North Central Texas Trauma Regional Advisory Council

Trauma Service Area-E
Health Care Coalition

Communications and Information Sharing
Concept of Operations

NCTTRAC
600 Six Flags Dr. Suite 160
Arlington TX, 76011
January 2019

I. Record of Review and Changes

TSA-E Health Care Coalition Communication and Information Sharing Concept of Operations

Change #	Date	Entered By
NCTTRAC Staff Review	1/7/2019	Jacob Seil

II. References

Federal

- Office of the Assistant Secretary for Preparedness and Response, 2017-2022 Health Care Preparedness and Response Capabilities
- Emergency Preparedness Requirements for Medicare and Medicaid Participating Providers and Suppliers, 42 CFR Parts 403, 416, 418, 441, 460, 482, 483, 484, 485, 486, 491, and 494 (CMS Emergency Preparedness Rule)
- Emergency Planning and Community Right-to-Know Act, 42 USC Chapter 116
- Emergency Management and Assistance, 44 CFR
- National Incident Management System
- National Response Framework
- National Strategy for Homeland Security, October 2007

State

- Government Code, Chapter 418 (Emergency Management)
- Government Code, Chapter 421 (Homeland Security)
- Government Code, Chapter 433 (State of Emergency)
- Government Code, Chapter 791 (Inter-local Cooperation Contracts)
- State of Texas Emergency Management Plan Annex H: Public Health and Medical (August 2015)
- Texas Statewide Interoperability Channel Plan (2018)
- Texas Administrative Code, Title 25, Part 1, Chapter 133, Subchapter C, Rule 133.45 (Hospital Disaster Preparedness Requirements)
- Health & Safety Code, Chapter 778 (Emergency Management Assistance Compact)
- Executive Order of the Governor Relating to Emergency Management and Homeland Security
- Executive Order of the Governor Relating to the National Incident Management System
- Administrative Code, Title 37, Part 1, Chapter 7 (Division of Emergency Management)
- The Texas Homeland Security Strategic Plan,2015-2020
- The State of Texas Disaster Medical System Overview

Regional and Local

- NCTTRAC Regional Trauma System Plan (2014)
- TSA-E HCC Preparedness Strategy (2018)
- TSA-E HCC Response Strategy (2019)
- NCTTRAC HPP Statement of Work (2017 – 2022)

III. Introduction

A. Purpose

The Trauma Service Area E (TSA-E) Health Care Coalition (HCC) Communications and Information Sharing Concept of Operations (ConOps) is intended to describe how the TSA-E HCC communicates in both normal and response operations. The TSA-E HCC is administered by the North Central Texas Trauma Regional Advisory Council (NCTTRAC). This document describes the various communication and information sharing methods available within the TSA-E HCC and provides a guide for their use in both normal operations and response operations.

B. Scope

Communication and information sharing occurs on multiple levels: between individual HCC partner organizations, between HCC partner organizations and the TSA-E Emergency Medical Coordination Center (EMCC), between the EMCC and external organizations (such as HCCs in other Trauma Service Areas), and between the EMCC and the Department of State Health Services (DSHS) State Medical Operations Center (SMOC). The TSA-E HCC Communications and Information Sharing ConOps is not intended to supplant the communications and information sharing plans of individual HCC partner organizations; it is intended to describe an overview of the communications and information sharing methods and procedures available to the HCC at large.

C. Administrative Support

The TSA-E HCC Communications and Information Sharing ConOps will be reviewed and updated annually. All revisions and review activities will be noted in the Record of Changes in the front of the document. General review procedures involve the following:

1. NCTTRAC staff annually reviews Communications and Information Sharing ConOps to ensure consistency with other regional plans.
2. NCTTRAC staff annually reviews recent exercise and real-world incidents and incorporates identified areas of improvement into the Communications and Information Sharing ConOps.
3. Revised Communications and Information Sharing ConOps is distributed to Health Care Coalition (HCC) members for review and comments.
4. HCC Planning Subcommittee reviews the Revised Communications and Information Sharing ConOps Draft and HCC member comments. HCC Planning Subcommittee recommends approval to REPC.
5. REPC votes to approve the TSA-E HCC Communications and Information Sharing Concept of Operations.

IV. Communications and Information Sharing Methods/Systems

A. Primary Methods

Primary methods for communication and information sharing within the TSA-E HCC are used for both normal operations and response operations. They include the following:

Email

HCC member organizations communicate with one another using email on a day-to-day basis. NCTTRAC maintains multiple email distribution lists composed of HCC member organization representatives. Specific distribution lists exist for the following groups: hospital clinical staff, hospital emergency management staff, ground EMS personnel, air EMS personnel, EMS medical directors, public health personnel, jurisdictional emergency managers, and Regional Emergency Preparedness Committee (REPC) voting members. These distribution lists are regularly used to widely disseminate information among HCC members. Individuals can request to be added to a distribution list by sending an email to Admin@ncttrac.org.

Additionally, REPC has an active email listserv which HCC members can use to communicate with the HCC at large. Individuals can register for the REPC email listserv at the following link: http://list.ncttrac.org/cgi-bin/mailman/listinfo

Business Phone

HCC member organizations communicate with one another using business phone lines on a day-to-day basis. HCC members and other partners can communicate with NCTTRAC staff using the NCTTRAC office number 817-608-0390. Individual NCTTRAC staff members charged with supporting the TSA-E HCC can be reached using their extension.

Cell Phone

HCC member organizations communicate with one another using cell phones on a day-to-day basis. The TSA-E Medical Coordination Center (EMCC) monitors a 24/7 Duty Phone that can be reached at 817-607-7020. The 24/7 Duty Phone is part of the NCTTRAC PBX system – if the NCTTRAC PBX system goes offline, the 24/7 Duty Phone can be reached directly at 682-225-3559.

Fax

HCC member organizations communicate with one another using phone line based fax machines on a regular basis. HCC member organizations and other partners can communicate with NCTTRAC via fax using 817-608-0399.

EMResource

EMResource is a web-based resource management software that allows users from different healthcare entities to report and view information regarding the emergency healthcare system in a particular region. EMResource is paid for by the Department of State Health Services (DSHS) and hosted by Juvare, with regional administration assigned to HPP contractors. NCTTRAC administers EMResource for TSA-E.

HCC member organizations regularly use EMResource to share Essential Elements of Information (EEI) with the HCC on a day-to-day basis. Specifically, EMResource users regularly update the following statuses:

- Open/Closed/Advisory (Emergency Department Status)
- National Emergency Department Overcrowding Score (NEDOCS)
- Available Beds (bed categories are determined by DSHS)
- Specific service-line statuses (NeuroSurg, OBGYN, etc.)
- Flight Availability Status (for Air Medical units)
- Deployment Status (for deployable specialty response vehicles such as AMBUSes or Mass Fatality Trailers)

HCC member organizations can also use EMResource to send notifications to the HCC for any events that might affect the emergency healthcare system in TSA-E. Non-emergency events that are regularly created in EMResource include hospital construction that affects EMS traffic and planned utility outages affecting service provision.

EMResource use is expanded during an emergency to include both mass notification of emergency events and the sharing of additional Essential Elements of Information. Examples might include creating an event that sends a text and email notification to HCC members about an emergent Mass Casualty Incident, the daily reporting of current inventory levels of certain medications during a critical medication shortage, or on-the-fly status updates for hospitals affected by a municipal water failure. The key is flexibility – EMResource can be adapted to support the sharing of almost any non-narrative information fields. EMResource will not be used to share protected health information such as patient names or medical conditions.

Detailed EMResource definitions, policies, and utilization procedures can be found in the EMResource Policy Document.

B. Secondary Methods

Secondary methods of communication and information sharing are used when primary methods are inadequate. This can be due to a communications failure (such as an internet outage by a specific provider) or due to increased communications

needs caused by medical response operations. These methods are typically not used in normal operations (with limited exceptions). Secondary communications and information sharing methods include the following:

WebEOC

WebEOC is a web-based incident management software that allows users from multiple entities to communicate via information sharing boards in order to enhance the common operating picture. WebEOC is divided into incidents and boards. When a user logs in to WebEOC, they select the incident in which they are operating – each emergency or disaster requiring the use of WebEOC will have its own incident. If there is not yet a custom WebEOC incident for the current event or disaster, users should use the incident titled "!Generic Incident". NCTTRAC WebEOC Administrators will rename the "!Generic Incident" to something that describes the current event. All information entered into "!Generic Incident" will be retained in the new incident.

The NCTTRAC WebEOC server operates independently from other servers, but does share information during large-scale events with other WebEOC servers across the state. This process is called fusion - during a large-scale event, TDEM CIS will publish a fusion incident that all regional WebEOC servers can subscribe to. In TSA-E, there are five WebEOC servers: NCTTRAC, Dallas County, City of Fort Worth, City of McKinney, and City of Plano. Additionally, TDEM CIS hosts the LoneStar server, which is where the DDCs operate. Generally speaking, healthcare related information is posted on the NCTTRAC server, jurisdictional emergency management related information is posted on one of the 4 city or county servers, and EMTF related information is posted on the LoneStar server.

WebEOC has two main functions in the TSA-E HCC: narrative-based information sharing and patient tracking. Narrative-based information sharing occurs in the "Local Medical Events" and "TSA-E Medical Events" boards. HCC member organizations can create narrative-based posts in Local Medical Events to inform the HCC about events happening at their facility or within their organization. The TSA-E Medical Coordination Center uses the TSA-E Medical Events board to inform the HCC as a unit about events affecting emergency healthcare through the TSA-E region. Patient tracking occurs in the NCTTRAC Regional Patient Tracking Toolkit. A full listing and description of each WebEOC board used by the HCC can be found in the "Response Operations" section of the "Communications and Information Sharing Procedures" part of this document.

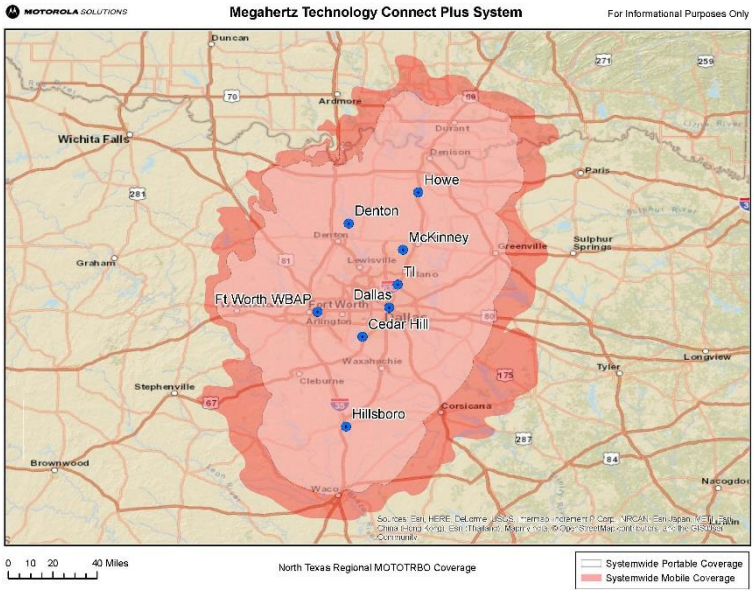
While WebEOC is always available, it is best used when it can be actively monitored. For this reason, the EMCC will notify the HCC when they should begin monitoring and posting in WebEOC. These notifications will come via an EMResource notification and the aforementioned email distribution lists.

Public Safety Radio Systems

There are multiple public safety radio systems within TSA-E that are not accessible to all members of the HCC. For example, a hospital system might have a private radio channel that connects only hospitals within that system, or a city might have a trunked radio system through which hospitals within the city can talk to the city Emergency Operations Center (EOC). Some HCC member organization may use public safety radio systems as a primary communication method (for example, an EMS agency might communicate via radio with a hospital to deliver incoming patient details) – the HCC encourages this behavior, as it creates a regularly practiced communication method that can be used in the event of an internet or phone line failure. However, these systems are typically limited in scope, so HCC members should have additional secondary communications methods in place to share information with HCC members who might not be a part of the same public safety radio system.

All HCC members should ensure that they have at least one public safety radio that is programmed with the statewide interoperability channels found in the Texas Statewide Interoperability Channel Plan. Please note that the statewide interoperability channels are not to be used for daily operations, but only in the event of a disaster or emergency. Additionally, HCC member organizations must execute a signed Memorandum of Understanding with Texas DPS prior to using the statewide interoperability channels.

D/FW Wide Radio System

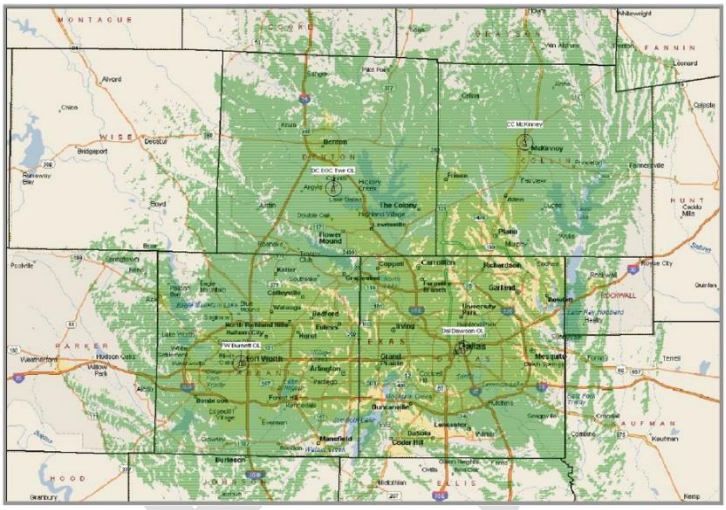


The Dallas/Fort Worth Wide Area Radio System (D/FW Wide) is a Motorola MOTORBO "Connect Plus" system operating on the UHF spectrum. There are six interconnected tower sites providing D/FW Wide coverage across TSA-E – these towers are located in Cedar Hill, Dallas, Denton, Fort Worth, Hillsboro, Howe, and McKinney. While D/FW Wide covers most of TSA-E, Erath and Palo Pinto counties currently fall outside of its footprint. D/FW Wide is managed by Megahertz Technology – HCC member organizations who wish to get access to the D/FW Wide Radio System should contact Joe Froehlich at joef@mhztech.com. There is a recurring cost per radio for D/FW Wide access.

D/FW Wide serves as a redundant radio system that allows hospitals to communicate with other hospitals and the EMCC if primary communications methods fail. While some hospital systems may have private talkgroups built out on the D/FW Wide

system, regional HCC communication on D/FW Wide occurs on the “D-DFW Wide” channel.

D/FW CONNCT Radio Overlay



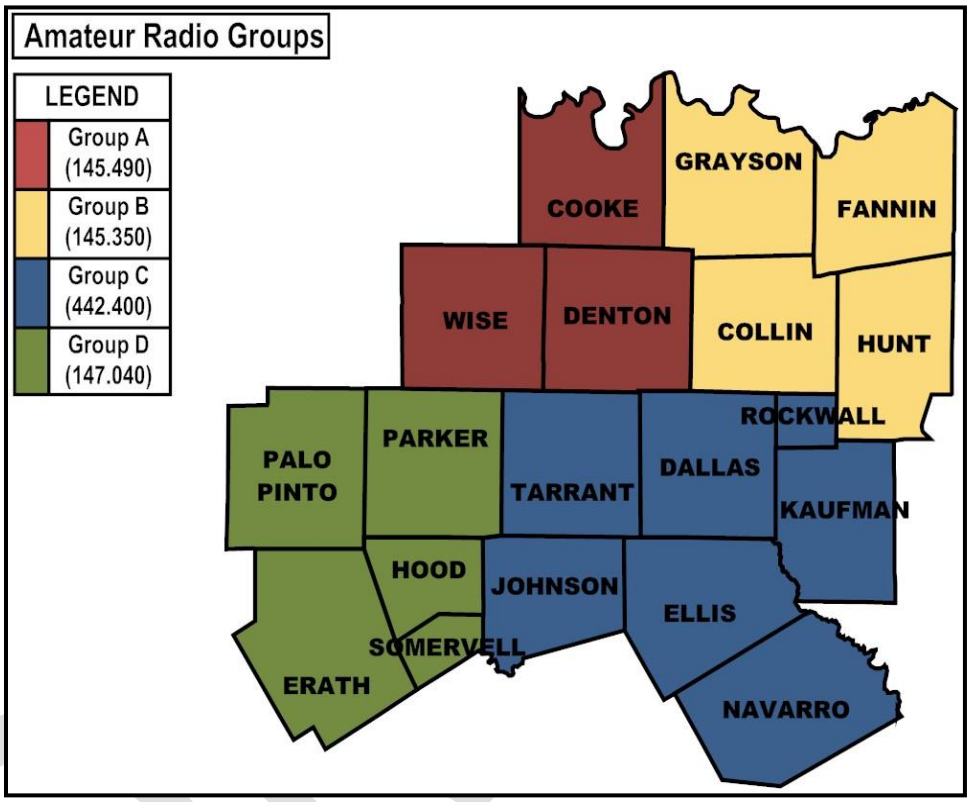
The D/FW CONNCT Radio Overlay (D/FW CONNCT) is a regional interoperability radio communications system built and operated by the North Central Texas Council of Governments (NCTCOG) to provide wide-area interoperable voice communications over Collin, Dallas, Denton, and Tarrant counties. The system is currently administered by the communications system manager for the City of Dallas. The system operates in the 700 MHz band using the Association of Public Safety Communications Officials International (APCO) P25 Phase 1 digital standard. There are currently four tower sites, one in each of the aforementioned counties, with four radio frequency channels per site. The CONNCT system provides a common platform for interoperable voice communications across jurisdictional boundaries and disciplines. While there is no cost to HCC member organizations to use D/FW CONNCT, any entity needing access to the system must contact CONNCT Database Ops at CONNCT@cynergyze.com in order to request a Radio Unit ID.

D/FW CONNCT serves as a redundant radio system that allows HCC member organizations to communicate with one another and with the EMCC if primary communication fails. HCC members should not use the D/FW CONNCT Radio Overlay for normal operations, but rather for response operations or during a communications failure.

Amateur Radio

Amateur radio serves as the last redundant communication method for the Health Care Coalition in TSA-E. NCTTRAC has purchased a large cache of amateur radios, antennas, and coax cable for distribution and installation with HCC member organizations. Each HCC member organization should have an operable amateur radio installed and ready to use, as well as a plan to provide a licensed ham radio operator for its use. It is important to note that an individual must have an amateur radio license from the FCC to legally transmit on an amateur radio. HCC member organizations are encouraged to partner with local amateur radio organizations in their area to provide amateur radio volunteers; this ensures that critical facility staff will not be tied down to the radio in the event of a communication failure.

TSA-E has a large number of repeaters with footprints that cover multiple counties; however, there is not currently a single amateur radio repeater with a coverage area that encompasses all of TSA-E. For amateur radio use, TSA-E is broken up into 4 geographic regions based on county, and each region is assigned a primary amateur radio repeater for use in a communications failure. These geographic regions and their primary repeaters are shown in the image below.



While the four repeaters outlined above serve as primary repeaters, each amateur radio purchased by NCTTRAC is programmed with over 170 frequencies, including over 100 repeaters. Should one of the primary repeaters become inoperable during a communications failure, HCC member organizations should begin monitoring other repeaters in their area. The EMCC will locate a working secondary repeater and begin transmitting on it for HCC redundant communications.

It is important to note that amateur radio frequencies are unsecured; anyone with a radio can listen. For this reason, HCC member organizations should never discuss Protected Health Information in the same room as the amateur radio.

Satellite Phones

Satellite phones allow HCC members to make phone calls when cellular service is down. Generally, paying for satellite telephone service is expensive, so satellite

phones are generally only used during a communications failure. The TSA-E Medical Coordination Center (EMCC) has two satellite phones that will be monitored 24/7 during a communications failure. Their numbers are listed below. A full list of HCC member organizations with satellite phones can be found in the HCC Communications Capabilities Matrix in Appendix A.

EMCC Sat Phone 1 – 8816-224-99633
EMCC Sat Phone 2 – 8816-224-99634

Mobile Satellite (MSAT) Units

MSAT Units allow users to talk over satellite-based talkgroups designated for interoperable communications. Currently, the TSA-E HCC has 12 portable MSAT units capable of being deployed, 2 base-station MSAT units (in the EMCC and at the NCTTRAC Warehouse), and 6 Mobile MSAT Units installed in the 4 regional AMBUSes and the two regional MERC Trailers.

For HCC MSAT communications in TSA-E, the “NCTTRAC” talkgroup is used. For EMTF-related MSAT communications, the “STRAC-1” talkgroup is typically used.

V. Communication and Information Sharing Procedures

A. Normal Operations

Point to point communication in normal operations is primarily accomplished through standard business methods (email, business phones, cell phones, and fax). Additionally, some HCC partner organizations may choose to use public safety radio for interorganizational communications (such as an EMS agency transmitting incoming patient information to a hospital Emergency Department via a trunked radio system). The NCTTRAC EMCC communicates with the TSA-E HCC at large using email distribution lists, email listservs, and EMResource event notifications. HCC partner organizations share essential elements of information with the HCC at large primarily using EMResource. The NCTTRAC EMCC communicates with DSHS and external partners using the aforementioned standard business methods.

Alerting/Notifications

Individual HCC partner organizations use EMResource event notifications and EMResource status updates to notify the HCC at large about internal issues. For example, hospitals often create EMResource events to notify EMS providers about facility construction affecting normal EMS traffic. Similarly, hospitals use EMResource to update their ED status, their NEDOCS, and their bed availability daily. Other HCC partner organizations can choose to be notified of these changes via text notifications or email notifications (for example, EMS providers often set up text notifications to organizational supervisors so that they are immediately notified when a hospital in their

service area moves their ED status to “Advisory”). In lieu of emergent notifications, some organizations choose to set up EMResource on a screen where it can be actively monitored 24/7.

When a hospital reports that their Emergency Department (ED) is “Closed” in EMResource, a text notification and an email notification are automatically sent to NCTTRAC EMCC staff. The NCTTRAC EMCC reaches out to the facility in question using business phone lines first and cell phone lines second to confirm the cause of the ED closure and check for any unmet needs. If the EMCC is unable to make contact with the hospital using business phones, cell phones, or email, the EMCC will begin to employ secondary communications methods/systems to contact the facility.

The NCTTRAC EMCC notifies the HCC at large about relevant information primarily using email distribution lists and email listservs. For more urgent notifications (such as the potential for severe weather in the near future), the EMCC will also create an EMResource event.

Essential Elements of Information (Method of Information Sharing)

- Hospital ED Status (EMResource)
- Hospital NEDOCS (EMResource)
- Hospital Service Line Availability (EMResource)
- Hospital Bed Availability (EMResource)
- Hospital Psych Bed Availability (EMResource)
- Air Medical Unit Availability (EMResource)
- AMBUS Deployment Status (EMResource)

B. Regional Emergency/Disaster Operations

Communication and information sharing in an emergency situation should largely follow the same procedures and use the same methods as during non-emergency situations. Most point-to-point communication still occurs over email, business phones, cell phones, and public safety radio, and EMResource remains the primary tool for sharing essential elements of information. However, emergency situations often create advanced communications and information sharing needs that are not adequately met by the procedures followed and methods used in normal operations.

Alerting/Notifications

During regional emergency/disaster operations, individual HCC partner organizations can use the NCTTRAC 24/7 Duty Phone (817-607-7020) to notify the EMCC about emergent issues affecting their organization or community. The EMCC will then use EMResource event notifications and email distribution lists to notify the HCC at large. Additionally, the EMCC monitors common situational awareness tools such as newsfeeds, EMResource, WebEOC, and email traffic to ensure that relevant

information is captured and passed on to the HCC at large as needed. The DSHS SMOC notifies the EMCC of relevant information using EMResource event notifications, cell phones, and email.

Deployable assets (including 4 regional AMBUSes, 2 regional MERC Trailers, and 4 regional Mass Fatality Trailers (MFTs) are built as individual resources in EMResource. When these resources update their "Deployment Status", it generates an email and text notification to EMCC staff. This information is then passed down to HCC partner organizations as needed.

Common Operating Picture/Situational Awareness

Common situational awareness during an emergency scenario is spread and gathered using WebEOC. NCTTRAC hosts an ESF-8 specific WebEOC server that can share information with other WebEOC servers active in TSA-E. Healthcare organizations primarily use the NCTTRAC WebEOC server while public safety and emergency management organizations primarily use on of the other regional servers. A summary of WebEOC boards on the NCTTRAC WebEOC server and their utilization as information sharing tools follows.

a. *Local Medical Events* – the Local Medical Events board is where any healthcare partners with access to the NCTTRAC WebEOC server can create informational posts about what is happening at their facility/agency. For example, a hospital might post that their facility has suffered damage from a tornado. Users who create a post in Local Medical Events have the option to share that post with the TSA-E Medical Events board, which is then shared with other WebEOC servers. Final approval for posts to move from Local Medical Events to TSA-E Medical Events rests with the Executive Director or his designee.

b. *TSA-E Medical Events* – the TSA-E Medical Events board is where NCTTRAC will post regional information for all users such as Situational Reports. During a fusion incident, the information posted in TSA-E Medical Events is visible to the following WebEOC servers: Fort Worth, Dallas County, Plano, McKinney, and LoneStar. For this reason, any posts made to TSA-E Medical Events require EMCC Executive Director approval.

c. *ESF-8 Events* – the ESF-8 Medical Events board is a read-only board for the NCTTRAC WebEOC server. The DSHS State Medical Operations Center (SMOC) will post to this board with any information relating to the incident such as Incident Action Plans or SMOC staffing information.

d. *North Central Texas Activity Board* – the North Central Texas Activity Board is a read-only board for the NCTTRAC WebEOC server. This board is where other regional WebEOC servers post information that is more related to jurisdictional emergency management such as shelter operations information.

Essential Elements of Information

- Hospital ED Status (EMResource)
- Hospital NEDOCS (EMResource)
- Hospital Service Line Availability (EMResource)
- Hospital Bed Availability (EMResource)
- Hospital Psych Bed Availability (EMResource)
- Air Medical Unit Availability (EMResource)
- AMBUS Deployment Status (EMResource)
- Deployable Asset Deployment Status (EMResource; updated as needed)
- HCC Partner Organizations Response Actions Taken (WebEOC; reported as needed)
- MCI Patients (WebEOC; reported as needed)

Additional EEIs can be built out in EMResource or WebEOC as needed.

Primary Communication Systems Failure

Certain emergency/disaster scenarios might impact the functionality of primary communications methods. For example, a tornado might damage critical communications infrastructure rendering business and cell phones inoperable, or a cyber security threat might make email communication impossible. In scenarios where primary communications methods go down, individual HCC partner organizations should begin activating their own redundant communications plans and equipment to maintain communication channels with other individual HCC partner organizations.
The NCTTRAC EMCC will begin reaching out to HCC partner organizations in the affected area using all secondary communications methods available. For example, in the event of a cell and landline phone outage, the NCTTRAC EMCC will use a satellite phone to call HCC member organizations with satellite phones, will use the D/FW Wide and D/FW CONNCT regional radio systems to make contact with HCC partner organizations who have access to those systems, and will use amateur radio to make contact with all other HCC partner organizations. Individual HCC partner organizations are expected to manage the operation and staffing of secondary communications systems for their organization.