



## **Pediatric Surge Annex**

**Annex to the Mid-South Emergency Planning Coalition  
Response Plan**

**June 2024**

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## Table of Contents

- 1.0 Introduction .....5**
  - 1.1 Purpose ..... 5
  - 1.2 Regional Demographics..... 5
- 2.0 Concept of Operations .....6**
  - 2.1 Activation ..... 6
  - 2.2 Notifications ..... 6
  - 2.3 Roles and Responsibilities..... 7
    - 2.3.1 Mid-South Emergency Planning Coalition ..... 7
    - 2.3.2 Emergency Management ..... 7
    - 2.3.3 Emergency Medical Services ..... 8
    - 2.3.4 Regional Medical Communications Center ..... 8
    - 2.3.5 Public Health ..... 8
    - 2.3.6 Hospitals ..... 9
- 3.0 Special Considerations .....10**
  - 3.1 Patient Decontamination ..... 10
  - 3.2 Security ..... 11
- 4.0 Operations Medical Care .....11**
  - 4.1 Triage ..... 11
  - 4.2 Treatment ..... 12
  - 4.3 Transportation ..... 12

## 1.0 Introduction

### 1.1 Purpose

This annex provides guidance to support a pediatric mass casualty incident response in which the number and severity of pediatric patients exceeds the capability and capacities of hospital facilities or resources in the Mid-South Emergency Planning Coalition region (MSEPC). The plan identifies the processes and specialized resources that exist within and external to the Mid-South Emergency Planning Coalition that must be engaged in a pediatric mass casualty response.

### 1.2 Regional Demographics

Within the Census Bureau's metropolitan statistical area for the Mid-South area, there are approximately 261,599 children under eighteen years of age in Shelby, Fayette Tipton, & Lauderdale Counties. An estimated 6% of children in this area have a disability. The Census Bureau breaks down disabilities into five categories: hearing, vision, ambulatory, self-care, cognitive, and independent living (which does not apply to the pediatric population).

The Mid-South has 451 acute care (floor, ICU, and NICU) beds in the region solely dedicated to neonates and pediatrics. Memphis has two children's hospitals that serve the West Tennessee area. Le Bonheur Children's is a CRPC and a Pediatric Level 1 Trauma Center. The Spence and Becky Wilson Baptist Children's Hospital is a General Pediatric care facility. Both hospitals offer comprehensive pediatric health care services, emergency care, and resources for patients and families. NICU services are offered at five other adult facilities in the area.

In the MSEPC jurisdiction, the pediatric population makes up approximately 23% of the total population. Of these children, 12.5% are school aged children requiring special education services. The number of children and the special considerations varies by county.

Children with medical complexity are a subset of pediatric patients with special health care needs who have one or more severe conditions, severe functional limitations, and/or high projected use of health care resources. These children may

or may not be using durable medical equipment (DME) or may be technology dependent. Most children with DME fall under the care of a CRPC.

## 2.0 Concept of Operations

The process outlined below describes the basic flow of a response to disaster and emergency situations with the steps and activities that may need to be accomplished. Not all steps and activities will apply to all hazards.

### 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 pediatric resources capability and capacity. In some cases, at the smallest hospital, even one critical pediatric patient could overwhelm immediate local resources. Depending upon the size and scope of an incident, local resources and number of available resources, response to the pediatric mass casualty situation may be a tiered, staged response.

Following incident recognition, EMS and the RMCC will coordinate to determine the level of activation required.

Then the following activities may occur:

- RMCC will activate HRTS to alert regional hospitals and partners of the event.
- Placing HRTS in disaster mode triggers hospitals & health care system partners to evaluate the level of response required and enhances situational awareness.
- Availability of facilities to receive patients will be monitored through HRTS by the RMCC, RHC, and the EMS Consultant.
- Resource coordination will be managed via the RHC, EMS Consultant, and local and state emergency management utilizing HRTS and WebEOC (for emergency management).

### 2.2 Notifications

The Mid-South Emergency Planning Coalition (MSEPC) Executive Director, or Executive Board members, when necessary, will utilize pre-established public health systems to share emergency information, warnings, and situational

awareness across medical disciplines, jurisdictions, and Coalition members during public health and medical emergencies. This is typically accomplished via systems such as ReadyOp and the Healthcare Resource Tracking System (HRTS). Additionally, information may be passed to Coalition members via email or direct phone call, when necessary. Finally, during events, the Executive Director may convene healthcare partners via conference call or face-to-face meetings to coordinate information sharing and response actions between partners and Coalition members.

MSEPC essential information elements to be shared include:

- Bed Availability (HRTS)
- Resource Capabilities (HRTS)
- Organization and Service Capabilities (HRTS)
- Facility Status (form shared via ReadyOp and HRTS message board). This form allows the MSEPC and the RHC to quickly identify the facility status of mission critical systems such as electricity, water, and medical gases.

## 2.3 Roles and Responsibilities

### 2.3.1 Mid-South Emergency Planning Coalition

The overall role of the Coalition in a pediatric mass casualty event includes, but is not limited to, the following:

- Promote a common operating picture through shared information.
- Support patient tracking.
- Assist with resource management between partner entities, particularly within the healthcare sector for healthcare resources.
- Work with local municipalities and county emergency management to process resource requests as appropriate.

### 2.3.2 Emergency Management

City-level support for respective jurisdictions will be coordinated among each utilizing assigned staff. The Shelby County Emergency Management and Homeland Security Agency will facilitate county-wide interagency coordination, provide centralized situation assessment and public information, coordinate the mobilization of county-level government resources in response to an emergency, and coordinate community disaster recovery.

If responding agencies, including the hospitals, have exhausted critical resources available through routine channels and through mutual aid, local EMA will request resources from the State Emergency Operations Center (SEOC) at TEMA. TEMA will coordinate emergency assistance to local jurisdictions from state agencies, other counties, other states, or the federal government.

### 2.3.3 Emergency Medical Services

EMS will triage, treat, decontaminate if needed, and transport casualties to appropriate local healthcare facilities in accordance with established TN EMS MCI protocols.

### 2.3.4 Regional Medical Communications Center

The RMCC serves as the 24/7 communications coordination center during all mass casualty events. The RMCC has communication capabilities to reach Coalition hospitals, EMS, other RMCCs, and local and state EOCs. The RMCC interacts directly with on-scene responders to provide information to MSEPC partners during events. RMCC will activate HRTS to alert regional hospitals and partners of the event. They will work with on-scene EMS personnel to distribute patients to hospitals capable of receiving patients according to their triaged acuity level.

RMCC has regularly utilized referral options in place associated with their additional role as the region's air medical critical care transport. If transport is needed out of the region, or out state, RMCC has pre-established contacts with the closest burn, pediatric, and other specialty centers.

### 2.3.5 Public Health

During public health emergencies and disasters, it is the responsibility of public health to take the lead in ensuring the FNP receive necessary and appropriate shelter and healthcare throughout the course of the event. During such events, it is often the case that damage will occur, within one or more communities, to the infrastructure of healthcare systems (including physical structures/facilities) that provide services to the FNP. In such circumstances, it will be necessary for non-impacted communities to be involved in absorbing the needs of the FNP of impacted communities. Among potential absorption solutions, displaced persons in the FNP could be admitted to unaffected, neighboring healthcare facilities that have vacancies and/or the capacity to receive such persons. Such facilities



generally possess many of the resources necessary to provide care and shelter to the FNP. Public Health, in carrying out its role and responsibilities, would initiate, coordinate, manage, and oversee the implementation of any such absorption system.

Populations recognized as having functional needs in a mass casualty event include but may not be limited to the following:

- Children
- Persons with Physical or Cognitive Disabilities
- Persons with pre-existing mental health and/or substance abuse problems
- Frail or immune compromised adults and children
- Non-English speakers
- Persons with dementia/Alzheimer's or reduced activities of daily living
- Homeless and Transient Populations

#### 2.3.6 Hospitals

During an emergency, hospitals are responsible for providing secondary 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, surge capacity including additional bed expansion, isolation patient management, acquisition of additional supplies/equipment/pharmaceuticals, emergency evacuation, shelter-in-place, fatality management, and coordination with the local EMA and other hospitals in the region.

As patient numbers increase beyond the capacity of the impacted hospital, they will:

- Activate their internal Emergency Operations Plan (EOP).
- Contact the RMCC.
- Contact the local EMA.
- Coordinate response efforts through the RHC and the MSEPC.
- Maintain current bed availability through the Healthcare Resource Tracking System (HRTS).

- Share information and resources as outlined in the MSEPC Bylaws and Memorandum of Understanding (MOU).

All hospitals address functional needs populations in their individual emergency response plans, including but not limited to communication, mobility, behavioral and mental health, and age-related issues. Hospitals will coordinate with other agencies such as public health and ESF-6 (Mass Care and Sheltering) agencies to develop protocols on the transfer of patients between mass care shelters and healthcare organizations. Other non-hospital healthcare organizations within the MSEPC should consider FNP when developing their internal plans.

### 3.0 Special Considerations

#### 3.1 Patient Decontamination

All hospitals have access to either a portable or fixed decontamination system for managing adult and pediatric patients as well as healthcare personnel who have been exposed during a chemical, biological, radiological, nuclear, or explosive incident. While gross decontamination should occur at the scene before transport to the hospital, hospitals must be prepared to decontaminate those that self-report to the emergency room. Therefore, hospitals must have the capacity to decontaminate more than one patient at a time and be able to decontaminate both ambulatory and non-ambulatory patients. The decontamination process must be integrated with local, regional, and state planning.

Children, as compared to adults, will require different planning, and supplies for decontamination. They are more vulnerable to hazardous substances because they have lower body weights, are typically shorter (closer to the ground), and breathe more times per minute than adults thus typically exposing them to larger doses than adults. In addition, their skin is thinner, and they have a larger skin surface-to-body mass ratio than adults.

Children, especially young children, are more at risk of hypothermia and therefore may require additional heated water for decontamination and more protection from becoming cold versus adults. Each hospital must have its own system or plan for decontamination, with protocols specific to children. Because of their unique anatomical, physiological, and developmental characteristics, here are some issues to consider:

- Warm water (between 98°F - 110°F or 36.6° C - 43.3° C) to prevent hypothermia.
- Low pressure/high volume
- Only soap and water
- Soft bristle brushes
- Safe method of transport through the decontamination shower without being carried (in a bassinet or laundry basket with holes on the bottom as to not pool contaminated water around the child)
- Process to keep families together.
- A safe heating system for the environment

### 3.2 Security

Most hospital and healthcare organization emergency response plans indicate a reliance on local law enforcement, Tennessee Highway Patrol, and/or other agency contracts for facility security during a large-scale event. Building and personnel security procedures are addressed in individual emergency response plans. Requests for security support should be sent through the local county EMA first and then the RHC.

- Infant/child abduction prevention
- Procedures in place to verify children are released to an appropriate caregiver
- Adequate staff to ensure there are always two adults present
- Background checks according to hospital policies and/or procedures
- Established lockdown procedures

## 4.0 Operations Medical Care

### 4.1 Triage

MSEPC services and facilities use Simple Triage and Rapid Treatment (START) Triage and JumpSTART Triage specifically for pediatric patients. Both practices are standardized throughout the state of Tennessee. Healthcare coalitions provide training and logistical support for hospitals and pre-hospital services.

During a disaster, pediatric patients will be triaged and disbursed to regional emergency care facilities. The most critically ill/injured, youngest and/or medically complex children will generally have priority for transport to the regional children's

facility. Priorities may be different depending on the scale of the event, type of event, ages, and severity of patients affected.

Emergency care facilities should be prepared to provide continued care of complex pediatric patients until stabilization of the scene has been achieved and the regional pediatric facility is available to accept patients from outside facilities.

#### 4.2 Treatment

Standard of Pediatric Care is followed by the standards approved by the State Board of EMS and Board of Licensing Healthcare Facilities outlined by CoPEC guidelines. Local protocols may vary from region to region based on local medical direction. Board of Licensing standards can be found here: <https://cecatn.org/what-we-do/resource-center/>

During a disaster, providers at outside facilities seeking pediatric expertise for complex pediatric patients will coordinate communications through the RHCs. Mass communication from the pediatric SME to outside providers will be communication by the RHCs through HRTS.

#### 4.3 Transportation

All ambulances and licensed EMS personnel operating within the State of Tennessee must meet certain pediatric standards set by the State Board of EMS. There are also several specialized pediatric transport teams, primarily housed at CRPCs, as well as, several air ambulance services. Specialized EMS transport resources are accessed through the EMS Consultants, working with the Regional Medical Communications Centers, and when required, the RHCs.

The regional pediatric facility will coordinate with the regional EMS consultants and RHCs to arrange and prioritize interfacility transportation of pediatric patients.