factors (12.1% chance of injury)
- GCS score 3-8 or unresponsive on AVPU scale
- Abnormal airway, breathing, or circulation
- Focal neurological deficits on examination

Yes → **Consider C-spine CT**
This patient likely exceeds the treatment capabilities of most centers and will require transfer out - consider discussion with PTC prior to imaging. This patient may also require CT arteriogram depending on mechanism given low GCS.

A negative CT scan is inadequate to clear a collar with GCS 3-8 or persistent neurologic deficits.

No

Intermediate Risk Factors (2.8% chance of injury)
- Altered mental status
- Self-reported neck pain or tenderness on examination
- Substantial head or torso injury

Yes → **Consider Lateral C-spine X-ray**
A negative x-ray is insufficient to clear a collar with persistent symptoms.

If imaging is normal, consider interval re-evaluation and if symptoms persist discuss case with PTC and consider sending home in a collar with outpatient spine follow-up.

No

No Risk Factors (0.2% chance of injury)

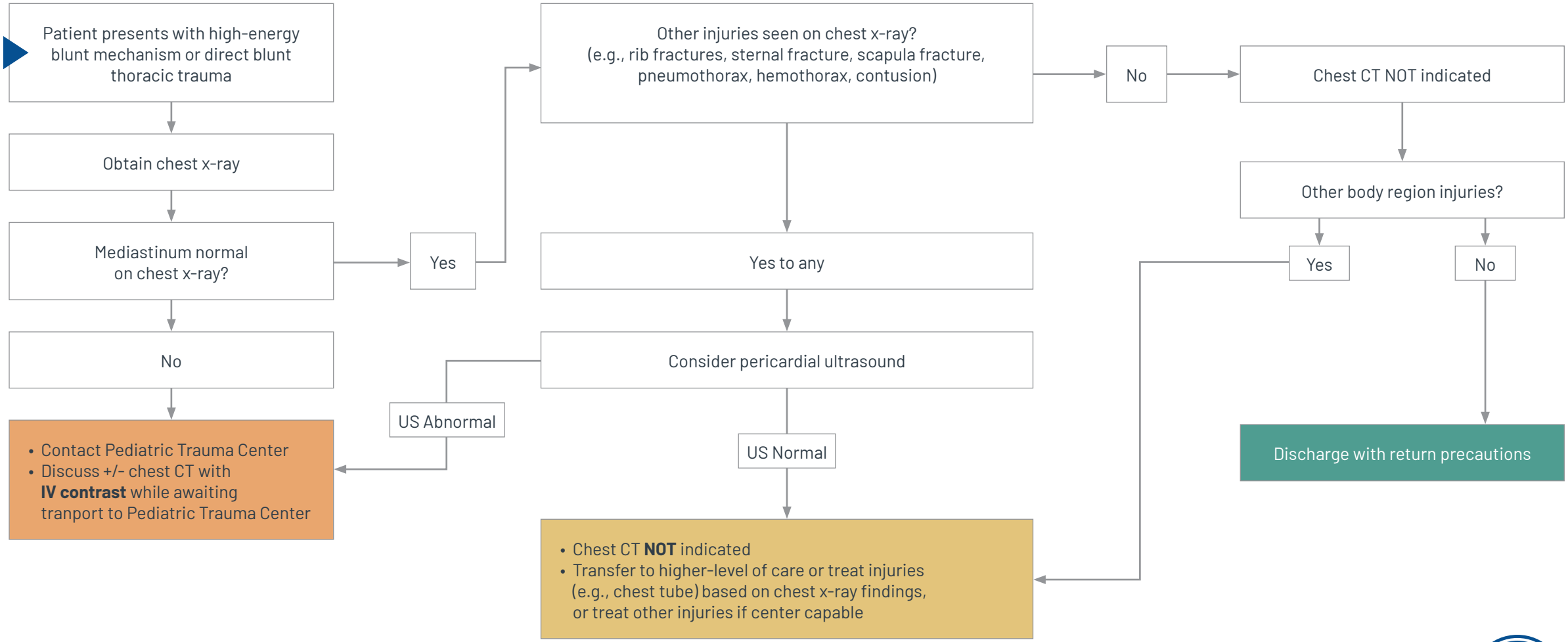
Yes → **Clear collar clinically (including ensuring full range of active motion) without imaging**

Scan QR code for additional information and references.

Algorithm is not intended for suspected child physical abuse.

Pediatric Blunt Thoracic Trauma Screening

for patients with high-energy blunt mechanism or direct blunt abdominal trauma



Scan QR code for additional information and references.

Algorithm is not intended for suspected child physical abuse.

Pediatric Blunt Abdominal Trauma Screening

for patients with high-energy blunt mechanism or direct blunt abdominal trauma

Patient presents with high-energy blunt mechanism or direct blunt abdominal trauma

- Abdominal tenderness
- Abdominal wall bruising
- Seatbelt sign
- GCS ≤ 13
- Hemodynamic instability
- Concern for child abuse

No

- Evidence of thoracic wall trauma
- Complaints of abdominal pain
- Decreased breath sounds
- History of vomiting after the injury

No

- Abdominal/pelvis CT with **IV contrast** NOT indicated

Observe 4-6 hours and PO trial

Abdominal pain or tenderness during observation

Yes

- Contact Pediatric Trauma Center
- Discuss +/- abdominal/pelvis CT with **IV contrast** while awaiting transport to Pediatric Trauma Center

No

Discharge with return precautions

Yes to any

- AST>200 / ALT > 125
- Abnormal Amylase/Lipase
- Hct < 30%
- Abnormal chest x-ray
- Gross hematuria

No

Yes to any

Consider

- CT Abdominal/pelvis with **IV contrast** if negative result will yield immediate ED discharge

OR

- If center capable, 24 hour observation with serial abdominal exams by a surgeon

CT Normal

CT Abnormal **OR** Develops abdominal pain or tenderness during observation

Yes to any

- Contact Pediatric Trauma Center
- Discuss +/- abdominal/pelvis CT with **IV contrast** while awaiting transport to Pediatric Trauma Center

Scan QR code for additional information and references.

Algorithm is not intended for suspected child physical abuse.

- FAST is unreliable in hemodynamically normal children and should not be used to rule out intra-abdominal injury or lead to an abdominal/pelvis CT with IV contrast in an asymptomatic child.

PREHOSPITAL PEDIATRIC STROKE TRIAGE AND MANAGEMENT

1. **Goals:**

   To increase EMS awareness and identification of strokes in the pediatric population (infants and children less than 18 years of age) and to facilitate rapid triage and transport to the nearest appropriate facility.

2. **Purpose:**

   Pediatric Stroke is a rare disease that is, nevertheless, included among the top ten causes of death in pediatrics.[1] However, rapid recognition and appropriate treatment of pediatric stroke can profoundly improve outcomes for these children, sparing them from decades of disability.[2,3] Thrombectomy has been shown to improve outcomes in pediatric large artery occlusion stroke.[4] This guidance document is designed to help EMS providers recognize and triage pediatric stroke patients quickly, facilitating improved outcomes throughout the state.

   The **GETAC Prehospital Pediatric Stroke Triage Algorithm** was developed in consultation with EMS, EMS leaders, and local, regional, and state medical authorities. The GETAC pediatric stroke algorithm was developed in consultation with the GETAC Stroke, EMS, Pediatric, EMS Medical Directors Committees, and the Council. Available guideline statements and guidance from the GETAC Pediatric Stroke Task Force (a consensus of expert opinion based on clinical experience in the fields of Vascular Neurologists, Neuroendovascular Surgeons, and Pediatricians) were integral in the development of this resource document and algorithm.[5-13] The recommendations were developed to ensure that all pediatric patients with a known or suspected stroke are rapidly identified, assessed, and triaged as outlined below. Standardizing care to rapidly diagnose and provide appropriate treatment will improve outcomes.[9-12] The prehospital pediatric stroke triage and transport recommendations serve to direct the regional triage of pediatric patients with acute stroke to the most appropriate facility. See **Annex A: GETAC Pediatric Prehospital Stroke Triage Algorithm**.

There are no formal national or statewide guidelines, certifications, or recognition systems for Pediatric Stroke Destinations. EMS Medical Directors should determine which nearby facilities they will direct pediatric patients with suspected or confirmed stroke. A pediatric stroke destination should have personnel available to care for pediatric stroke patients and a pediatric intensive care unit. Pediatric stroke destinations should have a multidisciplinary team to care for pediatric stroke patients, the capability to administer antiplatelet drugs, anticoagulants, thrombectomy, and thrombolytic therapies, and the ability to treat complications. Pediatric stroke destinations should have the technical capabilities (including imaging capability, MRI if possible), policies, and procedures to facilitate optimal care of a pediatric stroke patient.[9-12] Pediatric hospitals that do not meet the above capabilities should be able to identify, stabilize, consult, and transfer patients to a center that can provide the appropriate care and rehabilitative resources.[9-12]

3. Prehospital Triage of Stroke in Pediatric Patients

Pediatric stroke can present with focal neurologic signs, as well as nonspecific signs like seizure or altered mental status.[9,14-16]

Sudden onset of any of the following suggests the possibility of acute stroke:

- Numbness or weakness of the face, arm, and/or leg (especially on one side of the body)
- Confusion
- Trouble speaking or understanding language.
- Double vision, trouble seeing in one or both eyes.
- Altered Mental Status
- Trouble walking
- Dizziness
- Loss of balance or coordination
- Severe headache with no known cause (suggests hemorrhagic stroke), especially with altered mental status.

❖ For patients with any of the above neurological signs, especially with the listed conditions below, consider triaging as an acute stroke.

Patients with any of the following are at higher risk for acute stroke:

- Heart disease
- History of blood vessel problems in the brain
- History of stroke
- Sickle cell disease
- Cancer
- History of blood clots

Common pediatric stroke mimics:

- Alcoholic intoxication
- Cerebral infections

- Drug overdose
- Hypoglycemia
- Hyperglycemia
- Genetic/metabolic disorders
- Atypical migraines
- Neuropathies (e.g., Bell's palsy)
- Seizure
- Post-ictal state
- Tumors

Basic Level

In suspected pediatric stroke cases, assess and treat ABCDEs per universal pediatric recommendations:

- **A (Airway):** Airway support and ventilation assistance are recommended for patients with acute stroke who have decreased consciousness or who have a compromised airway. Suctioning and oropharyngeal or nasopharyngeal airway as needed to ensure airway patency.
- **B (Breathing):** Supplemental oxygen should be provided to maintain oxygen saturation > 94% (continuous monitoring).
- **NOTE:** Some patients with congenital heart disease have a different goal saturation level (80-90% in some cases). If unsure, confirm the normal level with parents or caretakers.
- **C (Circulation):** Evaluate and treat signs/symptoms of shock according to the Shock Clinical Practice Guidelines
- **D (Disability)**: Assess and document GCS, pupillary size, and reactivity.
- **E (Exposure/Environmental):** Assess for evidence of traumatic injury, especially head injury.

Stabilization and Initial Management:

- If there is evidence of shock, treat according to the Shock clinical practice guidelines.
- If there is hypoglycemia (POC glucose < 70 mg/dL),[17] treat according to the diabetic emergencies clinical practice guidelines.
- If seizures occur, treat according to the seizure clinical practice guidelines.
- Place the patient in a supine position, head of the bed elevated 30 degrees.
- Cardiac monitoring during transport is recommended.

Cardiovascular Examination:

- Record blood pressure, rate, rhythm, respiratory rate, and oxygen saturation.
- Obtain an EKG if it will not delay transport.

Neurological Assessment for Pediatric Stroke:

- Weakness of the face, arm, and/or leg (especially on one side of the body)
- Numbness on one side of the face or body
- Confusion
- Trouble speaking or understanding language.

- Double vision, trouble seeing in one or both eyes.
- Altered Mental Status
- Trouble walking
- Dizziness
- Loss of balance or coordination
- Severe headache with no known cause (suggests hemorrhagic stroke), especially with altered mental status.
- Seizure with post-ictal focal deficit (like weakness) that does not resolve quickly (~15 minutes).

History:

Interview the patient, family members, and other witnesses to determine symptoms, the time of symptom discovery, and the last known well (LKW) or the last time the patient was without symptoms. Ask about seizure at onset, head trauma, history of recent surgeries, history of bleeding problems/diagnosed bleeding disorders, and signs of possible brain hemorrhage (severe headache of sudden onset, nausea/vomiting with headache or loss of consciousness). Obtain a mobile number for the next of kin and witnesses.

- ❖ **NOTE:** For “wake-up strokes,” the last known well time is the last time the patient was witnessed to be at baseline, which may have been the night before. The time they are found is not the time of the last known well.

Additional History:

- Obtain past medical history and history of past and recent surgeries.
- Allergies (e.g., iodinated contrast)
- Pre-existing substantial disability (e.g., unable to walk independently)
- Device and implant history (e.g., left ventricular assist device, pacemaker, valve replacement, VP shunt)

Medications:

- Obtain a list of all medications including antiplatelet agents (e.g., aspirin, clopidogrel [Plavix]) and blood thinners (direct thrombin inhibitors [dabigatran/Pradaxa], factor Xa inhibitors [fondaparinux/Arixtra, rivaroxaban/Xarelto, apixaban/Eliquis, edoxaban/Savaysa]), low molecular weight heparin [enoxaparin/ Lovenox], unfractionated heparin, bivalirudin, argatroban, warfarin [Coumadin].
- If possible, record when the last dose was taken.

Management:

EMS personnel should address ABCDEs per universal pediatric guidelines. Additional initial management steps include:

- Prevent aspiration, HOB > 30. Ensure airway patency with suctioning and OPA or NPA as needed.
- Provide supplemental oxygen if needed to keep oxygen saturation > 94%.
    - (Adjust if the patient has known congenital heart disease with a different goal oxygen saturation)
- Treat hypotension per regional pediatric protocols.

- Maintain blood pressure below 20% above the 95th percentile for age.[12] Call online medical control if the systolic blood pressure is consistently above this percentile. The table below is an example of the upper limit of systolic blood pressure by age.

Age	Goal Systolic Blood Pressure
1-4 years	<130mmHg
5-10 years	<145mmHg
11-17 years	<160mmHg

- Hypoglycemia (blood glucose < 70 mg/dL) should be treated in patients suspected of acute ischemic stroke.[17] Evidence indicates that persistent in-hospital hyperglycemia during the first 24 hours after stroke is associated with worse outcomes and increased risk of hemorrhagic conversion in adults than normoglycemia. You should treat hyperglycemia with a blood glucose range of 140-180 being preferred.
- To facilitate expedited stroke workup in the ED, place two peripheral IVs, so long as it does not delay transport time.

System Triage:

- The goal on-scene time is 10-15 minutes or less. If the family is not transported with the patient, encourage them to go directly to the ED.
- See **Annex A: GETAC Pediatric *Prehospital Stroke Triage Algorithm*** forthe pediatric prehospital stroke triage algorithm.

Destination Decision-Making for Suspected Pediatric Stroke in Rural, Urban, and Suburban Areas

Age Criteria and Appropriateness for ADULT Stroke Facility: Please note that different adult stroke facilities will have different capabilities and willingness to evaluate and treat stroke patients under 18. EMS Medical Directors and stroke facility leadership should outline the age appropriateness for adult stroke facility admission based on regional facility resources and hospital policies.

Triage Recommendation:

1. Pediatric patient suspected of having a stroke who is medically stable and last known well **≤ 24 hours**; triage patient based on the following criteria:

   Age appropriateness for adult stroke facility:

   - Pediatric patient with suspected stroke, **age < appropriate:**
     - Transport suspected stroke patient to the nearest **Pediatric Stroke Destination***
       - **Pediatric Stroke Destination** – EMS Medical Director will recommend local pediatric stroke destinations. Typically, these are pediatric hospitals with the capability to care for pediatric patients

with stroke. Please note, there are **NO** formal national or statewide guidelines, certifications, accreditations, or recognition systems for 'Pediatric Stroke Destinations'.
    - If no Pediatric Stroke Destination is within 60 minutes by air or ground total transport time, or the patient is unstable, transport to the nearest Pediatric Facility.
- Suspected pediatric stroke, **age ≥ appropriate:**
    - Perform Validated Stroke Severity Screening Tool to assess for potential large vessel occlusion (LVO), such as RACE score.[18]
    - **If LVO Screening Tool Positive:**
        - Transport suspected stroke patients to the nearest adult Comprehensive Stroke Center (CSC/ Level 1) if within ≤ 30 minutes from the nearest Pediatric Stroke Destination and no more than 60 minutes total transport time by air or ground.
        - If no CSC is available within 30 minutes, transport to the nearest thrombectomy capable stroke center (TSC/ Level 2) if within < 30 minutes from the nearest Pediatric Stroke Destination and no more than 60 minutes total transport time by air or ground.
        - If neither a CSC nor TSC is available within ≤ 30 minutes, transport to the nearest Pediatric Stroke Destination.
        - If no Pediatric Stroke Destination is available within ≤ 60 minutes or the patient is unstable, transport to the nearest Pediatric Facility.
    - **If LVO Screening Tool Negative:**
        - Transport suspected stroke patients to the nearest Pediatric Stroke Destination.
        - If no Pediatric Stroke Destination is within 60 minutes by air or ground total transport time, or the patient is unstable, transport to the nearest Pediatric Facility or most appropriate facility.

2. Pediatric patient suspected of having a stroke and last known well **> 24 hours**, triage based on the following criteria:
    - Suspected pediatric stroke, **for all ages:**
        - Transport suspected stroke patients to the nearest Pediatric Stroke Destination.
        - If no Pediatric Stroke Destination is within a 60-minute total transport time or the patient is unstable, transport to the nearest Pediatric Facility.

❖ **For all ages:** consider air medical if transport time is prolonged > 60 minutes.

❖ **Stroke Prenotification**: alert the receiving facility that a suspected pediatric stroke patient is en route prior to arrival. A stroke alert prior to arrival will mobilize appropriate resources before patient arrival.
    - Prenotification should include: Age, last known well, time of symptom discovery, current vital signs, stroke screening tool score (if performed), and symptoms (weakness on one side, altered mental status, etc.).

❖ **Hand-off Goal**: 120 seconds for EMS to ED triage nurse hand-off.

(Note – Plan is adapted from the 2022 North Central Texas Trauma Regional Advisory Council Regional Stroke Plan)

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Rural Stroke Care Barriers Survey
Estimated completion time: 5–7 minutes

Section 1: Organization Information

1. Name of your organization (optional): _____
2. Type of organization:
   - ☐ Hospital
   - ☐ EMS Agency
   - ☐ Other (please specify): _____
3. Question on position at facility:
4. Location (RAC): _drop down list_____
5. Location County: write in
6. Approximate population your facilty serve:
   - ☐ < 5,000
   - ☐ 5,000 – 10,000
   - ☐ 10,000 – 25,000
   - ☐ > 25,000

Section 2: Stroke Care Capabilities
5. Does your facility/agency have stroke protocols in place?

- ☐ Yes
- ☐ No
- ☐ In development

6. Is your facility designated as a stroke center?
   - ☐ Yes
   - ☐ No
7. What DSHS Level stroke facility?
   - ☐ Level 1 (CSC)
   - ☐ Level 2 (Thrombectomy Capable Stroke Center)
   - ☐ Level 3 (PSC)
   - ☐ Level 4 (ASRH)
   - ☑ Not designated
8. Does your EMS staff receive regular stroke-specific training?
   - ☐ Yes – annually
   - ☐ Yes – less than annually

- ☐ No

9. Do you have access to telestroke or remote neurology services?
   - ☐ Yes
   - ☐ No
   - ☐ In progress

Section 3: Identifying Barriers

9. What are the main challenges you face in timely stroke identification and care? *(Check all that apply)*

- ☐ Lack of staff training
- ☐ Inclement weather
- ☐ Limited access to neurologists
- ☐ Long transport times
- ☐ Poor interfacility communication
- ☐ Access to ground transport
- ☐ Access to air transport
- ☐ Lack of advanced imaging
- ☐ Limited EMS personnel
- ☐ Financial/resource constraints
- ☐ Other (please specify): _____

10. What are the biggest barriers to transferring stroke patients to higher-level care facilities?

- ☐ Distance/transport time
- ☐ Lack of transfer agreements
- ☐ Limited bed availability
- ☐ Communication delays
- ☐ Insurance or cost-related issues
- ☐ Physician availability at the receiving hospital (e.g., Neurosurgery and Neurointerventional (Neuro IR)
- ☐ Other (please specify): _____

Section 4: Improvements & Needs

11. What would most improve your organization's ability to deliver timely stroke care? *(Check up to three)*

- ☐ More EMS or hospital staff
- ☐ Additional training/education
- ☐ Access to telestroke services
- ☐ Improved imaging capabilities
- ☐ Faster transport options
- ☐ Stronger regional coordination
- ☐ Funding for equipment/resources
- ☐ Other (please specify): _____

12. Any additional comments or suggestions?

Questions

Unstable trauma transfer delays: Data Collection Considerations

TIME OF INITIAL INJURY

Day of the week (Monday – Sunday)

Time of day (6a-12p, 12p-5p, 5-10pm, 10p-6a)

SEVERITY/PATIENT COMPLEXITY

Primary Diagnosis

Secondary Diagnoses

GCS Category (all are <9): (3, 4-7, 8)

Degree of hypotension: 0-10mmHg, 10-20mmHg, >20mmHg

[SBP <110 (if >64), <90 (if 10-64), or <70 +2*age (<10yrs)]

Initial ISS category (sending facility): 1-8, 9-15, 16-24, 25 or greater

POTENTIAL CAUSES OF DELAY

CT/MRI obtained? Y/N

Blood products given? Y/N

Intubated? Y/N

SBP normalized? Y/N

TRANSFER TIMES

DECISION TIME: Time of decision to transfer (if available) – ED Arrival Time

RECEIVING CENTER DETERMINATION TIME: 1st Receiving center call time – ED Arrival Time

TIME TO RECIVING CENTER ACCEPTANCE: Last Receiving center call time – ED Arrival Time

TRANSPORT COORD TIME: Departure Time - Time 1st receiving facility called

TRANSPORT SRVC TIME: Departure Time - Time transport service called

EXTERNAL FACTORS (if noted)

Weather delay? Y/N

Delayed availability of transport services? Y/N

Mode of transport (air, ground interfacility, emergent 911, other)?

Denied in-RAC transport? - Y/N

Special cause variation? Cyberattack, MCI, extreme weather event, ED crowding

TEXAS
Health and Human Services

Texas Department of State Health Services

Emergency Medical Services and Trauma Registries (EMSTR) Stroke Performance Improvement Data

August 22, 2025

Jia Benno
Injury Prevention Unit Director

About EMSTR

- EMSTR collects reportable event data from EMS providers, hospitals, justices of the peace, medical examiners, and rehabilitation facilities.
- All submitters must report all EMS responses and reportable trauma events to EMSTR under Texas Administrative Code, Title 25, Chapter 103.

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.

Stroke Performance Improvement (PI) Data

January 1, 2022-December 31, 2024

Inclusion Criteria – All Suspected Strokes

- Primary symptom, other associated symptom, provider's primary impression or provider's secondary impression variables included International Classification of Diseases Tenth Revision (ICD-10) codes:
  - G45 – Transient cerebral ischemic attacks and related syndromes
  - G46 – Vascular syndromes of brain in cerebrovascular diseases
  - I60 – Nontraumatic subarachnoid hemorrhage
  - I61 – Nontraumatic intracerebral hemorrhage
  - I63 – Cerebral infarction
- Protocols used were "Medical – Stroke/TIA".[1]
- Stroke Scale Result was "Positive".
- Destination Prearrival Activation is "Yes-Stroke"

[1] TIA = transient ischemic attack

Suspected Stroke Numbers, 2022-2024

	2022	2023	2024
Total Suspected Stroke Patients	59,752	59,898	69,129

Data prepared by Injury Prevention Unit Epidemiologists. Data from EMS and Trauma Registries (EMSTR), June 2025.

Suspected Stroke by Sex, 2022-2024

Sex	2022	2023	2024
Male	28,521	28,582	33,757
Female	30,894	31,125	35,228
Missing / Not Recorded	337	191	144
Total	**59,752**	**59,898**	**69,129**

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

Stroke Scale Status for Suspected Stroke Patients, 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. Data from EMSTR, June 2025.

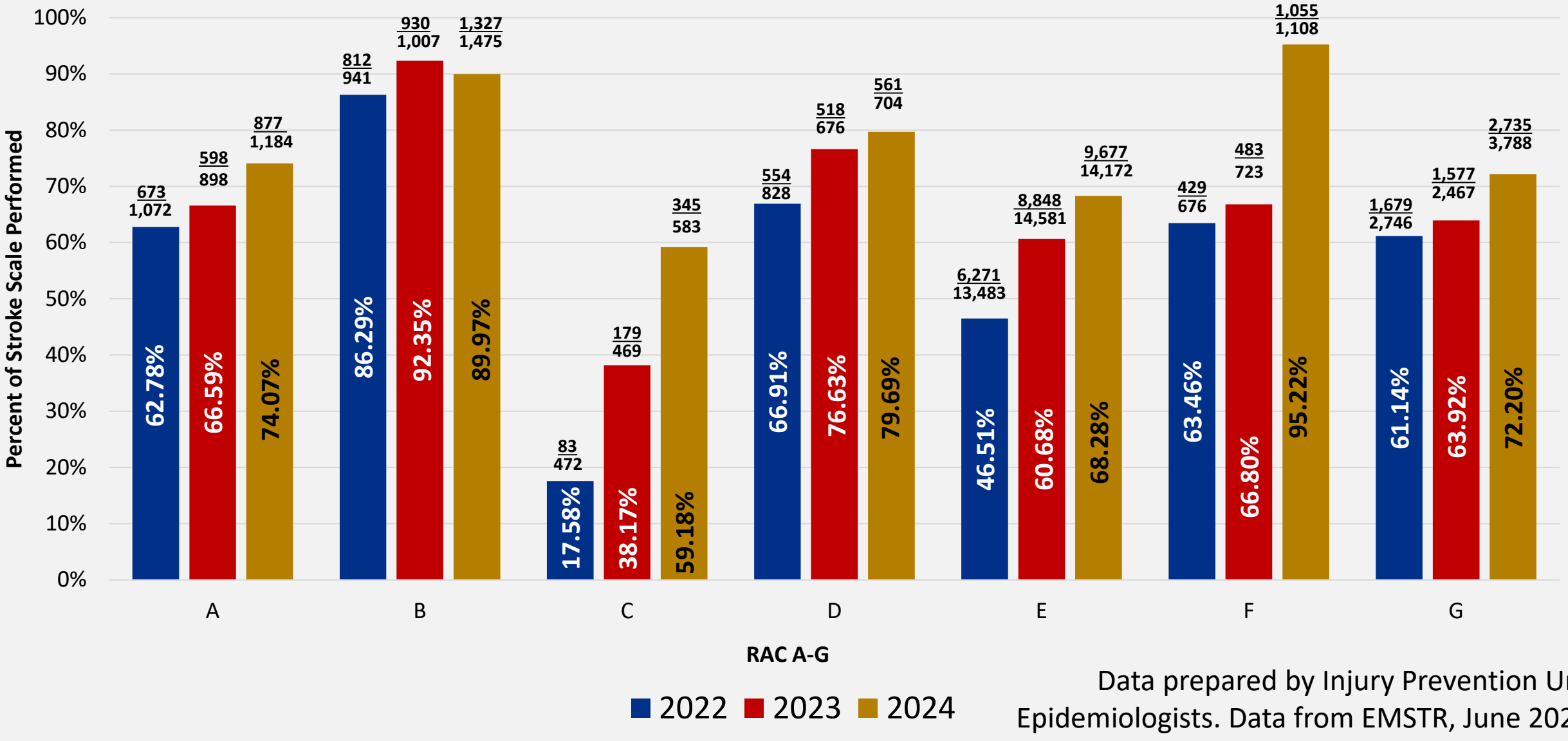
Stroke Scale Performed by Sex for Suspected Stroke Patients, 2022-2024

Sex	2022	2023	2024
Male	13,346	16,186	21,709
Percentage	46.79%	56.63%	64.31%
Female	14,772	17,604	23,015
Percentage	47.82%	56.56%	65.33%

Note: Data does not include stroke scales performed when sex was missing or unknown.

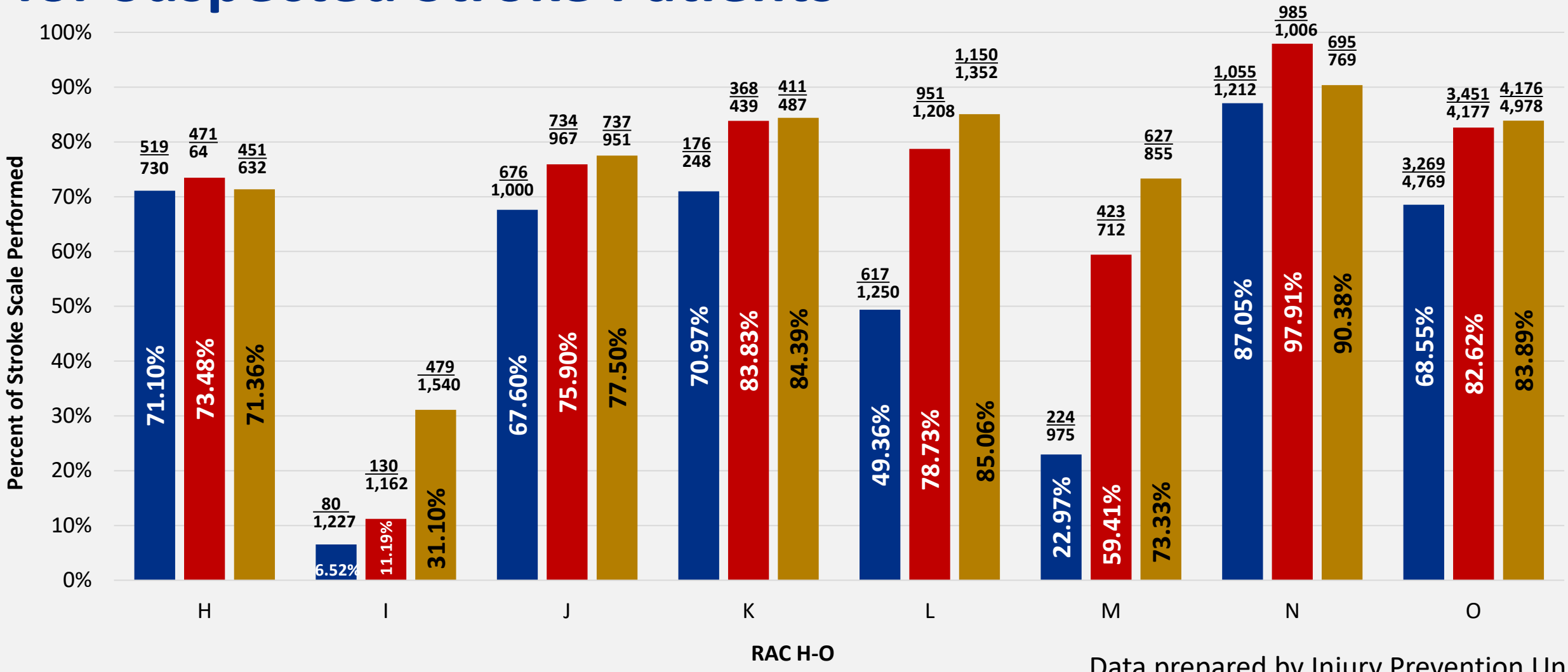
Data prepared by Injury Prevention Unit Epidemiologists. Data from EMSTR, June 2025.

Stroke Scale Performed by Regional Advisory Council (RAC) A-G for Suspected Stroke Patients



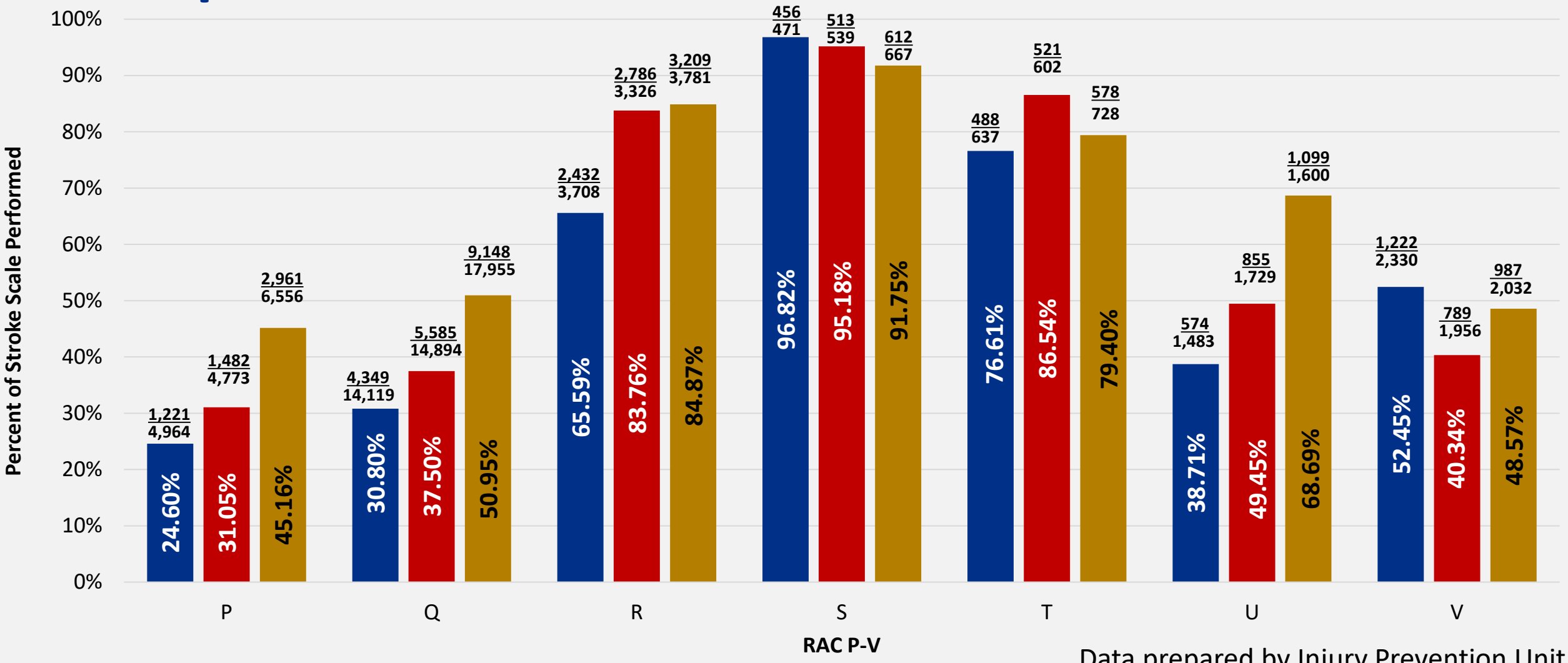
Data prepared by Injury Prevention Unit Epidemiologists. Data from EMSTR, June 2025.

Stroke Scale Performed by RAC H-O for Suspected Stroke Patients



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

Stroke Scale Performed by RAC P-V for Suspected Stroke Patients



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

Thank you!

EMSTR Stroke PI data

Injury.Prevention@dshs.texas.gov

American Heart Association.

American Heart Association. Get With The Guidelines. Stroke

Semiannual GETAC Stroke Quality Report

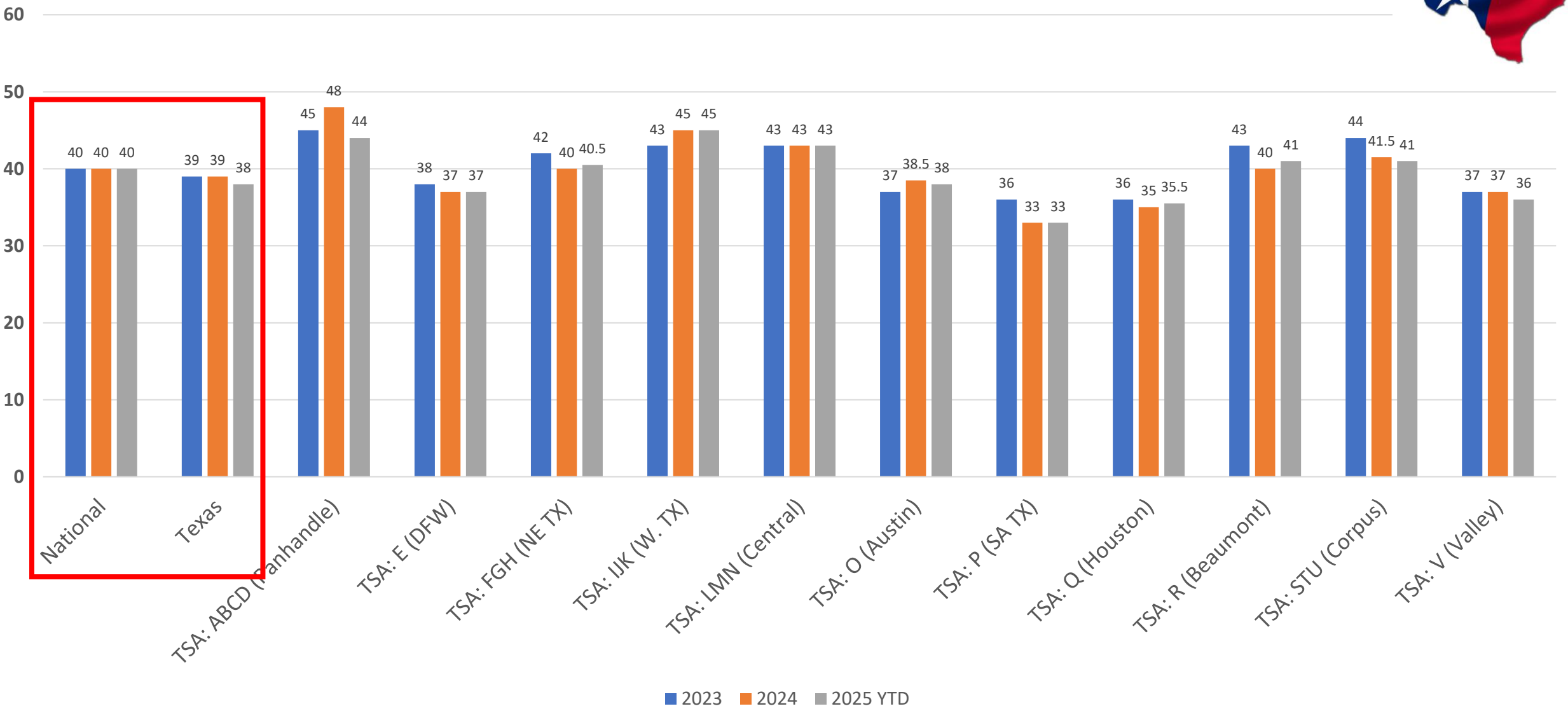
Data Sourced from Get With The Guidelines® - Stroke
June 27 – July 1, 2025
Reports reflect 2023 – 2025 YTD data

Currently Participating

Texas Stroke GWTG Sample

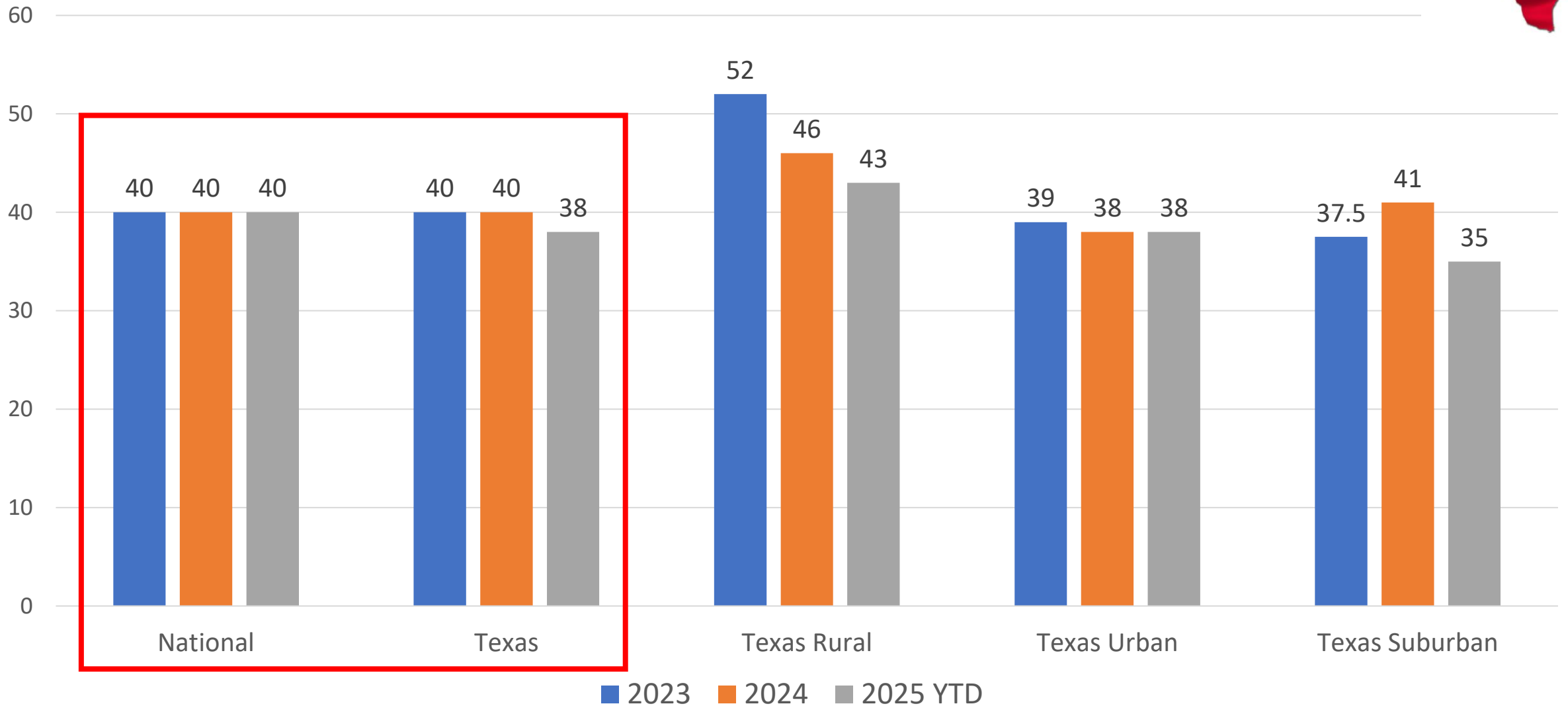
- 216 TX Hospitals participating in GWTG
  - 53 participating hospitals classified as "Rural," using the Rural Urban Commuting Area (RUCA) codes 4-10 and 99
    - 32 of these joined as part of the **Rural Healthcare Outcomes Accelerator** program
  - 84 participating in RDC = 39% of TX GWTG Hospitals
  - As of May 2025, 168 of the 191 (88%) designated facilities in Texas are currently using GWTG Stroke

Median DTN by RAC (minutes)



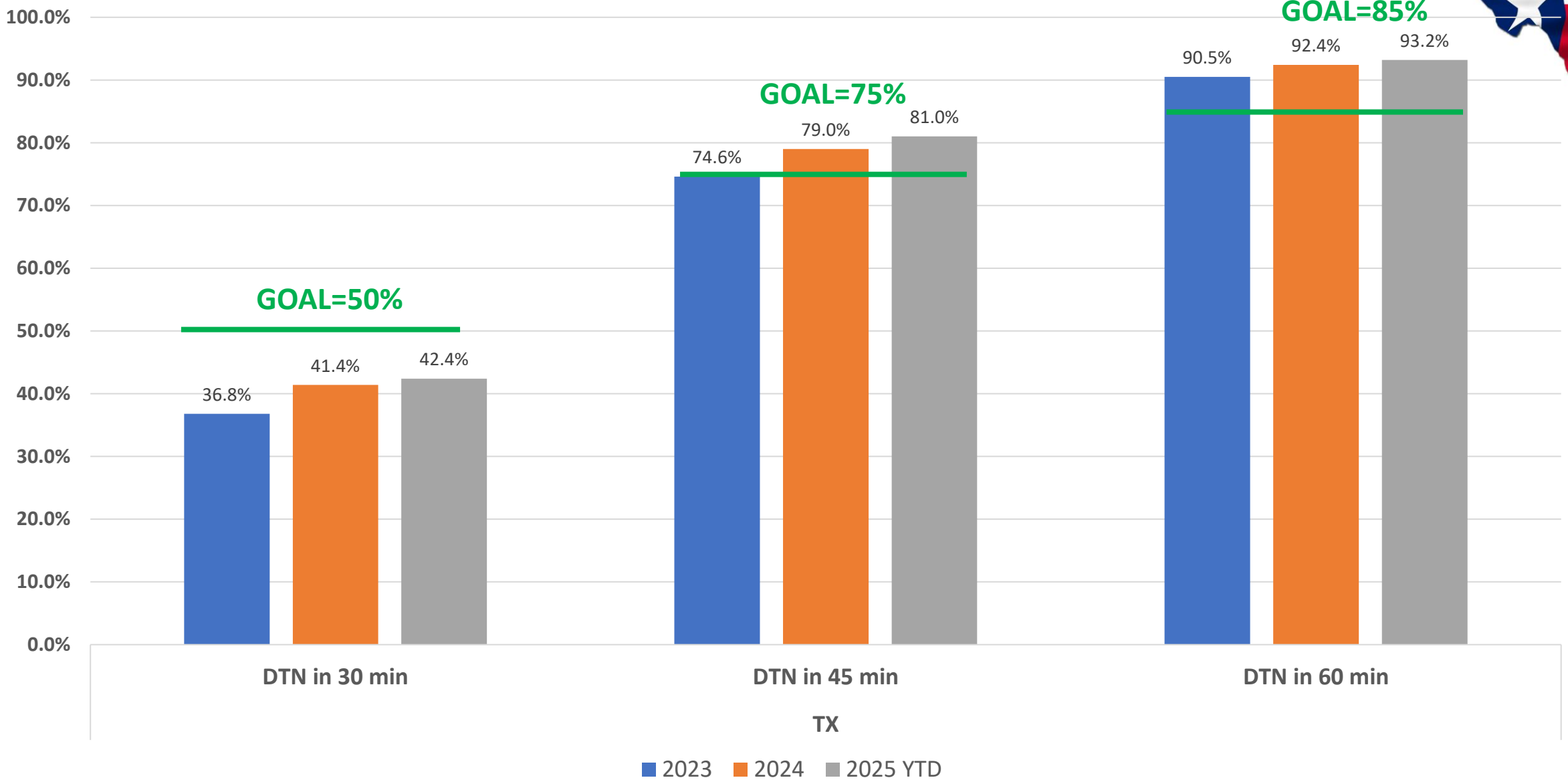
Disclaimer: Get with The Guideline reports are generated from a live registry. All data is subject to change. Report generated on 7/1/25.

Median DTN by Geographic Size



Disclaimer: Get with The Guideline reports are generated from a live registry. All data is subject to change. Report generated on 7/1/25.

Door to Needle (30'/45'/60' window)



Disclaimer: Get with The Guideline reports are generated from a live registry. All data is subject to change. Report generated on 7/1/25.

Trauma Facility Helicopter Safety and Landing Zone Training

DISCLOSURES

- **Title: Trauma Facility Helicopter Safety and Landing Zone Training**
- **Date: August 1, 2025**

- **Requirements for successful completion for awarding CNE include all of the following:**
  - Attendance for the entire educational activity
  - Completion and submission of a post-course feedback survey
  - Successful completion of a post-test exam, achieving 85% or higher

- **No relevant financial relationships with ineligible companies were identified for any other individuals with the ability to control content of the educational activity.**

- **Texas EMS, Trauma & Acute Care Foundation is approved as a provider of nursing continuing professional development by the Louisiana State Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation. LSNA Provider No. N002155**

INTRODUCTION

The GETAC Air Medical Committee is responsible for affecting and supporting **safe** air medical operations and high-quality clinical care provided by air medical transport services in Texas.

This committee provides guidance in the development and review of hospital and pre-hospital assessment tools, regional plans, treatment guidelines, and the committee SOP.

INTRODUCTION

The following content has been developed to fulfill requirement (h)(6) of the ***Texas Administrative Code Chapter 157, Rule 157.126 Trauma Facility Designation Requirements*** which will be effective on September 1, 2025 and states:

"Facilities must have landing zone capabilities or system processes to establish a landing zone (when rotor-wing capabilities are available) ***with appropriate staff safety training."***

OBJECTIVES

The **#1 objective** of this training is to ensure Safe Helipad Operations and to **PROTECT**

- Patients
- Flight crew
- Hospital staff and,
- The public

OBJECTIVES

- Identify landing zone requirements.
- Identify safety practices and security around an aircraft and within the landing zone.
- Define FOD and your role in preventing FOD damage to aircraft.
- Identify factors to consider when preparing your patient for air transport.
- Define “EMS Timeout” and identify its critical components.
- Define your role in the Texas EMS Wristband Project
- Recognize additional considerations during night operations.

DISCLAIMER

This presentation is a state-wide, universal training for educational use only; this presentation does not provide a substitute for any agency-specific education or training.

We strongly encourage reaching out to your local air medical providers for further guidance.

SAFETY

The number one priority for any air medical operation!

SAFETY STARTS BEFORE THE FLIGHT!

- Safety applies to both those inside and outside of the aircraft.
- Vigilance is required by those on the ground and in the aircraft during take-offs and landings.
- LZ team members must eliminate all non-essential distractions (i.e., phones, cameras, etc.). Those responsible for the safety and security of the LZ should not engage in photography or videography during the landing and departure of the aircraft.

SAFETY

The number one priority for any air medical operation!

- If your first air medical provider declines the flight, the second provider that is contacted needs to be made aware of the declination
- Honest communications can mitigate risk to the flight crew and ultimately everyone involved in patient care.

LANDING ZONE REQUIREMENTS

Safety begins before the aircraft arrives!

- Most facilities have a helipad or designated LZ. If not, these are the requirements for an unplanned LZ.
- Area should be a minimum of 100’x100’ with no overhead obstructions.
- Area should be a flat and level surface, 3-degree grade or less with little to no slope, as well as firm with no hidden obstacles.
- The area’s surface should be paved, short grass, or hard packed dirt that does NOT create dust. Brownouts caused by dust can be catastrophic.

LANDING ZONE REQUIREMENTS

Safety begins before the aircraft arrives!

- Area surrounding LZ should also be as free as possible from obstructions/hazards.
- If power lines are present, they can be marked by parking an emergency vehicle directly underneath them.
- The unplanned LZ **CAN** be marked with cones, strobes, or response vehicle lights.
- The LZ **CANNOT** be marked using road flares as they can cause fires and/or become projectiles during landing or departure of the aircraft.

LANDING ZONE REQUIREMENTS

Safety begins before the aircraft arrives!

Communication regarding LZ conditions is IMPERATIVE TO SAFETY!

You should communicate the following to the air medical provider prior to landing:

1. Any known obstructions/obstacles and how they are marked
2. The landing surface
3. Description of the LZ and location with regards to the facility

FOD Prevention

Safety begins before the aircraft arrives!

- Foreign Object Debris (FOD) is **any** unsecured object in or around the LZ. It can be anything from rocks and trash to stretchers, sheets, hospital bed mattresses.
- During take-off & landing, FOD can be lifted by rotor wash and sucked into the engine, main or tail rotor. causing catastrophic damage.
- FOD damage can put an aircraft out of service and leave it blocking the helipad until it can be repaired.
- This could prevent other patients from coming in or transferring out.
- FOD can also cause catastrophic aircraft damage resulting in the loss of life

FOD Prevention

Safety begins before the aircraft arrives!

- Areas surrounding LZ, such as open truck beds, should also be as free as possible from loose material.

- Security should do a daily FOD check, or at minimum, prior to each landing.
- Restrict bystander access to the area. Blown FOD can become dangerous projectiles.
- On elevated helipads, unattended equipment or stretchers could be blown off causing injuries below.
- If you have a windsock, ensure that it is in functional condition. If not, contact your local provider for help in obtaining a new one.

MULTI AIRCRAFT CONSIDERATIONS

- LZ requirements are designed for a single aircraft.
- Helipad safety area, in most cases, extends past the concrete pad or designated LZ due to the rotor wash of an arriving or departing aircraft.
- If landing multiple aircraft, an additional LZ will be needed. Hospital security must ensure an adequate safety area is available between each LZ.
    - For example, two established LZs may require an additional 100’ in between them for the safety area.

SAFETY - DRONE OPERATIONS

- An unmanned aircraft system (UAS), sometimes called a drone, is a safety risk to aircraft and should not be operated in the vicinity of air medical operations.
- Some hospital systems are utilizing drones to courier medications, supplies, and other items around large facility campuses.
- If you observe a drone in the vicinity of the LZ, immediately notify hospital security and the incoming helicopter's communication center and if possible, request the drone operator to shut down the drone until the helicopter has safely departed the area.

PREPARING YOUR PATIENT FOR TRANSPORT

General Considerations

- Consider the outside weather- Although aircraft are equipped with AC and heat, it can still get hot/cold during transport. Have extra blankets available or remove excessive clothing if needed.
- More than one IV site preferred. When loading the patient into the aircraft, do not utilize IV poles. Keep IV bags below the level of your head.
- Ensure all lines and tubes are well secured- There will be a lot of pt movement during loading/unloading, and things can become dislodged easily.
- Remove or secure any loose items such as clothing or bandaging- Items that can get sucked into the rotor system.
- If applicable, ensure the patient is decontaminated according to Safety Data Sheet (SDS) standards.

MOVING YOUR PATIENT

General Stretcher Considerations

Facilities should work with local Air Medical Providers as certain patient conditions may require a deviation from the following recommendations:

Types

- Hospital bed
- EMS-style stretcher

Requirements

Stretcher and/or hospital bed should receive routine and ongoing maintenance to ensure safe and proper working condition

- Functional brake, steering system, and ability to raise and lower to full capability
- Dual-sided locking rails and 3-point straps if using an EMS stretcher
- With or without a secured mattress based upon crew discretion

PREPARING FOR ARRIVAL

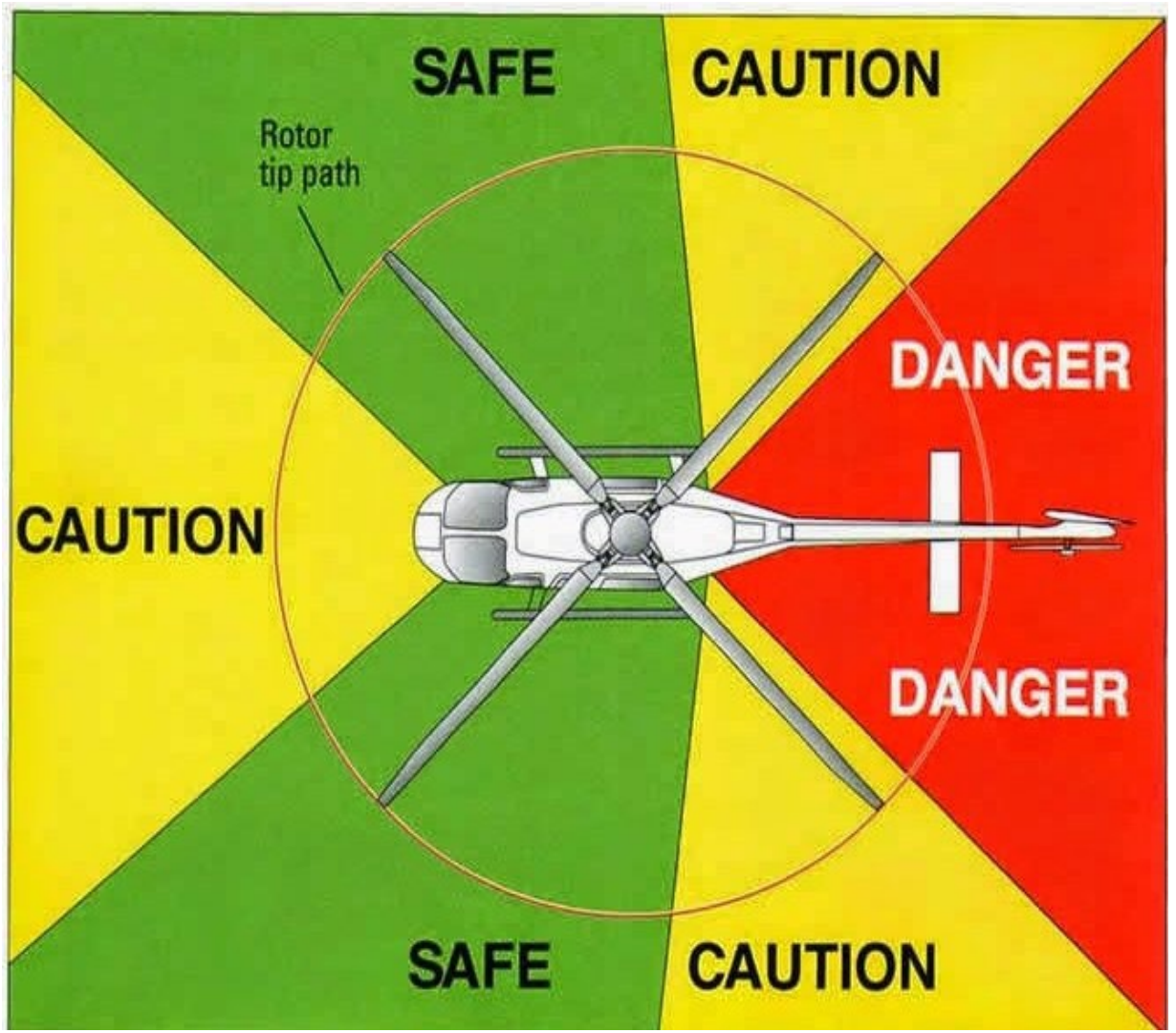
- **Gear Up!** Wear safety glasses and hearing protection.
- Assign a tail rotor guard and/or LZ safety officer (This needs to be someone not actively involved in the pt treatment).
- Ensure the area is secured and there are no pedestrians, animals, or vehicles within or immediately adjacent to the landing area
- Walk the area and remove any FOD that could be easily blown around when the aircraft arrives.
- Observe for any possible obstructions around the landing area. If you see something, say something!

LANDING

- Anticipate extremely high winds!
- Landing will almost always be done with the helicopter approaching into the wind.
- Maintain security within and around the landing area.
- A tail rotor guard is essential when the helicopter is on the ground and running.
- **DO NOT** approach the aircraft while it is running unless accompanied by the flight crew and/or only when directed to do so.

APPROACHING THE AIRCRAFT

- **DO NOT** enter the area unless accompanied by the flight crew and/or only when directed to do so.
- Utilize minimal amount of personnel needed to safely load or unload.
- Remove any hats or loose items from your person.
- Enter/exit in the area shown in green after receiving approval from the pilot or flight crew.
- **NEVER** approach from the tail!



APPROACHING THE AIRCRAFT

If you must approach the aircraft, follow the steps below:

- First obtain permission from the flight crew.
- Confirm the pilot is aware of your approach.
- Wait to approach until the pilot indicates it is safe to do so (make eye contact with the pilot and wait for approval, i.e. thumbs up).

SITUATIONAL AWARENESS

Look first!

- Think through **what** you are about to do.
- Think through **where** you are about to go.
- Move slowly and intentionally.
- Always be aware of what the aircraft is doing and is about to do.

LOADING/ UNLOADING

Assisting the flight crew with loading/unloading a patient will always be at the discretion of the flight crew. If requested to assist, all stretcher/sled movement will be directed by flight crew.

Cold Loading/Unloading

- Loading/Unloading is done when the engine is shut off and the blades have **completely** stopped turning.
- Safer, more controlled

Hot Loading/Unloading

- Loading/Unloading is done while the aircraft is running
- More common during scene responses
- Will always be at the flight crew's discretion as there are multiple factors involved in this decision

SAFETY NOTE

- Rotor droop is caused when an aircraft is shut down, but the main rotor is still slowing/spinning to a stop. In this situation, the rotor blade tips can drop dangerously close to the ground.

- **NEVER** approach a shut-down helicopter whose main rotor is not completely stopped. Wait until the flight crew marshals you, indicating it is safe to approach the aircraft.

LOADING/ UNLOADING

Aircraft Doors and Equipment

- Doors are light and fragile – Do not attempt to open, close, or secure the aircraft doors. Leave that to the flight crew!
- Do not rest hands on or lean against the aircraft – burns can occur from unsuspected hot surfaces (pitot tubes, cowlings, etc.).
- Antennas and sensors accidentally bumped can damage the aircraft and cause out of service time.
- Do not touch or move any aircraft support gear (land lines, chocks, foxcarts, etc.)

LOADING/UNLOADING

Side Load

Rear Load

LOADING/UNLOADING

Click to view the following videos of loading and unloading various airframes.

Loading - Bell 407

LOADING/UNLOADING

Loading - Bell 429

Unloading - Bell 429

LOADING/UNLOADING

Loading - EC 145

Unloading - EC 145

AIRCRAFT DEPARTURE

- Ensure area is secure and clear before start up.
- During start-up/take-off, ensure you are completely clear of the rotor system.
- Leave the area the same way you entered.
- Keep the tail rotor guard/LZ safety officer in place until the aircraft is clear of the area.
- Anticipate extremely high winds!

EMS PATIENT HANDOFF

AKA

"The EMS Timeout"

- Good patient care handoffs lead to better communication, fewer errors, and easier transitions in the hospital setting.

- It is imperative that all receiving team members take time to listen to the handoff, which should ideally occur ONCE at the bedside and involve key members of the team accepting the patient, including the treating physician.

Consider the following during the EMS patient handoff:

- The handoff should occur during the EMS timeout, which should last no more than 15-30 seconds.
- All personnel in the room should remain quiet during the timeout to receive the EMS report
- Questions or clarifications should be requested at the conclusion of the report.
- Except for those who are in extremis or arrest, the patient can wait on the EMS stretcher for 30 seconds without harm!

At a minimum, a good EMS patient handoff should include:

- Demographics – age, gender, weight
- Chief complaint or mechanism of injury with associated s/s
- Description of the scene or environmental factors that may have contributed to the illness or injury
- Trauma/Medical assessment findings highlighting life threats

At a minimum, a good EMS patient handoff should include:

- Vital signs – first set on arrival and repeat/trend if change in status
- Summary of patient care interventions and responses
- Any critical interventions not yet performed or achieved that should be addressed by accepting team on arrival

Consider utilizing the *MIST Format* handoff

M	**M**echanism or **M**edical Complaint
I	**I**njuries/Illness Identified
S	**S**ymptoms and most recent Vitals
T	**T**reatments, **T**ubes/lines

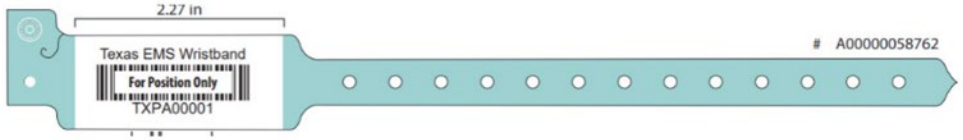
Texas EMS Wristband Project

The "Why"

- To track patients during mass casualty incidents (MCI), evacuations, and disasters
- To link pre-hospital and hospital records across disparate electronic medical record systems and throughout the continuum of care
- Increase the ability to collect accurate patient information
- Expedite record reconciliation and matching across various agencies/systems
- Facilitate outcome sharing between prehospital and hospital agencies
- Provide time and cost savings in locating and accessing records across multiple systems

The Texas EMS Wristband is for EVERYDAY USE by EMS and HOSPITALS
EVERY patient, EVERY day!

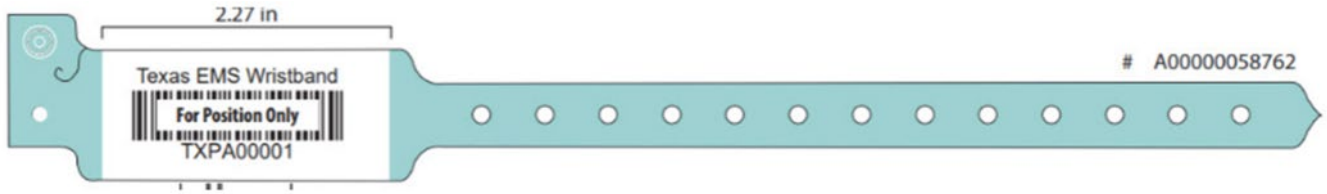
Texas EMS Wristband Expectations
Incoming EMS Patients



When patients are received into a facility with either a Texas EMS Wristband or an EMS Triage Wristband:

- Leave the wristband in place and DO NOT REMOVE
- Enter the wristband's unique identifier into a pre-identified query-able field within the facility's electronic health record
- If a wristband is accidentally removed – place a new wristband on the patient, cover or cross out the new barcode & unique identifier, and write the previous wristband's unique identifier on the new wristband using a permanent marker.

Texas EMS Wristband Expectations
Outgoing EMS Patients



When transferring patients out of the facility:

- Place a Texas EMS Wristband on the patient (if one is not already in place)
- Enter the wristband's unique identifier into a pre-identified query-able field within the facility's electronic health record prior to patient transfer
- If a wristband is accidentally removed – place a new wristband on the patient, cover or cross out the new barcode & unique identifier, and write the previous wristband's unique identifier on the new wristband using a permanent marker

Texas Department of State Health Services

Texas EMS Wristband Expectations
DSHS Rules Requirement

There is expectation that both the Texas EMS & EMS Triage Wristbands will be referenced within the Texas Department of State Health Services (DSHS) Rules, primarily within the revised Trauma Rules, as shown below:

REVISED TRAUMA RULE §157.125: REQUIREMENTS FOR TRAUMA FACILITY DESIGNATION

- Section 19, subsection (A); integration of the EMS patient care records, to include the EMS wristband tracking number.
- Section 27, subsection (E); The EMS wristband tracking number must be included in the registry abstraction and submission to the State Registry. If a wristband is accidentally removed – place a new wristband on the patient, cover or cross out the new barcode & unique identifier, and write the previous wristband's unique identifier on the new wristband using a permanent marker

EMERGENCY MEDICAL SERVICES (EMS) RULE §157.11: REQUIREMENTS FOR AN EMS PROVIDER

- Subsection (k); Paragraph (7): EMS vehicles must also have: each vehicle will carry 25 triage tags in coordination with the Regional Advisory Council (RAC).

SPECIAL CONSIDERATIONS

Night Operations

NIGHT OPERATIONS CONSIDERATIONS

- Decreased visibility
- Night Vision Goggles (NVG's)
  - Improve vision
  - Can impair depth perception
  - Can cause difficulty in differentiating terrain
- Light control
  - Do not shine light directly into the cockpit or towards the aircraft
  - Excessive overhead lights may be problematic
- LZ/Helipad lighting is of increased importance

SPECIAL CONSIDERATIONS

Specialty Aircraft

SPECIALTY AIRCRAFT CONSIDERATIONS

- Regions around Texas may need to consider LZ modifications to accommodate specialty aircraft (MH-65, UH-60, etc.).
- Each aircraft/organization may require different LZ and frequency considerations. It is recommended that you consult with applicable departments to best prepare for these specialty aircraft.

LET’S PUT IT ALL TOGETHER

[Illinois DOT Hospital Heliport Safety Training - YouTube [youtube.com]]

Video utilized with the written permission of the Illinois Department of Transportation

SUMMARY

- **SAFETY IS PRIORITY NUMBER 1!**
- LZ should be at least 100’x100’, on a flat firm surface, and as free of obstructions/hazards as possible.
- A tail rotor guard is essential when the helicopter is on the ground and running.
- Clear and concise communication is imperative.
- Keep landing areas free of debris.
- Anticipate high winds!

SUMMARY

- Never approach a running aircraft unless accompanied by the flight crew and/or only when directed to do so.
- Stay clear of rotor system during start-up and shutdown.
- Secure/remove any loose items.
- A good patient care handoff, or “EMS Timeout”, leads to better communication, fewer errors, and easier transitions in the hospital setting.
- See a Texas Wristband? SCAN IT!
- See a patient without a Texas wristband? PUT ONE ON and SCAN IT!
- Risks increase when operating aircraft at night.

EVALUATION

Questionnaire Instructions to Receive Nursing Continuing Professional Development hours:

1. Use the QR code at left to access the feedback survey.
2. Complete your survey at the end of this learning event, completing only one survey per participant. The survey completion deadline is August 1, 2027.

Certificates will be emailed to the email you provide on the feedback survey.

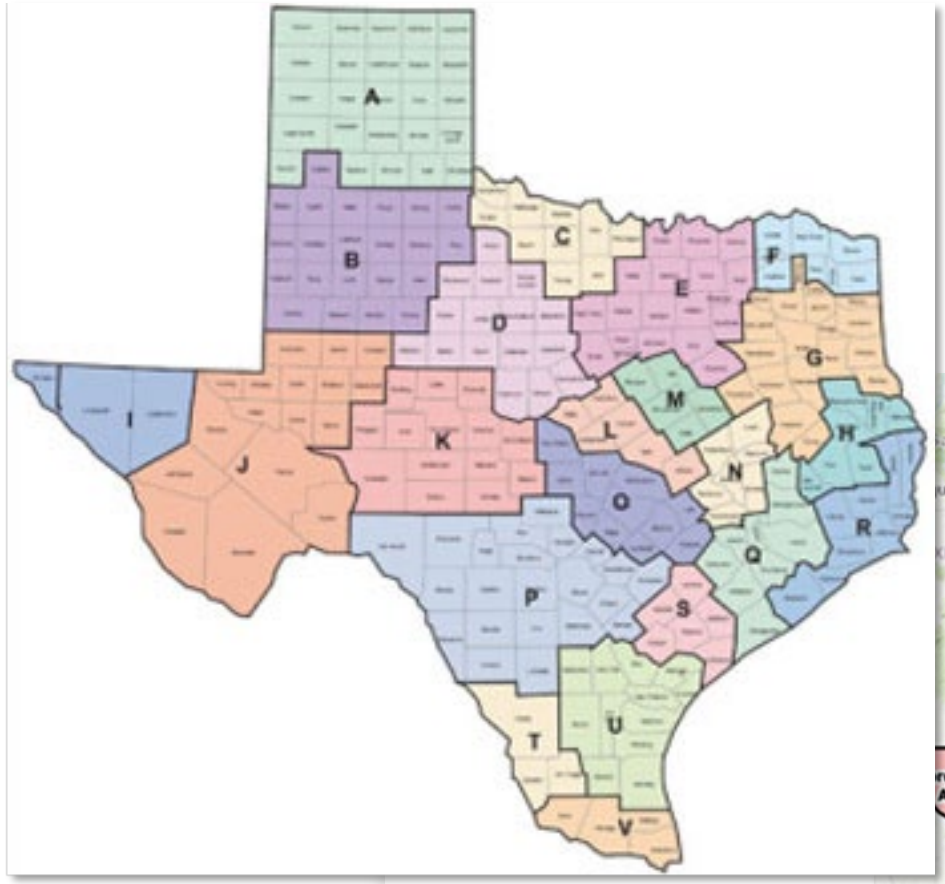
Questions? Contact us at education@tetaf.org

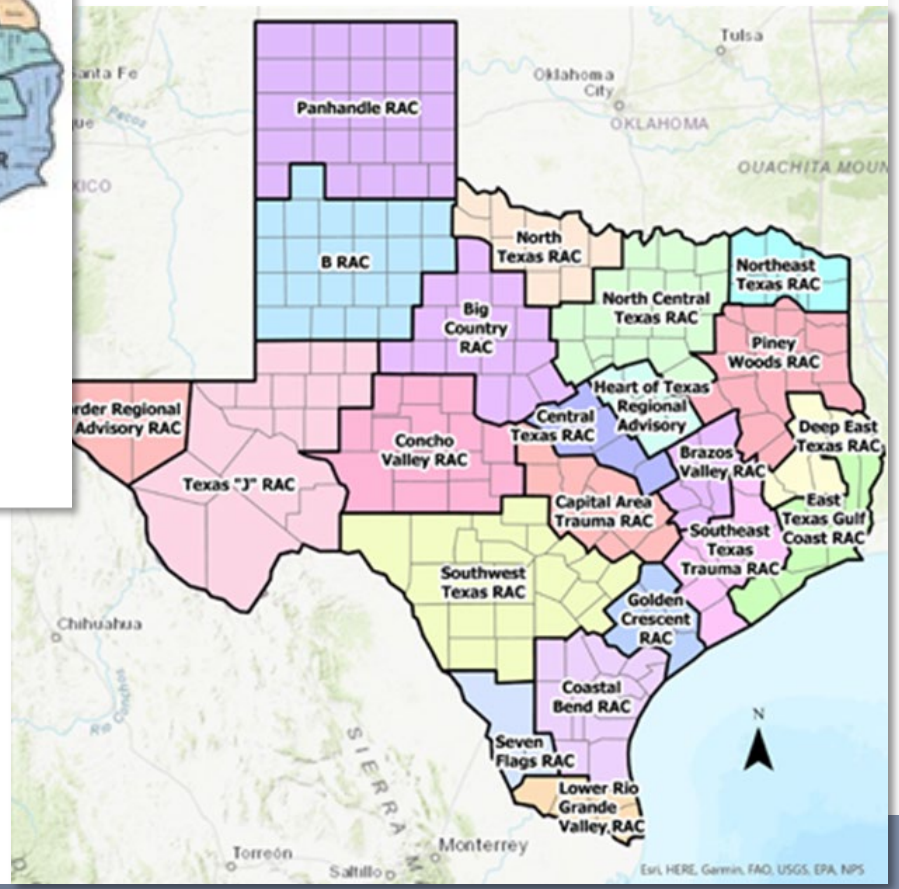
LOCAL PROVIDERS

As a reminder, this presentation is not meant as a substitute to in person training with your local providers. GETAC strongly recommends contacting your local air medical provider(s) to schedule that training.

If you require assistance in contacting your local air medical provider(s), please contact your RAC Chair.

Regional Advisory Councils





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For questions related to this presentation, please contact Lynn Lail at llail@CareFlite.org