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**Northeast Tennessee**

**Healthcare Preparedness Coalition**

**Burn Mass Casualty Incident**

**Surge Annex**



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**Northeast Tennessee Healthcare Preparedness Coalition**

**Burn Mass Casualty Incident**

**Surge Annex**

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**Northeast Tennessee Healthcare Preparedness Coalition**

**Burn Mass Casualty Incident**

**Surge Annex**

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# **PREFACE**

### KEY BURN MCI SURGE PLAN HIGHLIGHTS

The following are highlights are described in the Northeast Tennessee Healthcare Preparedness Coalition’s Burn MCI Surge Annex and serve as recommendations for planned development that are described to make improvements to the existing system:

|  |  |
| --- | --- |
| **STRATEGY** | **ACTIONS** |
| Establish Burn Surge Activation and Notification Criteria | * Adoption of Burn Stages I, II, III for Activation and Notifications * Assist RMCCs with burn surge capacity situational awareness using a HRTS dashboard * Encourage EMD availability at all EMS dispatch centers |
| Improve Burn MCI Coordination | * Adopt Burn Triage framework * Adopt Standard Burn Transfer Form * Formalize and integrate coordination assistance from ABA Southern Region Burn Coordination Center |
| Improve Burn Capacity Tracking Metrics | * Add new burn-related capability/capacity elements to HRTS |
| Increase Burn Capability and Capacity | * Identify Burn Care Resources * Ensure all Trauma Centers are burn capable * Include Pediatric Comprehensive Centers and pediatric hospitals as destinations for burn patients * Identify other burn care resource hospitals that have a commitment to receive burn patients during a mass casualty incident as determined regionally * Purchase burn surge supplies, including antimicrobials (i.e., Silver Impregnated Dressings, Silvadine), and Cyanokits for identified Burn Capable Hospitals * Formalize Burn Consultation/Telemedicine Program through partnerships with Burn Centers |
| Support Burn Surge Training | * Support burn care training for BCHs through burn center partnerships * Arrange ABLS Now access and ABLS Live Training for Burn Centers, BCHs, and EMS. * Encourage HICS Training to improve hospital surge management and BMCI response |

**Northeast Tennessee Healthcare Preparedness Coalition**

**Burn Mass Casualty Incident**

**Surge Annex**

# **INTRODUCTION**

## **1.1 PURPOSE**

This annex provides guidance to support a burn mass casualty incident (BMCI) response in which the number and severity of burn patients exceeds the capability and capacities of hospital facilities or resources in the Northeast Tennessee Healthcare Preparedness Coalition region. The plan identifies the processes and specialized resources that exist within and external to the Northeast Tennessee HCC that must be engaged in a BMCI response.

## **1.2 SCOPE**

### 1.2.1 Timeframe

This plan is effective upon approval by the Northeast Tennessee Healthcare Preparedness Coalition Executive Council. It remains effective until amended or rescinded.

### 1.2.2 Healthcare Coalitions and Jurisdictional Partners

Map

Description automatically generatedIn Tennessee, much of the work in Surge Management occurs through eight Healthcare Coalitions (HCC). The Northeast Tennessee Healthcare Preparedness Coalition is a collaborative network of healthcare organizations and their respective public and private sector partners that assist with preparedness, response, recovery, and mitigation activities related to healthcare organization disaster operations.

The Northeast Tennessee (NET) HCC region consists of two Regional Health Jurisdictions (RHJs) which are governed by the Tennessee Department of Health (TDH). These include the Sullivan County Health Department, and the Northeast Tennessee Health Office. Each has its own Regional Hospital Coordinator that is assigned to advise and coordinate coalition planning, preparedness, and response efforts. RHCs work closely with coalition partners and serve as a point of contact to the RHJ during emergency events. They maintain separate Regional Health Offices (RHOs). The Northeast Tennessee Regional Health Office oversees and supports the administration of public health services at the 7 county health offices (CHO). The Sullivan County Health Department is governed by the Sullivan County government.

### 1.2.3 General Command Structure

The Annex uses existing systems for command and control during a mass casualty incident involving burns. The Incident Command System is used at the field and at emergency operations center levels. TEMA, Emergency Medical Services, HCC and regional hospital disaster/emergency management plans guide communication and response. The Hospital Incident Command System (HICS) should be used at the hospital level to guide the emergency operations during various external and internal emergencies.

### 1.2.4 Definitions of Key Terms

**Medical surge** is the ability to expand capabilities to provide medical evaluation and care to the injured or ill during events that greatly increase demand causing health care facilitates to exceed the limits of their normal treatment capacity. Large events require the healthcare system to expand and adapt the medical services available to meet the needs of the public. **Surge Management** works to increase the surge capacity of healthcare systems. In Tennessee, the TDH Emergency Preparedness program sustains all-hazards electronic and communication response tools needed for regional and statewide disasters.

A **mass casualty incident (MCI)** is any situation in which the needs of victims exceed the abilities of available medical resources to manage each patient. A disaster occurs when imminent threat of widespread injury or loss of life results from man-made or natural events exceeding the capacity of a local area.

A **burn mass casualty incident (BMCI)** is an event that includes multiple patients with burn injuries. A **Burn Mass Casualty Incident Disaster** is defined as any catastrophic event in which the number of burn victims exceeds the capability and capacities of local healthcare coalition resources and burn center(s) to provide care. Capability includes the availability of burn beds, burn surgeons, burn nurses, support staff, operating rooms, equipment, supplies and related resources.

A **Burn Center** is a unit within a hospital that specializes in the treatment of burns. **Burn center surge capacity** is defined as 1.5 times the number of available burn beds in a burn center. Capacity is different at each burn center, may be seasonal, and will vary from week to week or possibly even day to day, based on the number of patients being treated prior to a disaster.

1.2.5 Plan Framework

The broad functions of EMS, hospitals, healthcare coalitions, local and state government, healthcare entities, the American Burn Association (ABA), and US Health and Human Services (HHS) Assistant Secretary for Preparedness and Response (ASPR) during a response to a BMCI are as follows:

1. Provide appropriate scene triage, treatment, and transport to the appropriate hospital destination by EMS according to protocols approved by the Tennessee Department of Health, Office of EMS.
2. Provide stabilizing care to burn patients at designated trauma centers and burn capable hospitals until adequate resources become available to allow for transport to a facility with appropriate burn care resources.
3. Promote safe burn patient transfer decision-making. Determine the most appropriate location of care based on the transportation, resources available, patient condition, and number of patients.
4. Obtain burn surgeon/subject matter expertise to inform the transfer decision-making either in person or via remote support (e.g., BRCA app, telemedicine.)
5. Assure a consistent level of care within the community and coalition by moving patients and resources and by requesting resources from private and public partners (e.g., emergency management [EM]) as needed.)
6. Support the tracking of burn patients throughout the incident.
7. Coordinate transfer of acutely ill/injured burn patients.
8. Ensure necessary communications and coordination processes are in place to support the above functions.

### 1.2.6 Planning Considerations

For Surge modeling purposes only, this document uses a legacy Health Resources and Services Administration (HRSA) benchmark for Burn-Trauma Mass Casualty which is 50 adult and pediatric burn victims per one million population. The Northeast Tennessee Region with a population of approximately 517,000 (2020 census) has a planning target for management of 26 burn patients.

### 1.2.7 Limitations of the Plan

This plan is intended to support, not replace, existing policies or plans by providing uniform response considerations in the case of a BMCI. The plan is designed to provide guidelines for a response to a Burn Mass Casualty Incident. The plan does not and cannot prescribe a rigid response to a set of known hazards as each incident is unique. It is a resource document and does not constitute policy or impose any obligations.

Each jurisdiction and entity will require internal documents and policies that address the specific needs of their response. The plan does not supersede the authorities of the participating entities.

### 1.2.8 Additional Referenced Plans

In addition to this plan, depending upon the size, scope and nature of the incident, other relevant response plans may be applicable when considering the response. These plans include, but are not limited to:

* Tennessee Burn Mass Casualty Incident Surge Plan (2022)
* Northeast Tennessee Healthcare Coalition Response Plan (2019)
* Northeast Tennessee Healthcare Coalition Pediatric Annex (2020)
* Tennessee Department of Health CBRN Response Plan (2020)
* Guidance for the Allocation of Scarce Resources (v. 1.6, 2020)
* Tennessee Mass Fatality Plan (2018)

## **1.3 OVERVIEW AND BACKGROUND OF THE COALITION AND SITUATION**

### 1.3.1 Healthcare Coalition (HCC) Members

The Northeast Region Healthcare Preparedness Coalition is a multi-agency coordinating group that assists the health care community and other emergency response agencies to jointly prepare for, respond to, and recover from disaster events and public health emergencies. The Coalition serves as a cooperative alliance of health, response and other governmental agencies, along with other community partners in the region through collaborative planning and information sharing among a broad range of healthcare partners in order to protect, promote, and improve the health and prosperity of people in Tennessee.

The Healthcare coalition is comprised of both public and private hospitals and healthcare partners, including EMS and other healthcare facilities. The Northeast Tennessee Healthcare Coalition has members from across the region that include hospitals, mental health facilities, dialysis clinics, long term care facilities, rehabilitation facilities, police, EMS, TEMA, RMCC, and Air Medical.

### 1.3.2 Demographics

Diagram, map

Description automatically generatedThe Northeast Tennessee Healthcare Preparedness Coalition encompasses the Sullivan County and Northeast Tennessee Health Department Regions (EMS Region 1). The NET HCC primary boundaries include the following eight counties: Carter, Greene, Hawkins, Hancock, Johnson, Sullivan, Washington, and Unicoi counties in the Northeast region of Tennessee. It includes a mix of urban and rural areas and encompasses a population of approximately 517,000 (2020 census) and 2897 square miles.

### 1.3.3 Local Risks for BMCI

Burn Mass Casualty Incident modeling requires two essential elements to occur simultaneously in order for an event to create multiple victims. First, a primary event type causing a burn to the skin and/or damage to the lungs, and second, a location where relative high-density population exists. These two elements must exist to create a situation where a burn mass casualty incident could occur.

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| --- | --- |
| **Primary Event Categories** | **Population Location Categories** |
| * Fire or Explosion * Wildfire * Railway fire or explosion * Transportation fire or explosion, flammable fuels or chemicals (Ground or aircraft) * Industrial fire or explosion * Pipeline fire or explosion * Earthquake * Volcano | * Mass Gathering * Nightclubs/Bar * High Density Living Arrangement (Apartment/Hotel, Nursing Home, Hospital) * Highly Populated Area (Residential or Business) * Cruise Ship |

For the purpose of this annex, local risks and hazards for BMCI were evaluated using a standardized set of observational situations based upon real events that have generated burn mass casualty incidents. The model does not anticipate every possible scenario but covers the main categories that may generate a BMCI. It does not evaluate (1) frequency or likelihood of an event occurring, or (2) the consequences or catastrophic nature of a particular incident. This annex identifies the hazards and risks in the region and is rated as either high, medium, or low based upon expert opinion from the respective healthcare leaders in the HCC.

Northeast Tennessee HCC Region Relative Risks for BMCI

|  |  |  |
| --- | --- | --- |
| **High Risk** | **Medium Risk** | **Low Risk** |
| * Fire/Explosion at a Mass Gathering * Industry/Chemical Fire/Explosion in Populated Area | * Fire/Explosion at High Density Living Setting * Wildfire in Populated Area * Railway Fire/Explosion in Populated Area | * Fire/Explosion at a Nightclub/bar * Transportation Fire/Explosion in Populated Area * Pipeline Fire/Explosion in Populated Area * Radiological Release in Populated Area * Earthquake with Fire in populated area * Volcano (Not Applicable) |

The cause or intent of an incident (Natural, Unintentional, Intentional [terrorism]) is not addressed in this risk and hazard analysis as response to an incident creating a Burn MCI is managed in a similar fashion. An element of cause or intent would be descriptive only to provide context for the primary type and location.

### 1.3.4 Healthcare Facilities

There are 13 hospitals in Northeast Tennessee. There is one Level I Trauma Center and two Level III trauma centers. The closest Comprehensive Pediatric Referral Center is located in the neighboring Knox/East Healthcare Coalition. Overall, there are approximately 1,473 acute care hospital beds in the Northeast TN Healthcare Preparedness Coalition of which approximately 1,000 are staffed.

In addition, there is one mental health hospital associated with the major healthcare system and one Veterans Affairs Hospital in the region.

Hospitals are responsible for providing triage and assessment, basic decontamination, emergency care/treatment, and isolation/quarantine of patients. Each hospital has an emergency response plan to address internal plan activation, emergency staffing, on loading and off-loading of patients, isolation patient management, acquisition of additional supplies, equipment, pharmaceuticals, emergency evacuation, business continuity, shelter-in-place, fatality management, and coordination with their local office of emergency management and other hospitals in the region.

Each acute care hospital providing emergency care may receive burn patients and should be able to provide initial assessment and stabilization.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Acute Care Hospital** | **Total Bed Capacity** | **Staffed Beds** | **Surge Bed Capacity** |
| 1 | Bristol Regional Medical Center | 243 | 203 |  |
| 2 | Franklin Woods Community Hospital | 64 | 61 |  |
| 3 | Greeneville Community Hospital East | 124 | 58 |  |
| 4 | Hancock County Hospital | 10 | 3 |  |
| 5 | Hawkins County Memorial Hospital | 9 | 5 |  |
| 6 | Holston Valley Medical Center | 371 | 225 |  |
| 7 | Indian Path Community Hospital | 146 | 21 |  |
| 8 | James H Quillen VA Medical Center | 78 | 75 |  |
| 9 | Johnson City Medical Center | 320 | 280 |  |
|  | Niswonger Children’s Hospital | 34 | 21 |  |
| 10 | Johnson County Community Hospital | 2 |  |  |
| 11 | Johnston Memorial Hospital |  |  |  |
| 12 | Sycamore Shoals Hospital | 62 | 45 |  |
| 13 | Unicoi County Hospital | 10 | 3 |  |
| *14* | *Lee County Community Hospital (Virginia)* | - | - | - |
| *15* | *Norton Community Hospital (Virginia)* | - | - | - |
| *16* | *Russell County Hospital (Virginia)* | - | - | - |
| *17* | *Smyth County Community Hospital (Virginia)* | - | - | - |
| *18* | *Dickenson Community Hospital (Virginia)* | - | - | - |
| *19* | *Lonesome Pine Hospital (Virginia)* | - | - | - |
| 20 |  |  |  |  |
|  | **Totals** | 1,473 | 1,000 |  |

### 1.3.5 Burn Care Resources

In the Northeast Tennessee Region HCC, the three Trauma Centers, will provide treatment and supportive care to patients until a secondary transfer to the most appropriate level of burn care can be arranged. Pediatric burn patients may be treated at the Children’s Hospital.

The Northeast Tennessee region has ten hospitals to serve as Burn Capable Hospitals with a burn surge bed capacity of 26. The targeted burn surge bed capacity is for planning purposes and actual burn surge bed capacity can only be measured at the time of the incident.

Burn Capable Hospitals of the HCC as part of the Burn MCI Surge Plan meets the following criteria:

* Be a General Acute Care Hospital
* Complete an MOU with a Burn Center or other HCC-approved arrangement
* Stock Burn Care Supplies
* Employ trained medical personnel who have received burn care training and annual updates

Each Burn Capable Hospital should have a primary Burn Center partner. The Burn Center partner will be work with the Burn Capable Hospital by providing training and stock rotation for the surge facilities. Each Burn Capable Hospital should also have a primary Burn Center partner for burn consultation and telemedicine support.

**Burn Care Resources in Northeast Tennessee HCC**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Region** | **FACILITY** | **TYPE** | **LOCATION** | **BURN SURGE BED CAPACITY** |
| 1 | Johnson City Medical Center | Trauma Center, Level I | Johnson City, TN | 12 |
| 1 | Niswonger Children’s Hospital at Johnson City Medical Center | Pediatric Hospital | Johnson City, TN | 4 |
| 1 | Bristol Medical Center | Trauma Center, Level III | Bristol, TN | 5 |
| 1 | Holston Valley Medical Center | Trauma Center, Level III | Kingsport, TN | 5 |
|  |  |  |  | **26** |

Depending upon the location and magnitude of the incident, burn patients may be transported to Trauma Centers in adjacent HCCs or States. Trauma centers in closest proximity to the Region are the University of Tennessee Medical Center in Knoxville, Mission Hospital in Asheville, North Carolina, or Pikeville Medical Center in Pikeville, Kentucky.

In the case of pediatrics, within the Northeast Tennessee region, Niswonger Children’s Hospital at Johnson City Medical Center provides pediatric specialty care. East Tennessee Children’s Hospital in Knoxville as a Comprehensive Regional Pediatric Center is capable of providing comprehensive specialized pediatric medical and surgical care to all acutely ill and injured children.

**Burn Care Resources Adjacent to Southeast Regional HCC**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Region** | **FACILITY** | **TYPE** | **LOCATION** | **BURN SURGE BED CAPACITY** |
| 2 | University of Tennessee Medical Center | Trauma Center, Level I | Knoxville, TN | 24 |
| 2 | East Tennessee Children's Hospital | Comprehensive Regional Pediatric Center | Knoxville, TN |  |
| 1 OOS | Mission Hospital | Trauma Center, Level II | Asheville, NC |  |
| 1 OOS | Pikeville Medical Center | Trauma Center, Level II | Pikeville, KY |  |
| 1 OOS | Wake Forest Medical Center | Burn Center, ABA-Verified | Wake Forest, NC |  |
|  |  |  |  | **24** |

### 1.3.6 Burn Centers

The Northeast Tennessee region does not have any burn centers. Secondary transfer of patients would be primarily to an out-of-state burn center if they have available surge capacity.

Tennessee has three Burn Centers—two in Nashville and one in Memphis. These Burn Centers have 51 burn treatment beds, however, their census is typically above 80%. This factor decreases the amount of usable surge bed capacity during an incident. Additionally, the distance from the Northeast Tennessee region and Memphis is a barrier to use of Firefighter’s Regional Burn Center.

|  |  |  |  |
| --- | --- | --- | --- |
| **Burn Center** | **Location** | **# of Burn Beds** | **Surge Planning Capacity** |
| Vanderbilt University Burn Center | Nashville, TN | 25 | 38 |
| Tristar Skyline Burn Center | Nashville, TN | 12 | 18 |
| Firefighter’s Regional Burn Center at Regional One Health\*\* | Memphis, TN | 14 | 21 |
|  | TOTAL | *51* | *77* |

\*\* ABA-verified Burn Center

In the surrounding states of Alabama, Georgia, North Carolina, Kentucky, Arkansas, Louisiana, and Missouri there are an additional ten burn centers that have proximity to Tennessee and have arrangements to receive burn patients. However, the distance from the Northeast Tennessee region may limit their use for initial transport and receipt of burn patients. The closest burn centers do provide options for secondary transfer of burn patients after initial stabilization. The most commonly used Out-of-State Burn Center is Wake Forest Baptist Medical Center Burn Center in Winston-Salem, North Carolina.

|  |  |  |  |
| --- | --- | --- | --- |
| **Burn Center** | **Location** | **# of Burn Beds** | **Distance from major TN cities** |
| Wake Forest Baptist Medical Center Burn Center\*\* | Winston-Salem, North Carolina | 24 | 140 miles from Johnson City |
| North Carolina JayCee Burn Center\*\* | Chapel Hill, North Carolina | 36 | 215 miles from Johnson City |

#### Use of ABA Burn Coordination Center

The Southern Region Burn Coordination Center (SBCC), located at the University of Birmingham in Alabama serves as a resource for coordination of burn resources out of state and throughout the Southeast. Contact with the coordination center is at 1-800-359-0123. The response plan for the SBCC is in the plan Appendix.

#### Telemedicine Support

Vanderbilt Burn Center uses their Transfer Center as their consultation hub. The referring provider contacts the VUMC transfer center. The transfer center then connects directly with the on-call burn surgeon. The transfer center asks the referring provider if they are willing to send a secured email with uploaded photos of the burns/injuries. After review of the photos of the burns, the on-call burn surgeon is connected via phone with the referring provider through the transfer center for a discussion about transfer.

Tristar Skyline Burn Center has one centralized communications hub at the Transfer Center. Skyline uses 10 Tele-burn professionals with 90 connected devices for telehealth consultation. They connect with both HCA Tristar facilities and non-Tristar facilities.

Firefighter’s Regional Burn Center in Memphis uses a Burn Consultation Software Application from the Burn and Reconstructive Centers of America (BRCA) for communication with 56 hospitals in the area.

**Burn Consultation and Telehealth in Tennessee**

|  |  |  |
| --- | --- | --- |
| **Burn Center** | **Consultation/Telehealth Status** | **Phone Number** |
| Vanderbilt University Burn Center | Transfer Center and Burn Clinic Protocols | (615) 343-4444  [For Referring Providers | Vanderbilt Health Nashville, TN](https://www.vanderbilthealth.com/healthcare-professionals/referring-providers) |
| Tristar Skyline Burn Center | Tristar Telehealth Network | (877) 342-1540  [Transfer Center | TriStar Health](https://tristarhealth.com/medical-professionals/transfer-center.dot) |
| Firefighter’s Regional Burn Center at Regional One Health | BRCA Application | (800) 351-3434  [Acute Burn Care and Reconstruction - Regional One Health](https://www.regionalonehealth.org/firefighters-burn-center/acute-burn-care-and-reconstruction/) |

### 1.3.7 EMS and Patient Transport Resources for Inter-Facility Transfer

All ambulances and licensed EMS personnel operating within the State of Tennessee must meet certain standards set by the State Board of EMS. Specialized EMS transport resources are accessed through the EMS Consultants, working with the Regional Medical Communications Centers, and when required, the RHCs.

The Emergency Medical Services (EMS) in Sullivan County and Northeast Tennessee are comprised of the following elements:

* + - 11 Primary EMS Providers
    - 1 Secondary EMS Providers
    - 3 Specialty EMS Service Providers
    - 1Helicopter Service Providers with 5 helicopters

The EMS Division has an important role in state government disaster planning and operations. The Division’s responsibilities are delineated in the Tennessee Emergency Management Plan (TEMP). EMS Division responsibilities include:

The EMS Division has an important role in state government disaster planning and operations. The Division’s responsibilities are delineated in the Tennessee Emergency Management Plan (TEMP).

When deaths or injuries occur in a disaster, Tennessee Emergency Management Agency (TEMA) tasks the EMS Division with the responsibility for:

* Ensuring continuity of normal 911/EMS operations during events. When a mass casualty incident occurs, division staff can assist local ambulance services manage the consequences. This includes contacting other services for mutual aid, identifying staging areas for responding ambulances and distributing patients to hospitals within the region.
* Verifying deaths and injuries,
* Determining where patients were transported and by what means,
* Producing official state casualty reports,
* Providing initial damage assessment and assistance to any health care facility damaged or disabled in a disaster, and
* Reporting any findings to TEMA, TDH, and the Division of Health Care Facilities.

To ensure that these emergency management responsibilities can be carried out rapidly, EMS Division management and all regional staff are on call 24 hours per day, 7 days a week. The Emergency Medical Services Director is the primary Emergency Services Coordinator (ESC) for ESF 8 in the SEOC. The EMS Consultant is the regional representative for ESF 8 Coordination.

Additionally, the Regional Medical Communications Center (RMCC) falls under EMS leadership within the state of Tennessee. This serves as the 24/7 communications coordination center during events. The RMCC has communication capabilities coalition hospitals, EMS, other RMCCs, and local and state Emergency Operations Centers. RHCs generally respond to the RMCC during events to perform the information sharing and resource coordination roles of the healthcare coalition.

Critical Care transport for inter-facility transfer of severely burned patients would be performed primarily with air ambulances. The air ambulances are staffed with two Advanced Life Support personnel, at least one of which is a Registered Nurse.

## **1.4 RESPONSE ASSUMPTIONS**

During the response, key points and assumptions of the Annex include:

* All hospitals providing emergency care may receive burn patients and should be able to provide initial assessment and stabilization, assist in transfer, and patient tracking if needed.
* Burn centers and Level I, II and III trauma centers should plan for a major role in the receipt and care of burn patients and understand their role in a BMCI.
* Trauma Centers, pediatric hospitals, and burn capable hospitals may need to provide care for the patients requiring definitive burn care for 24 to 72 hours until transfer arrangements can be made.
* Tennessee Burn Centers invite all those hospitals receiving burn casualty victims to call for immediate and ongoing consultation.
* Tennessee Burn Centers, and the Southern Region Burn Coordination Center, will assist hospitals with secondary triage and assistance in relocation of the patient to a center able to provide definitive burn care.
* Care of critical burns is extremely resource-intensive and requires specialized staff, expert advice, and critical care transportation assets.
* Severe burn patients often become clinically unstable within 24 hours of injury, complicating transfer plans after this time frame.
* Burn center placement may require transport of patients across the country, depending on the severity of injury and the number of patients injured.
* Existing State surge planning processes and expectations of preparedness and coordination will be followed.
* EMS agencies and Burn Capable Hospitals, in collaboration with the RMCC and RHC, EMS Consultant, and ERC within the jurisdiction will have primary responsibility for response including initial casualty distribution and subsequent triage of patients for forward movement.
* Tennessee governmental agencies (TDH and TEMA) will have a primary responsibility for support of the response and the RMCCs and BCHs will coordinate transfers with the closest burn center or Southern Region ABA regional coordinating facility in accordance with established protocols.
* State resources from the Tennessee Department of Military, including the Civil Support Team (CST) and a medical team from the Tennessee National Guard (TNNG), and/or a medical team from the Tennessee State Guard (TNSG) may be available within the first 12-24 hours.
* Federal resources (e.g., ambulance contracts, National Disaster Medical System DMAT teams, DOD teams), though potentially available to assist, cannot be relied upon to mobilize and deploy for the first 72 hours.

# **CONCEPT OF OPERATIONS**

In the event of a burn mass casualty incident, fire departments would provide first response to the event for rescue, fire suppression, and initial emergency medical care. The EMS response, both ground and air, would be initiated for triage, treatment, and transportation. Advanced life support care would be provided at the scene by paramedics, advanced EMTs, and nurses. Patients would be transported by ground or air ambulances to trauma centers, pediatric centers, or other designated burn capable hospitals in their respective areas based upon existing State EMS protocols. Trauma Centers, pediatric centers, or burn capable hospitals would provide initial stabilization including airway control, pain management and initial fluid resuscitation for patients while seeking interfacility transfers to a higher level of care if needed.

Regional Medical Communication Centers (RMCCs) would provide coordination to distribute patients to the most appropriate hospital within the HCC. Secondary transfer to in-state specialty burn centers of the most severely burned patients would occur when beds are available. If appropriate, or if local or state resources are overwhelmed, patients would be transferred out-of-state to burn centers using existing transfer agreements and/or through coordination with the ABA’s Southern Region Burn Coordination Center.

Diagram

Description automatically generatedProcedurally, burn patients would first go to a trauma center, pediatric center, or burn capable hospital for initial stabilization then be transferred to a Burn Center. This procedure is also used at the three trauma centers that also have a Burn Center as a specialty service. Admission to the Burn Center within the hospital remains contingent upon physician discretion and existing capacity. In addition to the three trauma centers that are also burn centers, Tennessee has two Level I Trauma Centers, one Level II Trauma Centers, and eight Level III Trauma Centers that play a major role in the receipt and care of burn patients. Also, four Comprehensive Pediatric Centers may provide care to pediatric burn patients.

The State of Tennessee currently has three burn centers: (1) Vanderbilt Burn Center in Nashville serving both adult and pediatric patients, (2) Tristar Skyline Medical Center in Nashville and (3) Firefighters Regional Burn Center at Regional One Health in Memphis – which is ABA-verified -- serving patients 14 and older. Out of State Burn Centers in adjacent states such as Alabama, Georgia, North Carolina, Kentucky and Arkansas may also have capacity to receive severely burned patients.

Overall coordination during a Burn Mass Casualty Incident would be a combination of local law enforcement, fire department and EMS providing Incident command at the scene, plus Regional Medical Communications Centers and Hospital Regional Coordinators providing critical information regarding the availability of burn care resources—using HRTS. Tennessee’s Burn Centers could serve to provide remote treatment advice to burn receiving hospitals if necessary. The Tennessee Department of Health (TDH) and the Tennessee Emergency Management Agency (TEMA) would play important roles in overall State coordination as part of the ESF 8 (Public Health and Medical Services) function.

## **2.1 ACTIVATION**

Activation of this plan, or any portion thereof, is determined on a case-by-case basis. Generally, this plan will be activated anytime a healthcare facility has exceeded or reasonably anticipates exceeding burn resources capability and capacity. In some cases, at the smallest hospital, even one critical burn patient could overwhelm immediate local resources. Depending upon the size and scope of an incident, local resources and number of burn centers, response to the burn disaster situation may be a tiered, staged response.

In the Northeast Tennessee HCC region, any event involving more than 10 burned patients would likely overwhelm the regional resources and capacity and create a Stage II Burn Disaster. The three Trauma Centers, and other Burn Capable Hospitals would serve as the primary burn surge treatment facilities. Any necessary inter-regional movement of patients would be coordinated through EMS, the RHC, and the applicable Regional Medical Communications Centers (RMCCs). Since no burn center exists within the region, any severely burned patient would likely be transferred to the most appropriate burn center.

### 2.1.1 Triggers

The following triggers for each level are to be considered guidelines. Based upon local resources and capabilities, a Stage level may be upgraded by a higher level at the discretion of an HCC or TDH.

The following Burn Disaster stages, triggers, and notifications are in ascending order of severity:

|  |  |  |  |
| --- | --- | --- | --- |
| **STAGE** | **DEFINITION** | **PRESUMPTIVELY DEFINED BURN MCI** | **NOTIFICATION** |
| **Stage III Burn Disaster** | Local burn resources handle a Stage III burn disaster. The strategy of management revolves around local/regional burn centers. In general, incident command will be established and a needs assessment will be carried out. | * 5-10 Burn Casualties | * RMCC * RHC * EMS Consultant * ERC * EM |
| **Stage II Burn Disaster** | A Stage II burn disaster overwhelms local but not regional burn resources. Planning will involve a regional network of burn centers. | * 11-25 Burn Casualties | * State Burn Coordinating Center * TDH * TEMA |
| **Stage I Burn Disaster** | A Stage I burn disaster overwhelms the regional/state resources and will require response from a national network of burn centers. | * >25 Burn Casualties | * Southern Region Burn Coord Cntr |

## **2.2 NOTIFICATIONS**

The procedure involved in alerting and notifying members of an event consists of two primary systems through the RHC or other authorized emergency response personnel. These are the Tennessee Health Alert Network (TNHAN), the primary purpose of which is notification, and the Healthcare Resource Tracking System (HRTS), which also has an alert function. TNHAN is used mostly to broadcast more time-sensitive and specific information. HRTS is used mostly to alert healthcare and emergency responders of an impending surge event.

Depending on the nature and scope of the surge, notification requirements may vary. In general, the following entities are identified as key players, and as such, would be subject to call:

* Regional Medical Communications Center (RMCC)
* Regional EMS Consultant
* Regional Healthcare Coordinator (RHC)
* Regional Emergency Response Coordinator (ERC)
* Transportation Agencies—Ground and Air (as needed)
* Tennessee Department of Health (TDH)
* Tennessee Emergency Management Agency (TEMA)

This list is not all-inclusive, but these notifications should trigger additional notifications as may be appropriate for the nature of the surge.

When a Disaster or surge event occurs, the RMCC activates the Healthcare Resource Tracking System (HRTS) for all impacted counties. Other RMCCs, RHCs, ERCs, and EMS Consultants across the state are notified through HRTS. Hospitals in the impacted HCC are requested to update their bed availability to include number of GREEN, YELLOW, and RED incoming injured they can accommodate.

|  |  |  |
| --- | --- | --- |
| **ROLE** | **NORTHEAST/SULLIVAN CONTACTS** |  |
| RMCC | **Ballad Health, Johnson City**  800-645-9670 423-952-5700  Ricky McMurray\* Ricky.McMurray@balladhealth.org |  |
| RHC | **NORTHEAST/SULLIVAN**  Meranda Belcher [mbelcher@sullivanhealth.org](mailto:mbelcher@sullivanhealth.org)  O: 423-279-2691  C: 423-306-6051  Anthony Wright  [anthony.c.wright@tn.gov](mailto:anthony.c.wright@tn.gov)  O: 423-979-4633  C: 423-741-4646 |  |
| EMS Consultant | **Northeast TN Regional Office**  John Dabbs [John.dabbs@tn.gov](mailto:John.dabbs@tn.gov)  Telephone: (423) 737-1992 Fax: (423) 979-3271 |  |
| ERC |  |  |

### 2.3.1 Communications

Tennessee has developed extensive preparedness and response plans and systems since the 9/11 attacks. The systems are used to actively monitor public health demands and hospital/health system capabilities and resources during major public health emergencies. These systems provide the capabilities for a common operating framework in real or near-real time, including:

* The Healthcare Resource Tracking System (HRTS) facilitates reporting and monitoring for hospital bed availability, facility status, healthcare resource levels/capacities, and other critical emergency response information.
* Tennessee’s system of eight Regional Medical Communication Centers (RMCC) provides a unique and effective means for coordination and communication for EMS services and hospitals. The primary purpose of the RMCCs is to assist ambulance services and hospitals to get patients to the right hospital for the appropriate care in a timely manner.
* TDH Emergency Response Coordinators (ERCs), Regional Healthcare Coordinators (RHC) and state EMS consultants coordinate with Regional Health Operations Centers (RHOCs) in every major metro- and regional-area of the state
* HRTS and Tennessee Health Alert Network (TNHAN) provides e-mail and telephone updates and alerts to key public health and hospital staff

Activation of an event within HRTS engages applicable EMS Consultants, RHCs, ERCs, RMCCs, and hospitals. In addition, applicable hospitals outside of Tennessee that are part of HRTS are notified. The State of Tennessee Emergency Support Function (ESF) 8 response structure consists of 8 EMS regions. There is an RMCC and a Healthcare Coalition to coordinate efforts in each one of the EMS regions. The Regional Medical Communications Centers (RMCCs) are part of the Tennessee Emergency Medical Services Telecommunications Plan.

Ballad Health serves as the Northeast Tennessee’s RMCC. These RMCCs are staffed 24 hours a day to assist in the coordination of patient transport in situations where local authorities and healthcare organizations request aid. They coordinate communication between hospitals and EMS agencies and can communicate with the other RMCCs around the state. During a disaster of regional or statewide proportion, the respective Emergency Medical Services Consultant and the Regional Healthcare Coordinators (RHC) will work with the RMCC to move patients to appropriate facilities and medical assets where they are needed most.

On-going monitoring of public need, health system capabilities, and resources provides the necessary information to instruct all affected hospitals relative to the use of contingency and crisis standards of care. During use of these guidelines, TDH would provide direction and coordination with 911 centers, RMCCs and EMS agencies would ensure that any authorized altered standards of care were as widely known as appropriate. This coordinating action is key to ensuring that the most appropriate patients are transported to medical facilities while others receive the best care possible elsewhere with the current situation.

Open communication between healthcare facilities is key for an effective response during a public health emergency. Ongoing communication between hospitals should be coordinated through Regional Healthcare Coordinators and Healthcare Coalitions as part of the TN ESF 8 Response Plan. Situational awareness will be ensured with frequent communication between each hospital regarding patient volume and acuity experienced by the facility, as well as resource status information. This information will be used to facilitate decision-making to determine when and how altered standards of care may be implemented and deactivated. Hospitals will provide ongoing status information as requested by the State. Data will be reported using existing reporting systems. The Regional Healthcare Coordinators will monitor data reports for potential trends across affected areas.

## **2.3 ROLES AND RESPONSIBILITIES**

Organization and Assignment of Responsibilities

|  |  |  |
| --- | --- | --- |
| **Partner** | **Primary Response Roles** | **Secondary Response Roles** |
| Fire  EMS | * Rescue, triage, treat, transport, and distribute casualties to appropriate local trauma centers and burn capable hospitals in accordance with established TN EMS MCI protocols. |  |
| RMCC  RHC/HCC  EMS Consultant  ERC  EM  PH | |  | | --- | | * Request / mobilize any coalition/regional caches of burn supplies. Assist in coordinating fatality management and behavioral health resources. * Activate coordination mechanisms and any burn-specific plans. * Coordinate local lists of victims and clinical information. * Triage/prioritize victims for forward movement to specialty centers in accordance with established BMCI protocols and /or expert input. | | * Ensure notification and coordinate information with state/federal/ ABA partners. * Assure that appropriate clinical information is relayed between the referring and receiving facilities during the transfer process. * Support coordination with burn experts to determine appropriate destinations for patients that cannot be accommodated in the local healthcare system with assistance from state and ABA. |
| Trauma Centers  Pediatric Comprehensive Care Centers | * Provide patient care. * Activate hospital surge capacity plans to accommodate multiple patients. * Treat and hold burn patients for up to 72 hours while transfers can be arranged. | * Activate the Hospital Incident Command System (HICS) for Surge patient management. * Support regional burn coordination activities. |
| Burn Center | * Provide patient care. * Activate facility and regional surge capacity plans to accommodate multiple patients. * Liaison between local response and regional ABA coordinating center. | * Assist with patient triage for forward movement. * Support facilities providing care for burn patients in the area via telephone or telemedicine, or request outside support from more remote ABA / other sources. * Provide expertise to affected area. * Assist with bed matching (right patient to right bed/facility). |
| Southern Region Burn Coordination Center | * Serve as the point of contact (POC) for the ABA system. * Conduct bed polling within ABA region (and request assistance from adjacent regions as required). * Facilitate requests for tissue bank products, as well as graft equipment and other specialized supplies. | * Facilitate exchange of patient transfer information between referring and receiving facilities once patients are matched to destinations. |
| TDH  TEMA | * Ensure that patient triage, tracking, and transport needs are addressed. * Support local jurisdiction with state-level coordination and requests for assistance (e.g., federal declarations). * Make request for burn care assets, including dressings and other materials from the Strategic National Stockpile (SNS). * Engage Emergency Management Assistance Compact (EMAC) assets to provide inter-state support for transportation, staff, or other logistics. | * Liaison between local and federal resources. * Support bed polling and matching functions as required in coordination with ABA regional center. |
| ABA National Headquarters | * Provide expertise and advice on request from a member center. | * Provide expertise and advice to inform the federal response. |
| HHS/ASPR | * Provide federal support to local and state activities as requested/ authorized under the National Response Framework including supplies, staff, and transportation assistance through the Federal Coordinating Officer (FCO) appointed to the State for the incident. * Coordinate approved use of National Disaster Medical System (NDMS) personnel or transportation assets. | * Coordinate information and access to burn expertise during BMCI. * Support/ assist states and ABA information and system needs (e.g., bed polling / data management). |

## **2.4 LOGISTICS**

### 2.4.1 Space

Four hospitals are the primary burn care receiving hospitals in the Northeast Tennessee region and would provide initial treatment in the emergency department. Other hospitals identified as burn capable may also receive patients.

If additional space is needed, hospitals can take steps to decompress adult patient census and/or less acute adult inpatients can be shifted to other hospitals within the region.

### 2.4.2 Staff

Medical professional staff in the prehospital setting (Paramedics, Advanced EMTs and EMTs) and in the hospital setting (Physicians, Nurse Practitioners, Physician’s Assistants, Registered Nurses and Respiratory Therapists) should receive training in burn care. Burn Capable Hospitals can receive training delivered by their burn center partners.

Advanced Burn Life Support (ABLS) courses, if available, are also encouraged but not required. The ABLS course is designed to provide the “how-to” of emergency care of the burn patient through the first 24-hour critical time period.

### 2.4.3 Supplies

Every hospital that receives burn patients should have enough supplies to provide stabilizing care. Supplies should include airway management, initial fluid resuscitation, and pain management.

Airway management supplies and drugs to counteract burn inhalation injury from Carbon Monoxide (100% Oxygen) or Hydrogen Cyanide (Hydroxocobalamin) should be available. IV fluid needs can be substantial (Lactated Ringers is preferred). For example, a single 100kg patient with 60% body surface area (BSA) thermal burns will be predicted to need 24 liters of intravenous (IV) solution over the first 24 hours. For pain management, approximately 250 mg of morphine (or equivalent) may be required.

Burn Capable Hospitals should also have burn dressings available include Silver-Impregnated dressings and Silvadine 1% Cream. The Burn Capable Hospital may use burn supplies based on the facility’s current supply chain management and procurement policies.

A plan for rotation of supplies to reduce expiration should be addressed by each Burn Capable Hospital. Each Burn Capable Hospital will choose their own Burn Center partner. The Burn Center partner will be responsible for providing training and stock rotation for the surge facilities. Stock rotation plans will be coordinated between the local HCC and Burn Centers. Burn Centers will be responsible for rotating, replacing, and absorbing soon-to-expire products from each Burn Capable Hospital they have trained.

## **2.5 SPECIAL CONSIDERATIONS**

### 2.5.1 Behavioral Health

Tennessee uses PsySTART (Psychological Simple Triage and Rapid Treatment) to Triage mental health needs and assess and manage behavioral health impact.

PsySTART Tennessee can be found at:

https://www.tn.gov/health/cedep/cedep-emergency-preparedness/temarr.html

The Tennessee Department of Health, in collaboration with the Tennessee Department of Mental Health and Substance Abuse Services, established a Tennessee Disaster Mental Health Strike Team through the Tennessee Federation of Fire Chaplains (TFFC). The TFFC provides training and management of the Strike Team which includes a statewide deployment-capable cadre of trained Chaplain, Mental Health, and Emergency Service Peer Professionals. The Tennessee Department of Health may activate and deploy the team for service during disasters. The Strike Team provides timely initial referral to Licensed Mental Health Care Professionals, including immediate emergency referrals when appropriate.

### 2.5.2 Pediatric

The Northeast Tennessee Healthcare Preparedness Coalition has developed a Pediatric Surge Annex which guides the response in the event of a surge of pediatric patients, including burns.

In the case of pediatrics, Niswonger Children’s Hospital at Johnson City Medical Center is a pediatric specialty hospital. The primary CRPC available is East Tennessee Children’s Hospital in Knoxville in an adjacent HCC. If additional resources are required, Children’s Hospital at Erlanger in Chattanooga and Monroe Carell, Jr. Children’s Hospital in Nashville are the next closest facilities. These facilities are capable of providing comprehensive specialized pediatric medical and surgical care to all acutely ill and injured children.

### 2.5.3 Combined Injury

Every burn patient is considered a trauma patient. Combined burn and trauma injuries do occur and should be handled initially at a Level I or II Trauma Center if possible.

## **2.6 OPERATIONS - MEDICAL CARE**

### 2.6.1 Triage and Secondary Triage

Primary triage occurs at the disaster scene by pre-hospital EMS personnel.

The State standard triage system utilized throughout the state uses SMART TAGS with Simple Triage and Rapid Treatment (START Triage). For pediatric patients, JumpSTART triage should be used. Healthcare coalitions provide training and logistical support for hospitals and pre-hospital services.

In a BMCI, the scene incident commander (IC), or EMS transportation officer, may be coordinating with the regional medical communications center that includes one (or more) burn centers to assist with patient triage, referral and transport priorities.

Since Tennessee has established the START Triage system for use in the prehospital care setting, color-coded tags are used during a mass casualty incident to triage who should/should not receive immediate care. Hospital personnel should be familiar with the triage tags used by EMS to facilitate understanding of the pre-hospital assessment and care provided prior to hospital arrival.

Typically, secondary triage occurs at the emergency department of the first receiving hospital. The ABA recommends that major burns be triaged to a burn center within the first 72 hours if at all possible. Secondary triage may occur from burn center to burn center (regional or national transfer).

#### Burn Survivability

There are three critical factors in determining patient survivability:

* Total Burn Surface Area (TBSA) size
* Age
* Presence of inhalation injury

Burn size is the most readily identified factor in determining the potential survivability of patients with burns. Accurate assessment of the percentage of TBSA burn is critical for appropriate application of triage criteria, especially in a disaster. Health care providers who are inexperienced with calculating this may wish to consider implementing one or more of the following strategies, if staffing allows:

1. Two independent providers calculate % TBSA burn. If the difference is greater than 5%, recalculate.

2. Have one provider calculate % TBSA burn. A second person calculates unburned (or superficial, first degree burn) areas. If the sum is different than 95-100%, recalculate.

3. Use digital photographs and coordinate consultation with the nearest regional burn center via the scene incident commander when possible.

In general, patients with burns do not develop decompensated shock immediately after injury, unless there are associated injuries or medical conditions in addition to the burn. Patients older than two years old and younger than 60 years old will fare better. Patients with inhalation injury will fare worse than those without inhalation injury. Some patients will have to be treated as “expectant”. Definitive treatment must be delayed or withheld for expectant patients to adequately treat those with a better chance of survival.

Other factors including presence of associated injuries and/or pre-existing health status have an impact on resources (i.e., personnel, supplies, equipment and time) required for prioritizing patient care. Survivability thresholds will depend on the magnitude of the event and the resources available locally, regionally and nationally. Thus, situation awareness and good communication are essential during initial triage. The scene incident commander will relay reliable information to the RHOC and RMCC, and work in conjunction with the local burn center in this response phase. The following grid provides an example of triage decisions that may become necessary in the setting of overwhelmed resources, or in austere conditions, where altered standards of care need to be instituted. This survivability grid utilizes the same 4-color code scheme used for EMS personnel. Survivability Chart

Description automatically generatedwill differ if the patient has also sustained an inhalation injury.

Red patients should be prioritized for care at a Burn Center or Trauma Center, whereas Green patients can be initially managed at a Burn Capable Hospital.

### 2.6.2 Treatment

#### Initial Burn Care and Stabilization

Every hospital that receives trauma patients should be prepared to provide stabilizing care for burn patients including airway management, initial fluid resuscitation, and pain management.

At times, weather, overwhelming demand, and other conditions may require that the initial receiving facility hold the patient awaiting transfer, in which case specialty consultation should be obtained. Care of major burn patients is extremely resource intensive and this consultation should be obtained as soon as possible. Patients with major burn injuries will require critical care transport.

After the initial resuscitation, burn surgery can be deferred for a few days while appropriate triage and transportation occurs. During this time, basic antimicrobial burn dressings must be applied (e.g., bacitracin and petrolatum-impregnated gauze or silver impregnated dressings if available). It should be noted that after the first few days, complications are likely to increase if the patient is not transferred to a specialty facility.

#### Management for 24 hours

Care of the burned patient in a non-burn center for 24-72 hours may be required while arrangements for interfacility transfer can be made. During this time, patient care treatment priorities for the first 24 hours should be guided by the ABA’s recommendations (See Appendix). Treatment priorities should be further guided by consultation with Burn Subject Matter experts at Burn Centers.

#### Activation of Tennessee Guidelines for Ethical Allocation of Scarce Resources

Use of Crisis Standards of Care (CSC) could occur suddenly as may be the case with an event like a large New Madrid earthquake, moderate burn mass casualty incident, or may result from a slow escalation as a result of a disease. The region of the state affected could also be either large or small. The Health Commissioner in consultation with the Governor’s Office can make the declaration with the details for the particular situation. The public and health providers will be notified through Tennessee Emergency Management Agency and ESF 8 communications systems as well as other public communication channels.

The Tennessee Department of Health Mission Coordination Group (MCG) will provide expert advisory input for guidance implementation. The MCG is a standing core group composed of the Commissioner of Health, the Chief Medical Officer, the State Epidemiologist, the Emergency Preparedness Program and Medical Directors.

Additionally, the Commissioner may appoint Subject Matter Experts (SMEs) appropriate to the situation to assist in determining policy, objectives, strategies, plans, and priorities for overseeing response activities for and recovery from a disaster that may cause this guidance to be initiated.

A local decision to implementthe TN Guidance for Ethical Allocation of Scarce Resources guidelines should be based upon the degree of the public health emergency and available healthcare capacity. Specifically, Guidance for Ethical Allocation of Scarce Resources may be initiated only after all of the following conditions have been

met:

* Surge capacity is fully employed within healthcare facilities and the healthcare coalition(s)
* Attempts at conservation, reutilization, adaption, and substitution have been performed maximally
* Critically limited resources have been identified (e.g., ventilators, antibiotics)
* Infrastructure resource needs have been identified (e.g., isolation, staff, electrical power)
* Resources and/or infrastructure needs cannot be met by local and regional health officials
* Requests for federal and state resources cannot be timely met.
* The appropriate institutional committee has reviewed and recommends initiation of the Guidance for Ethical Allocation of Scarce Resources.

It is imperative that all healthcare coalitions and hospitals work together as much as possible to maximize all available resources. It is recognized that within individual regions and institutions, the criteria for implementation of these guidelines may occur at different times.

## **2.7 TRANSPORTATION**

All ambulances and licensed EMS personnel operating within the State of Tennessee must meet certain standards set by the State Board of EMS. Specialized EMS transport resources such as an ambubus are accessed through the EMS Consultants, working with the Regional Medical Communications Centers, and when required, the RHCs.

## **2.8 TRACKING**

Tennessee uses the Global Emergency Response (GER) patient tracking module (HC Standard). It is integrated into the national system for patient tracking. This system is used to provide situational awareness, family reunification and repatriation for emergency evacuees. The system provides for quick patient registration and documentation of patient assessments, triage and treatment. The system is scalable and can be deployed for mass casualties, healthcare facility evacuations and medical assistance in shelter operations.

The TDH Patient Tracking Policy can be found at: <https://files.asprtracie.hhs.gov/documents/tdh-pt.-tracking-policy-6-13-2018-v-1.2.pdf>

## **2.9 REHABILITATION AND OUTPATIENT FOLLOWUP SERVICES**

Rehabilitation is an essential and integral part of burn treatment. It is a process that starts from day one of admission and continues for months and sometimes years after the initial event. Burn rehabilitation should be a team approach, incorporating the patient and when appropriate, their family.

Burn rehabilitation incorporates the physical, psychological and social aspects of care. It is common for burn patients to experience difficulties in one or all of these areas following a burn injury. Burns can leave a patient with severely debilitating and deforming contractures, which can lead to significant disability when left untreated. The aims of burn rehabilitation are to:

* Minimize the adverse effects caused by the injury in terms of maintaining range of movement,
* Minimizing contracture development and impact of scarring,
* Maximizing functional ability,
* Maximizing psychological wellbeing,
* Maximizing social integration

The admitting burn center will arrange for rehabilitation and outpatient services for follow-up care to the patient.

## **2.10 DEACTIVATION AND RECOVERY**

When activated, this Annex functions within the existing ESF-8 systems and structures. All communication and coordination activities within ESF-8, including lead and supporting agencies, remain unchanged. In addition, recovery activities are managed as part of the overall recovery from the disaster.

# **APPENDICES**

## **3.1 ACRONYMS**

ABA American Burn Association

ABLS Advanced Burn Life Support

AEMT Advanced Emergency Medical Technician

ASPR Assistant Secretary for Preparedness and Response

BCH Burn Capable Hospital

BMCI Burn Mass Casualty Incident

BRCA Burn and Reconstructive Centers of America

CBRN Chemical, Biological, Radiological, Nuclear

CSC Crisis Standards of Care

CST Civil Support Team (TNNG)

DMAT Disaster Medical Assistance Team

EMD Emergency Medical Dispatch

EMR Emergency Medical Responder

EMS Emergency Medical Services

EMT Emergency Medical Technician

EMT-P EMT-Paramedic or Paramedic

EOC Emergency Operations Center

ERC Emergency Response Coordinator

ESC Emergency Services Coordinator

ESF8 Emergency Support Function 8 (Public Health and Medical)

FEMA Federal Emergency Management Agency

HCC Healthcare Coalition

HICS Hospital Incident Command System

HPP Hospital (Healthcare) Preparedness Program

HRSA Health Resources and Services Administration

HRTS Healthcare Resources Tracking System

IC Incident Commander

ICS Incident Command System

IV Intravenous

MCG Tennessee Department of Health Mission Coordination Group

NDMS National Disaster Medical System

NRP Nationally Registered Paramedic

PH Public Health

REC Regional Emergency Coordinator

RHC Regional Healthcare Coordinator

RHJ Regional Health Jurisdiction

RHOC Regional Health Operations Center

RMCC Regional Medical Communications Center

SBCC Southern Region Burn Coordination Center

SME Subject Matter Expert

SNS Strategic National Stockpile

START Simple Triage and Rapid Treatment

TBSA Total Burn Surface Area

TDH Tennessee Department of Health

TEMA Tennessee Emergency Management Agency

TNHAN Tennessee Health Alert Network

TNNG Tennessee National Guard

TNSG Tennessee State Guard

## **3.2 TRAINING AND EXERCISES**

The coalition supports advancement of pre-hospital and hospital skills through Advanced Burn Life Support offerings.

Additionally, the *Emergency Nursing Pediatric Course* and Critical Care Paramedic classes provide instruction in burn treatment and care.

Training for Burn Capable Hospital medical staff will be provided by a burn center partner (2-4 hours/year) and consist of the following topics:

**Burn Training Topics**

1. Assessment
   1. Primary and Secondary Survey
   2. Total Burn Surface Area –Rule of Nines and Palmar Method (Adult and Pediatric)
      1. Partial and Full Thickness Burns only
2. Airway Management
3. Fluid Resuscitation
   1. Adult and Pediatric
4. Pain Management
5. Burn Wound Care Basics
6. Consultation/Telehealth Methods
7. Burn Center Referral Criteria
8. Burn Care Protocols for 24 hours—ABA Algorithm or Burn Center Equivalent

## **3.3 LEGAL AUTHORITIES**

This Annex was developed in coordination with HCC membership and in compliance with 2019-2023 Hospital Preparedness Program (HPP) funding requirements. Nothing contained herein is intended to supersede local, State, or Federal requirements or authorities. The Plan is consistent with ESF-8 and other applicable standards, including the Tennessee Emergency Management Plan (TEMP.) The plan describes the roles and functions of critical response partners (hospitals, regional health jurisdictions, emergency medical services, emergency management, etc.) under ESF-8 of the Tennessee Emergency Management Plan (TEMP). The plan and its appendices address general operational concepts.

The plan is intended to augment and support plans across agencies and disciplines to support a coordinated emergency response of ESF-8 in the event of a mass casualty incident or public health emergency and does not circumvent or supersede existing lines of emergency communications between hospitals and local emergency agencies. Local and county Emergency Management and/or Emergency Operations Centers (EOCs) remain the first line of contact for the coordination and acquisition of emergency resources.

The HCC is not an independent response body. Rather, each member of the coalition has a primary organization to which they are accountable. The purpose of the coalition is planning and preparedness for a coordinated response across healthcare partners. The HCC and healthcare system partners operate within the context of this plan and authority is derived through regional agreements and acknowledgements, relationships and authority given under various legislative actions, Tennessee Code and Executive Orders.

The HCC, in collaboration with the ESF-8 lead agency and other applicable state authorities regularly assess and identify regulatory compliance requirements that are applicable to coalition partners’ day-to-day operations as well as planning and responding to an emergency. The preparedness, training and exercise activities of the HCC take into consideration the Health Care Preparedness and Response Capabilities, Centers for Medicare and Medicaid Services Conditions of Participation, the Joint Commission accreditation requirements, Occupational Safety and Health Administration regulations and the rules of Tennessee Department of Health Division of Licensing and Regulations.

## **3.4 BURN CARE REFERRAL RESOURCES**

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### SOUTHERN REGION BURN COORDINATION CENTER (SBCC) RESPONSE PLAN

## **3.5 ADDITIONAL RESOURCES/REFERENCES**

### Text Description automatically generatedABA BURN REFERRAL RECOMMENDATIONS

### BURN TRANSFER FORM

Table

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Graphical user interface

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### ABA PATIENT CARE PRIORITIES FIRST 24 HOURS

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**Approval of Northeast TN Healthcare Preparedness Coalition-Burn Surge Annex**

**The Burn Surge Annex is approved by the Northeast Tennessee Healthcare Preparedness Coalition and the Clinical Advisor:**

**Approval/Adapted Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**