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# INCIDENT ANNEX A: Pediatric Surge Annex

Version 1.0

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# Record of Changes

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| --- | --- | --- | --- |
| **Revision Date** | **Name or Recorder** | **Sections Changed** | **Version Number** |
| December 31, 2020 | Shane Anderson | Final Draft | 1.0 |
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# Executive Summary

Incident Annex A: Pediatric Surge Annex (Hereafter referred to as “Annex”), supplements the Maryland Region III Health and Medical Coalition’s Emergency Operations Plan (EOP), version 2.0.

This Annex outlines the necessary Concept of Operations for managing a larger number of children during an all-hazards incident. This is a high-level annex providing guidance for the Region III Health and Medical Coalition and is intended to supplement, not supplant, any individual healthcare, public health, or emergency management agency’s existing plans/policies or standard operating procedures, including healthcare facility Pediatric Emergency Plans.

This Annex emphasizes the following core elements:

* Indicators/triggers and alerting/notifications of a specialty event;
* Initial coordination mechanism and information gathering to determine impact and specialty needs;
* Documentation of available local, state, and interstate resources that can support the specialty response and key resource gaps that may require external support (including inpatient and outpatient resources);
* Access to subject matter experts (SMEs) – local, regional and national;
* Prioritization method for specialty patient transfers (e.g., which patients are most suited for transfer to a specialty facility);
* Relevant baseline or just-in-time training to support specialty care; &
* Evaluation and exercise plan for the specialty function.

This Annex was developed with standardization of terms, processes and tools to better prepare the Coalition for an all-hazards incident. With that strategic process in mind, this Annex was greatly influenced by, and where appropriate, integrated concepts, definitions, processes, tools, and other aids primarily from the Assistant Secretary for Preparedness and Response’s Technical Resources, Assistance Center, and Information Exchange (TRACIE), the Emergency Plan for the “Stanislaus County Healthcare Emergency Preparedness Coalition Pediatric Disaster Surge Plan, DRAFT (January 2019)”, the “Los Angeles County Pediatric Surge Plan (August 2016)”, the “Illinois Department of Public Health Emergency Support Function (ESF)-8 Plan: Pediatric and Neonatal Surge Annex (March 2017)”, as well as other coalition response plans located in TRACIE.

The methodology to utilize the aforementioned resources ensures regional, state and national coalition standardization for an all-hazards incident involving children. The strategy follows the National Incident Management System (NIMS) principles and establishes common emergency operating practices if neighboring coalitions within and neighboring the State of Maryland require mutual aid.

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# Acronym List

|  |  |
| --- | --- |
| **Acronym** | **Definition** |
| AAR | After Action Report |
| ALS | Advanced Life Support |
| APLS | Advanced Pediatric Life Support |
| ASPR | Office of the Assistant Secretary for Preparedness & Response |
| ATF | Bureau of Alcohol, Tobacco, Firearms and Explosives |
| BLS | Basic Life Support |
| CMS | Centers for Medicare & Medicaid Services |
| CRISP | Chesapeake Regional Information System for our Patients |
| DOB | Date of Birth |
| ED | Emergency Department |
| EMS | Emergency Medical Services |
| EOP | Emergency Operations Plan |
| ESF | Emergency Support Function |
| FBI | Federal Bureau of Investigation |
| FRC | Family Reunification Center |
| HAN | Health Alert Network |
| HCC | Healthcare Coalition |
| ICU | Intensive Care Unit |
| IMT | Incident Management Team |
| MEMRAD | Maryland Emergency Medical Resource & Alerting Database |
| MDH | Maryland Department of Health |
| MIEMSS | Maryland Institute for Emergency Medical Service Systems |
| MOU/MOA | Memorandum of Understanding/Agreement |
| NICU | Neonatal Intensive Care Unit |
| NIMS | National Incident Management System |
| OSHA | Occupational Health & Safety Administration |
| PAT | Pediatric Assessment Triangle |
| PICU | Pediatric Intensive Care Unit |
| PPE | Personal Protective Equipment |
| PSA | Pediatric Safe Area |
| SME | Subject Matter Expert |
| START | Simple Triage and Rapid Treatment |
| TRACIE | Technical Resources, Assistance Center, and Information Exchange |
| WebEOC | Web-based Emergency Operations Center |

# Emergency Contacts

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Organization** | **Position** | **Name** | **Phone** | **E-Mail** |
| **MD Region III HCC** |  |  |  |  |
| MD Region III HCC | Chair | Christina Hughes | 443.777.7380  410.935.7370 | Christina.Hughes@medstar.net |
| MD Region III HCC | Emergency Manager | Shane Anderson | 240.470.0888 | sanderson@mhaonline.org |
| **MIEMSS** |  |  |  |  |
| MIEMSS | MD Region III Administrator | Jeff Huggins | 410.706.3996  443.310.1506 | jhuggins@miemss.org |
| MIEMSS | Director of Emergency Operations | Randy Linthicum | 410.706.4674  410.608.5501 | rlinthicum@miemss.org |
| **Pediatric Trauma Hospitals** |  |  |  |  |
| JHH Pediatric Trauma, Burn, Eye Trauma | Emergency Manager | Mary Brown | 410.502.5778  440.610.7333 | mbrow232@jhmi.edu |
| Children’s National | Emergency Preparedness Program Lead | Rebecca Cahill | 202.476.3430  202.259.3905 | RCAHILL@childrensnational.org |
| **Pediatric Specialty** |  |  |  |  |
| Mt. Washington | Emergency Manager | Troy Rodgers | 410.578.2664  443.904.0998 | troy.rodgers@mwph.org |
| **Adult Trauma** |  |  |  |  |
| STC | Emergency Manager | Syedmehdi "Mehdi" Rizvi | 410.328.3467  443.610.6035 | syedmehdi.rizvi@umm.edu |
| JHH Adult Trauma | Emergency Manager | Mary Brown | 410.502.5778  440.610.7333 | mbrow232@jhmi.edu |
| Sinai Hospital (Level 2) | Emergency Manager | Tom Jeffers | 410.601.9682  443.865.1540 | tjeffers@lifebridgehealth.org |
| Bayview Hospital (Level 2, Burn) | Emergency Manager | Todd Dousa | 410.550.9435  443.307.5012 | tdousa1@jhmi.edu |

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| --- | --- | --- | --- | --- |
| **Schools** |  |  |  |  |
| Anne Arundel Public Schools | Security Specialist | Shelly Powell | 410.222.5086 | slpowell@aacps.org |
| Anne Arundel Public Schools | Supervisor of School Security | Doyle Batten | 410.222.5086 (ext. 6) | jdbatten@aacps.org |
| Baltimore City Public Schools |  | MJ Coleman | 443.904.8072 | mcoleman@bcps.k12.md.us |
| Baltimore County Public Schools | Executive Director, Dept. of School Safety | April Lewis | 443.809.4360 | alewis7@bcps.org |
| Carroll County Public Schools | Supervisor of School Security and EM | Duane Williams | 410.751.3171 | dawill2@carrollk12.org |
| Carroll County Public Schools | Supervisor of Student Services- Health Services | |  | | --- | | Filipa Gomes | |  | | 410.751.3124 | fdgomes@carrollk12.org |
| Harford County Public Schools | Chief, Dept. of Safety and Security | Donoven Brooks | 410.638.4242 | donoven.brooks@hcps.org |
| Howard County Public Schools | Planning and Program Manager | |  | | --- | | Alan Moss | |  | | 410.294.4089 | alan\_moss@hcpss.org |
| Howard County Public Schools | Director of Security and Emergency Preparedness | Thomas McNeal | 443.355.7556 | Thomas\_mcneal@hcpss.org |
| **Other Resources** |  |  |  |  |
| Maryland Poison Control | -- | -- | 1-800-222-1222 | -- |

# INTRODUCTION

The Maryland Region III Health and Medical Coalition encompasses a population of approximately 715,865 pediatrics ranging in age from newborn to 18 years of age, representing nearly 22% of the total population. This pediatric population exists within rural and metropolitan areas spanning several counties.

With few specialized children’s’ hospitals and specialty centers located in Maryland Region III, an Annex needed to address the varied health and unique medical care challenges that children could present during a disaster. In 2019, the Maryland Region III Health and Medical Coalition identified pediatric disaster surge capacity as a critical priority for healthcare planning and capability/capacity improvement. The Coalition established a Pediatric Disaster Work Group of members to draft an annex to address the issues pertaining to a pediatric disaster surge from an all-hazards incident.

## Purpose

The purpose of this Annex is to support the Maryland Region III Health and Medical Coalition Emergency Operations Plan by providing regional guidance to protect and provide appropriate pediatric medical care during a disaster.

## Scope

This Annex is designed to provide an overarching guide for the Maryland Region III Health and Medical Coalition partners in order to:

* Establish and activate a communication infrastructure to relay disaster information;
* Identify pediatric emergency medical services transport resources;
* Define emergency triage, care and tracking of pediatric patients from pre-hospital to hospitals;
* Identify pediatric specialty inpatient beds within the Region including capabilities and capacities for surge;
* Understand the regional pediatric population with a documented disability and develop guidance for supporting that unique patient population; &
* Assist with the coordination of transferring and decompressing acutely ill/injured pediatric patients between pediatric tertiary care centers/specialty care centers.

For this plan, the following pediatric age groups were used by the planning team to define the pediatric population and determine special age group related considerations:

* Infants/toddlers (0 - 24 months);
* Preschoolers (2 - 5 years);
* School aged children (6 – 13 years); &
* Adolescent children over 14 and children with underlying complex medical conditions, disabilities, and access and functional needs.

# Overview

The Maryland Region III Health and Medical Coalition encompasses healthcare partners throughout central Maryland to include: hospitals, state health facilities, local health departments, fire and emergency medical services, federal qualified healthcare centers, and emergency management agencies within the following geographic territories:

* Annapolis City
* Anne Arundel County
* Baltimore City
* Baltimore County
* Carroll County
* City of Annapolis
* Harford County
* Howard County

The total population based on the 2018 U.S. census report is 3,293,537 citizens. The pediatric population is further delineated in Table 1 below.

#### Table 1: Regional Population Census

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| County | Pediatric (0-5 years) population | % | Pediatric (0-18 years) population | % | Total Population |
| Anne Arundel | 35,138 | 6.1% | 127,879 | 22.2% | 576,031 |
| Baltimore City | 39,162 | 6.5% | 125,921 | 20.9% | 602,495 |
| Baltimore | 48,877 | 5.9% | 179,941 | 21.6% | 828,431 |
| Carroll | 9,264 | 5.5% | 36,549 | 21.7% | 168,429 |
| Harford | 14,222 | 5.6% | 56,378 | 22.2% | 253,956 |
| Howard | 19,069 | 5.9% | 78,860 | 24.4% | 323,196 |
| Total | 165,732 | 5.92% (avg.) | 605,528 | 22.17% (avg.) | 2,752,538 |

*\*The 2019 U.S. Census Report was not available at the time of this Plan development. \*\*Some City/County websites detailed variances in total populations while others, did not list total counts.*

## Acute Care Hospitals and Trauma Centers

The Maryland Region III Health and Medical Coalition has 21 healthcare facilities designated as General Acute Care Hospitals and 3 specialty hospitals; 21 of these facilities provide 24-hour emergency care services. The Region has five trauma centers: two adult level 2, two adult level 1, and one pediatric level 1.

#### Table 2: Region III Hospitals per Pediatric Specialty Services

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Facility Name | Trauma Center Designation | Neonatal Intensive Care Unit (NICU) Capability/Beds | Pediatric Intensive Care Unit (PICU) Capability/Beds | Pediatric Emergency Department (ED)/Beds | Pediatric Psychiatric/Beds |
| System Hospitals | | | | | |
| Johns Hopkins Hospitals | | | | | |
| Johns Hopkins Hospital | Pediatric, Adult Level I, Pediatric Burn, Eye Trauma | 44 | PCICU – 12  PICU - 28 | 28 medical,  2 trauma bays,  3 psych | 14 |
| Bayview Medical Center | Level II, Adult Burn | 25 | -- | 5 exam,  2 treatment,  7 total | 2 in ED  7 in-patient, non-ICU |
| Lifebridge Health | | | | | |
| Sinai Hospital of Baltimore | Level II | 21 | 6 | 13 | -- |
| MedStar Hospitals | | | | | |
| Union Memorial Hospital | Hand/Upper Extremity Trauma | -- | -- | -- | -- |
| University of Maryland Hospitals | | | | | |
| University of Maryland Medical Center (UMMC) | Primary Adult Resource Center, Neurotrauma | 52 | 19 | 13 | 15 |
| Government | | | | | |
| VA Maryland Health Care System | Level 1 Trauma | -- | -- | -- | -- |

## Disaster Risk Profile

The Maryland Region III Health and Medical Coalition identified the top five classes of injuries that pose the greatest challenge for regional healthcare facilities to manage during a pediatric disaster. The following injury classifications were identified as the largest gap in the Region’s ability to stabilize, treat, transport, and care (short/long term) for pediatric patients in a disaster:

## Physical

Trauma: Trauma is a broad category that can encompass pediatric casualties involved in motor vehicle collisions, gun shots, falls, explosions, and other penetrating and blunt injuries.

* + Coalition Resources: (what trauma resources does the coalition have to help, or not have to help the healthcare infrastructure? The gap is what you do not have which could be resources or communication)
  + Hospital Resources: (Based on physical type - provide gap analysis in meeting the demand for large scale pediatric trauma, i.e., how many pediatric trauma facilities in the region, how would non-trauma facilities manage an influx)
  + EMS Resources: (Similar as above, what are the gaps for Basics and Medics in the field to triage, treat and transport pediatric trauma patients)

Burns: Burns involve both classifications and types. Much like trauma, pediatric patients may encounter burns from mass casualties, fires, explosions, or hazardous material spills.

* + Classifications:
    - First-degree (superficial)
    - Second-degree (partial thickness) burns,
    - Third-degree (full thickness) burns, and
    - Fourth-degree burns which, go through both layers of the skin and underlying tissue as well as deeper tissue, possibly involving muscle and bone.
  + Types:
    - **Thermal burns** occur when you encounter something hot, for example fire.
    - You may receive a [**chemical burn**](https://share.upmc.com/2014/02/burn-awareness-chemical-burns/) if your skin and/or eyes come in contact with a harsh irritant, such as acid.
    - **Electrical Burns** happen when the body encounters an electric current.
    - A **friction burn** can occur when skin repeatedly rubs against another surface or is scraped against a hard surface.
    - **Radiation Burns** can occur through a release of a radiological device such as in a “dirty bomb”.

Infectious Disease: Typically, infectious disease occurs with a local, regional, state-wide, national and/or international spread (i.e., endemic, epidemic, pandemic). In late 2019 early 2020, the global population entered a new Coronavirus (COVID-19) Pandemic. While currently still in the response phase, COVID-19 has illustrated the continued need for pediatric resources to manage large scale infectious disease surges.

* + Coalition Resources: (what infectious disease resources does the coalition have to help, or not have to help the healthcare infrastructure? The gap is what you do not have which could be resources or communication. This could be highlighted on what is happening now)
  + Hospital Resources: (Based on physical type - provide gap analysis in meeting the demand for large scale pediatric infectious disease surge, i.e., how many pediatric Emerging Infectious Disease facilities in the region, how would non-EID facilities manage an influx)
  + EMS Resources: (Similar as above, what are the gaps for Basics and Medics in the field to triage, treat and transport pediatric EID patients)

Hazardous Materials Exposure (CBRNE): Exposures from hazardous materials can be found in many locations/scenarios. For the context of this Plan, the Region III Coalition refers to transportation (train, truck collision), manufacturing (chemical plant), social use (swimming pool [chlorine]), and terrorist activity (explosives, release).

* + Coalition Resources: (what hazardous materials resources does the coalition have to help, or not have to help the healthcare infrastructure? The gap is what you do not have which could be resources or communication.)
  + Hospital Resources: (Based on physical type - provide gap analysis in meeting the demand for large scale pediatric hazardous materials exposure surge, i.e., how many pediatric decontamination facilities in the region, how would non-decontamination facilities manage an influx)
  + EMS Resources: (Similar as above, what are the gaps for Basics and Medics in the field to triage, treat and transport pediatric patients exposed to a hazardous material)

## Mental

* Psychological/Behavioral: Many aspects of emergencies cannot be seen or may lay dormant for years. Exposure to the above injuries may include some aspect of mental health.
  + Coalition Resources: (what mental health resources does the coalition have to help, or not have to help the healthcare infrastructure? The gap is what you do not have which could be resources or communication.)
  + Hospital Resources: (Based on physical type - provide gap analysis in meeting the demand for pediatric mental health services)
  + EMS Resources: (Similar as above, what are the gaps for Basics and Medics in the field to triage, treat and transport pediatric patients exposed to various disasters who do not overtly show signs and symptoms of physical injury)

#### Table 3: Unique Consequences in Children During a Disaster

|  |  |  |
| --- | --- | --- |
| Characteristic | Cause | Consequences |
| Larger head for a given body weight | Higher center of gravity | More likely to suffer head injuries and falls |
| Greater Skin surface for body weight | Evaporative heat and water losses | Hypothermia and dehydration |
| Small blood vessels | Relative size with younger age | Difficult venous access, more difficult fluid and medication delivery |
| Closer proximity of solid organs with less bony protection | Relative size with younger age | Greater chance of multi-organ injuries |
| Wide range of normal vital signs | Large differences in size, weight, and normal values | Difficult to determine normal values for a given individual, particularly for clinicians more accustomed to caring for adult patients |
| Rapid heart and respiratory rate | Normal physiologic variables-based age and weight | Faster intake of airborne agents and dissemination to tissues |
| Wide range of weight across pediatric age range | Normal physiologic variables based on age and weight | Greater likelihood of medication errors |
| Shorter height | Closer to the ground | Greater exposure to chemical and biologic toxins that settle near the ground due to higher density |
| Often found in groups | Daycare and school | More likely to see multiple casualties |
| Immature cognitive and coping skills | Age and experience, psychological development | Less likely to flee from danger, inability to cope, inability to care for themselves, find sustenance, and avoid danger |

## Access and Functional Needs

Children represent a portion of the population that relies on other human interaction, modeling, guidance, and intervention to help protect them and cope with disaster situations. They are a part of a society that helps to influence how they interact with each other and with adults through social and institutional constructs, such as schools, religious organizations, physical activities, etc.

Children have physical and mental behaviors still forming which can be greatly altered post-disaster. Children react differently to disaster situations, and the likelihood of separation from parents or guardians further increases the stressors. Medical treatment and care for children is different from adults and is compounded by disabilities.

The following information on children in Region III is provided to guide healthcare agencies in understanding the scope of children in their respective communities and the disabilities that may challenge healthcare providers during a disaster surge.

#### Table 4: Total Number of Children (Ages 3-21) with Disabilities by Jurisdiction (as of 2018)

|  |  |  |  |
| --- | --- | --- | --- |
| County | Total Number of Children Enrolled in Public Schools | Total Number of Children with Disabilities Enrolled in Public Schools | Percent of Children with Disabilities Enrolled in Public Schools |
| Anne Arundel | 83,307 | 9,063 | 10.9% |
| Baltimore City | 79,297 | 12,486 | 15.7% |
| Baltimore | 113,814 | 15,502 | 13.6% |
| Carroll | 25,179 | 3,011 | 12.0% |
| Harford | 37,826 | 5,036 | 13.3% |
| Howard | 57,907 | 5,728 | 9.9% |
| Total | 896,845 | 109,717 | 12.2% |

#### Table 5: Special Education Enrollment (Ages 3-21) per Region III by Disability (as of 2018)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Disability | Anne Arundel | Baltimore City | Baltimore County | Carroll County | Harford County | Howard County |
| Autism | 1,014 (11.19%) | 1,003 (8.03%) | 1,879 (12.12%) | 282 (9.37%) | 406 (8.06%) | 928 (16.20%) |
| Deaf | 11 (0.12%) | 14 (0.11%) | 15 (0.10%) | 6 (0.20%) | 7 (0.14%) | 3 (0.05%) |
| Deaf-Blindness | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 1 (0.02%) |
| Emotional Disability | 358 (3.95%) | 1,140 (9.13%) | 864 (5.57%) | 218 (7.24%) | 243 (4.83%) | 372 (6.49%) |
| Hearing Impairment | 18 (0.20%) | 35 (0.28%) | 54 (0.35%) | 6 (0.20%) | 10 (0.20%) | 9 (0.16%) |
| Intellectual Disability | 306 (3.38%) | 2,039 (16.33%) | 577 (3.72%) | 143 (4.75%) | 166 (3.30%) | 234 (4.09%) |
| Specific Learning Disability | 1,901 (20.98%) | 2,256 (18.07%) | 4,812 (31.04%) | 799 (26.54%) | 1,508 (29.94%) | 1,279 (22.33%) |
| Multiple Disabilities | 1,939 (21.39%) | 205 (1.64%) | 664 (4.28%) | 149 (4.95%) | 580 (11.52%) | 278 (4.85%) |
| Orthopedic Impairment | 9 (0.10%) | 17 (0.14%) | 12 (0.08%) | 7 (0.23%) | 4 (0.08%) | 14 (0.24%) |
| Other Health Impairment | 1,264 (13.95%) | 3,237 (25.93%) | 2,591 (16.71%) | 496 (16.47%) | 936 (18.59%) | 798 (13.93%) |
| Speech or Language Impairment | 1,557 (17.18%) | 1,664 (13.33%) | 2,259 (14.57%) | 666 (22.12%) | 756 (15.01%) | 967 (16.88%) |
| Traumatic Brain Injury | 25 (0.28%) | 42 (0.34%) | 31 (0.20%) | 1 (0.03%) | 3 (0.06%) | 8 (0.14%) |
| Visual Impairment | 17 (0.19%) | 27 (0.22%) | 22 (0.14) | 10 (0.33%) | 17 (0.34%) | 18 (0.31%) |

The top Secondary Non-English Language Spoken by Pediatrics within Maryland Region III is Spanish.

# Concept of Operations

The Concept of Operations details the response actions necessary to prepare for a surge of pediatrics with varied medical care issues (burn, trauma, infectious disease, etc.). While not every healthcare facility in Region III specializes in childcare, each facility should be prepared to initially stabilize and treat this population. Pediatric transport to “other” Maryland regions or to other states (Virginia, Delaware, Pennsylvania, and the District of Columbia) may not be available.

## Activation

In accordance with the Region III Health and Medical Coalition Emergency Operations Plan, this Annex may be activated by any of the following positions or entities:

* Chair of the Maryland Region III Health and Medical Coalition
* Co-Chair of the Maryland Region III Health and Medical Coalition (position is not currently filled)
* Maryland Region III Health and Medical Coalition Emergency Manager

There are several situations that may require activation of this Pediatric Surge Annex:

* Unplanned incidents such as terrorist attack/active assailant, mass transit collision, infectious disease outbreak, earthquake, etc.;
* Impending incident such as a blizzard or hurricane; &
* Any other incident which causes a surge of pediatric patients into the region’s hospitals.
* Any incident that overwhelms another Maryland Health Care Coalition or neighboring state where resources are needed.

Presidential disaster declarations and activation of the Stafford Act or other national emergency acts may include the activation of a Public Health Emergency. Emergency declarations announced prior to Coalition activation will be reviewed by the Coalition to determine at what level this Annex is activated (partial, full). State and federal disaster declarations would also include activations of local, state and federal agencies within Maryland. These activations may include waivers for healthcare systems to meet pediatric demands (see CMS 1135 waiver).

All disasters will be managed locally first. The Coalition assumes that local healthcare agencies will activate their respective Emergency Operations Plans, incident management teams, and command centers before activation of the Coalition.

## Notifications

Notifications are transmitted through multiple modalities. These notifications may come from on-scene first responders or as patients first arrive to emergency departments. The Maryland Institute for Emergency Medical Services Systems (MIEMSS) provides initial and ongoing alert notifications through their Maryland Emergency Medical Resource and Alerting Database (MEMRAD) system. This initial notification is primarily received in emergency departments throughout Region III. Additional notifications can be received via the Health Alert Network (HAN), WebEOC or via direct hospital-to-hospital conversations.

Upon activation of this Annex, the Coalition, or leading healthcare/emergency management agency will hold a teleconference call to brief healthcare/emergency management agencies. Situation briefing leads will be determined by the scope of the emergency and involved agencies.

* Coalition-specific response: The Region III Coalition may conduct an initial briefing either by itself to inform members, or through a coordinated call with the other Maryland Health Care Coalitions. Due to the quick response from the local level, the Coalition Leadership situation briefing will primarily be the first to occur.
* Local Health/Local Emergency Management Agency: Local Health (primary ESH-8 jurisdictional lead) may hold a situational briefing or their community partners including the Region III Coalition.
* State-wide Health/Emergency Management Agency: At the State level, the Maryland Department of Health (ESF-8) and/or through collaboration with the Maryland Emergency Management Agency may conduct a state-wide briefing for all local, state and federal agencies.

Initial situational briefing may include the following discussion points:

* Initial situational awareness on the disaster including geographic scope;
* Incident Management structure (current and for an expanded incident)
* Known, unknown hazards;
* Responding agencies involved;
* Potential number of pediatric patients including types/kinds of injuries;
* Pediatric bed status;
* Pediatric staffing issues;
* Agreement on communication channels;
* Resource issues/requests;
* Transport asset availabilities and requests;
* Memorandum of Understating/Agreement activations; and,
* Next briefing call.

#### Graphic 1: HCC Initial Notification and Coordination Flow

## Roles and Responsibilities

Due to the limited number of pediatric-specialty healthcare facilities in the HCC region, a significant number of pediatric casualties could overwhelm the existing patient care infrastructure.

The table below lists the responsibilities of local healthcare facilities and supporting entities.

#### Table 6: Response Roles

|  |  |
| --- | --- |
| Facility/Entity Type | Responsibilities |
| Local/State Emergency Management Agency | * Coordinate local and state resources for incident management |
| Local/State Healthcare Departments | * Lead Emergency Support Function (ESF) 8 * Communicate situational awareness updates * Assist in coordination of regional and state resources |
| MIEMSS | * Disseminate initial notifications * Patient dispersal * Track patient destinations * Coordinate EMS resources |
| Maryland Region III Health and Medical Coalition | * Coordinate and communicate Regional capabilities * Activate Memorandum of Understanding/Memorandum of Agreement (MOU/MOA) * Establish situational awareness of regional assets * Work with MIEMSS to coordinate patient dispersal to pediatric facilities |
| Maryland Department of Disabilities |  |
| Field Level EMS/First Response | * Communicate on-scene situational assessment to MIEMSS and regional hospitals * Triage patients * Provide medical care * Conduct field decontamination (if needed) * Transport to healthcare facility |
| Hospitals | * Triage & treat casualties * Conduct decontamination (if needed) * Track secondary facility transfers * Provide victim/casualty information to Coalition and requesting agencies * Coordinate with Maryland Department of Human Services for family reunification. |
| Law Enforcement | * Coordinate with Child Protective Services to ensure the safety of all unaccompanied children * Aide in the identification and reunification of children in disaster |
| Child Protective Services | * Provide staff for Family Assistance Center * Collect victim/casualty information * Provide temporary care for unaccompanied minors * Coordinate reunification of families |
| School Systems | * Provide accounting of school-aged children (if event happens within school system) to law enforcement * May provide student records detailing disabilities to healthcare agencies |
| Maryland Department of Human Services | * Coordinates and provides resources for family reunification. * Coordinates with 211 hotline. |
| Office of Health Care Quality (OHCQ) | * Provides approval, as needed, to operate above licensed bed capacity. * Facilitate communication with CMS and provide 1135 Waiver support. |

## Logistics

Every healthcare facility in Region III must be prepared to provide support and services to all patients regardless of age or injury/illness. This section of the plan lists basic strategies for healthcare facilities to address the allocation of scarce resources and other operational challenges that may impact patient care and organizational needs during the lifecycle of the disaster – from initial response through the recovery phases.

### Space

**Primary Goal:** To maintain patient care operations by increasing surge capacity to accommodate a significant influx of pediatric populations.

Prior to the event, healthcare facilities should identify space appropriate for pediatric care, including:

* Triage areas;
* Ambulatory/Clinic care;
* Emergency/Resuscitation care;
* Inpatient care (including NICU, PICU, psychiatric if available);
* Post-acute areas;
* Pediatric Safe Area (PSA) (a supervised/monitored area for discharged pediatric patients awaiting a caregiver, children of facility staff responding to work that did not have other options for child care, etc.);
* Conference Rooms/Auditoriums; &
* Cafeterias.

Spaces should be listed as:

* Operational spaces: Areas where normal pediatric care is provided
* Transitional spaces: Areas where pediatric care could be provided at a level functionally equivalent to normal care locations
* Critical spaces: Areas where sufficient care could be provided when typical resources are overwhelmed (this might involve non-pediatric providers supervising inpatient care, temporary intensive care/ventilator support for patients who cannot be moved, etc.)
* Alternate Care spaces: These may be within the hospital footprint, or external at another location such as a convention center, or business park where alternate care can be provided.

Usually, Operational spaces are used first, and Transitional and Critical spaces are activated according to incident resource needs. The list below provides examples of strategies that may be utilized.

Strategies include:

* Utilize licensed space for other types of patients
* Use outpatient beds for inpatient care
* Use internal skilled beds as acute patient areas
* Convert adult space into pediatric space
* Convert pediatric space to adult space
* Increase capacity in patient rooms or hallways in patient care areas:
  + Two (2) patients in a single room
  + Three (3) patients in a double room
* Open hospital floors that are vacant
* Use areas of the hospital for inpatients
* Perioperative services, such as:
  + Recovery room
  + Outpatient surgery
  + Physical therapy
  + Other services
* Use non-traditional areas of the hospital for inpatients, such as:
  + Cafeterias
  + Conference rooms
  + Parking structures
  + Other areas
* Shut off floor ventilation system to make a cohort of infected patients
* Use tents to create additional patient care areas
* Request relaxation of nurse/patient ratios to allow occupancy of all licensed beds

### Staff

**Primary Goal:** Increase the capability to maintain staffing levels and/or expand the workforce through emergency credentialing and/or volunteers.

Strategies:

* Cross train clinical/non-clinical staff
* Contact Nurse Staffing Agencies to assist with supplemental staffing needs
* Use of non-conventional staff or expand scope of practice, including:
  + Student nurses
  + Medical students
  + Military licensed staff
* Use of non-conventional staff in emergency situations only, including:
  + Volunteers
  + Emergency Medical Technicians (Basic and Paramedic certified) should the governor declare a state of emergency.
  + Retired health professionals with an active license
* Utilize pediatric skilled nurses to supervise adult skilled patients and vice versa
* Utilize families to render care under direction of a healthcare provider
* Implement and/or develop just in time training for clinical staff normally assigned to non-direct patient care positions

### Supplies

**Primary Goal:** Manage medical/non-medical supplies and equipment to ensure par levels are sufficient for incident needs.

The Region III Pediatric Disaster Surge Work Group identified the following three areas to prioritize when developing strategies for the allocation of resources:

* **Airway**
* **Breathing**
* **Circulation**

The Work Group has identified the following categories of supplies and equipment, that at a minimum, should be available for use in an emergency room during a pediatric surge event:

|  |  |
| --- | --- |
| **Function** | **Resource** |
| Airway | Oral Pediatric Airway  Nasopharyngeal Airway  Laryngeal Masks  Endotracheal Intubation Tubes  Laryngoscope Blades |
| Breathing | Face Masks  Non-rebreather Masks  Ambu-bags Chest Tubes  Nasogastric Tubes |
| Circulation | Intravenous Supplies Invasive Mechanical Vents Portable Invasive Mechanical Non-invasive Ventilators |
| Pediatric Specific | Broselow Bags  Broselow Carts |

#### Minimal Pediatric Equipment Recommendations for Emergency Departments

The following recommendations suggest specific equipment emergency departments should keep on hand per **one** critical pediatric patient of unknown age or size.

#### Table 7: ED Pediatric Equipment List

|  |  |  |  |
| --- | --- | --- | --- |
| **Equipment Type** | **Size/Type** | **Quantity** | **Importance**  **E = Essential**  **D = Desirable** |
| Ambu Bags | Infant |  |  |
| Child |  |  |
| Arm Boards |  |  |  |
| Blood Pressure Cuffs |  |  |  |
| Chest Tubes |  |  |  |
| Dosing Chart, Pediatric |  |  |  |
| ETCO2 Detectors (Pediatric, Disposable) |  |  |  |
| ET Tubes |  |  |  |
| Foley Catheters |  |  |  |
| Gastronomy Tubes |  |  |  |
| Infant Scale |  |  |  |
| Intraosseous Needles |  |  |  |
| Intravenous Infusion Pumps |  |  |  |
| Laryngoscope Blades |  |  |  |
| Laryngoscope Handles (Pediatric) |  |  |  |
| Masks: Face Masks, clear self-inflating bag  Non-Rebreather |  |  |  |
| Nasal Cannula |  |  |  |
| Nasogastric Tubes |  |  |  |
| Newborn Kit/Obstetric/Delivery Kit |  |  |  |
| Oral Airways |  |  |  |
| Over the needle intravenous catheters |  |  |  |
| Restraining Board (pediatric) |  |  |  |
| Broselow Resuscitation Tape, Length-based |  |  |  |
| Vascular Access Kit |  |  |  |
| Semi-rigid Cervical Spine Collars |  |  |  |
| Suction Catheters |  |  |  |
| Syringes |  |  |  |
| Warming Device |  |  |  |
| Tracheostomy Tubes |  |  |  |

**Minimal Pediatric Equipment Recommendations for Pre-Hospital Providers**

Pre-hospital ambulance providers that operate in the State of Maryland carry a standard inventory of medical equipment and supplies on each Advanced Life Support (ALS) and Basic Life Support (BLS) response and transfer vehicles. (Voluntary Ambulance Inspection Program)

The Code of Maryland Regulations Title 30.MIEMSS, Subtitle 09.Commercial Ambulance Services (Chapter 30.09) further provides detailed operational requirements for pre-hospital BLS, ALS and Neonatal Ambulance services including required equipment.

## Special Considerations

### Behavioral Health

Children may respond to disaster and hospitalization in similar ways to adults, but will also experience, mediate, and communicate trauma in unique ways characteristic of their developmental levels. Hospital staff should consider this when helping children cope with their hospital stay after a disaster. Staff can help children feel safer in the unfamiliar environment of a hospital by including familiar people, things and routines. Hospitals should also prepare staff for the different ways culture impacts a child’s response to trauma.

### Developmental Level-Specific Guidelines for Treating Children in the Hospital

#### Infants

* Let a parent or caregiver stay with and, when possible, hold the infant during medical procedures.
* Use familiar objects from the baby’s home such as stuffed animals, blankets, music boxes, or toys for comfort before, during and/or after a procedure.

#### Toddlers and Preschool-aged Children

* Avoid discussing toddler or preschoolers’ care in their presence unless you include them in the conversation. Children overhear much more than adults realize and, without any explanation, information may seem terribly frightening.
* Let a parent or caregiver stay overnight with the child if possible and let other family members, including siblings, visit (if appropriate).
* Reassure the child that the hospitalization is not a punishment. Avoid applying good or bad labels to the child, particularly during a procedure. For example, instead of saying “See, you were so good, the doctor only had to do this once,” say, “You did such a good job of sitting still, I know that was hard.”
* Allow children to handle medical equipment such as stethoscopes, blood pressure cuffs, etc. and to practice procedures on a doll. Children learn best through play. “Medical play” can be particularly useful to aid in communicating understanding, fears, etc. through play with medical equipment.
* Allow the child to make choices whenever possible, but don’t offer a choice when none exist. For example, do not say, “Would you like to come into the treatment room now, so the doctor can look at you?” Instead say, “Do you want to bring your bear or blanket with you to the treatment room?”

#### School-Aged Children

* You can give school-aged children more specific information about what they will experience; however, many medical terms can be confusing. For example, the term "I.V." could be confused with the word “ivy,” or “dye” with “die.” Give simple, specific explanations for procedures and use non-technical language.
* This is a great age for “medical play”. Let the child reenact events through play with different kinds of toys or art materials. This will help school-aged children express their feelings and gain a sense of control over what is happening to them.
* Encourage all staff to respect the child's privacy by knocking before entering his or her room and by being sensitive to who is around when examinations are in progress.
* Children this age may regress or revert to behaviors that they had outgrown (thumb sucking, bed wetting, etc.) during stressful situations such as hospitalization. Do not berate (e.g., say, “come on, you’re a big girl now...”) or punish children for such behavior; instead encourage them to express their feelings and discharge emotions through play.

#### Adolescents

* Avoid discussing teenagers’ care in their presence unless they are included in the conversation. Adolescents can understand much more about their bodies and what is happening to them than younger children and may resent being excluded from discussions.
* Do not assume that teens manage their emotions the same way as adults. Give teens opportunities to talk to staff about what is happening and to ask questions, both with and without parents or caregivers present.
* Encourage all staff to respect teens’ privacy by knocking before entering exam rooms and by being sensitive to who is around during examinations.
* Adolescents are particularly concerned about body image and do not want to be perceived as “different” than peers because of an illness or injury. Be especially sensitive to the physical changes adolescents may experience when explaining any procedures, injuries or treatments.

### How to Help Children During and After a Disaster

There are many ways to help children both before and during a disaster, especially if their age is considered.

#### Children Younger than Five Years of Age

* Maintain their normal routines and favorite rituals as much as possible.
* Limit exposure to television programs and adult conversations about the events.
* Ask what makes them feel better.
* Give plenty of hugs and physical reassurance.
* Provide opportunities for them to be creative and find other ways to express themselves.

#### Children Older than Five Years of Age

* Don’t be afraid to ask them directly what is on their minds and answer their questions honestly.
* Talk to them about the news and any adult conversations they have heard.
* Make sure they have opportunities to talk with peers, if possible.
* Set gentle but firm limits for “acting out” behavior.
* Encourage expression, verbally and through play, of thoughts and feelings.
* Listen to their repeated retellings of the event.

#### When to Consult a Mental Health Professional

Seek psychiatric consultation if children of any age exhibit any of the following behaviors:

* Excessive fear of something terrible happening to their parents or loved ones;
* Excessive and uncontrollable worry about unfamiliar people, places or activities;
* Fear of not being able to escape if something goes wrong;
* Suicidal thoughts or the desire to hurt others;
* Hallucinations; &
* Feelings of being helpless, hopeless or worthless.

## HAZARDS

### Decontamination

The following recommendations are intended to facilitate decontamination of all children presenting to any hospital during a disaster in a timely manner. Children require special considerations that should be addressed in a general hospital decontamination plan.

Hospitals within Region III follow the guidance outlined in the Occupational Safety and Health Administrations “Best Practices for Hospital-Based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances”. This provides standardized guidance for Personal Protective Equipment (PPE) and response and recovery operations.

Depending on time and capability, EMS and fire services may conduct gross decontamination at either the site of the hazardous materials exposure or in a location nearby. Gross decontamination typically involves fire service apparatus aligning to tanker trucks next to each other creating a corridor where fire hoses spray large amounts of water in a shower-like configuration. Contaminated patients walk or are transported via stretchers through the shower.

Removal of clothing can account for approximately an 80% reduction in hazardous materials removal. However, clothing is not always removed during gross decontamination.

**General Guidelines**

Infants and children have unique needs that require special consideration during the process of hospital-based decontamination. These considerations include:

* Avoid separating families during the decontamination process.
* Older children may resist or be difficult to handle due to fear, peer pressure and modesty issues
* Since parents or caregivers may not be able to decontaminate both themselves and their children at the same time, decontamination personnel may need to assist them.
* Incorporating high-volume, low pressure water delivery systems that are “child-friendly” into the hospital decontamination showers
* Risk of hypothermia increases proportionally in smaller, younger children when the water temperature in the decontamination shower is below 98°F
* Attention to airway management, a priority in decontamination showers
* The smaller the child, the bigger the problem regarding any of the above considerations.
* Infants should not be held during decontamination but placed on a stretcher or roller system. Water and soap mixtures can create a slippery environment.
* Some chemical agents are heavier than air and tend to hover low to the ground. This proximity is typically equal to the height of children’s’ airways.

**Decontamination Recommendations** Based on Child’s Age

Two primary documents should be utilized for developing a Healthcare Facility Decontamination Program, each providing guidance on decontamination processes and practices. These documents are:

* OSHA Best Practices for Hospital-based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances - <https://www.osha.gov/dts/osta/bestpractices/html/hospital_firstreceivers.html>
* Patient Decontamination in a Mass Chemical Exposure Incident: National Planning Guidance for Communities: <https://www.dhs.gov/sites/default/files/publications/Patient%20Decon%20National%20Planning%20Guidance_Final_December%202014.pdf>

The following guidance is based on the child’s estimated age of appearance, since asking may be impractical due to the limitations of PPE and or a large influx of patients. These recommendations are divided into three groups by ages – infants and toddlers (0-2 years), preschool children (2-8 years), and school aged children and adolescents (8-18 years).

**Infants and Toddlers (0-2 years)**

Infants and toddlers are the most challenging group to treat. Follow the guidelines below during treatment.

1. All infants and toddlers should be placed on a stretcher and undressed by either the child’s caregiver or hospital decontamination personnel. All clothes and items should be placed in appropriate containers or bags provided by the hospital and labeled.
2. Each child should then be accompanied through the decontamination shower by either the child’s caregiver or hospital decontamination personnel to ensure that the patient is properly and thoroughly decontaminated. It is not recommended that the child be separated from family members or adult caregivers. **Caregivers should not carry the child because of the possibility of injury from a fall, or from dropping a slippery and squirming child.**
3. Non-ambulatory children should be placed on a stretcher by hospital decontamination personnel and undressed (using trauma shears if necessary). All clothes and items that cannot be decontaminated (glasses, hearing aids, or other devices) should be placed in appropriate containers or bags as provided by the hospital and labeled.
4. All non-ambulatory children should then be escorted through the decontamination shower by either the child’s caregiver or decontamination personnel to ensure the patient is properly and thoroughly decontaminated.
5. Once through the shower, the child’s caregiver or post-decontamination personnel will be given a towel and sheets to dry off the child, and a hospital gown. The child should immediately be given a unique identification number on a wristband and then triaged to an appropriate area for medical evaluation.
6. Children and their parents or caregivers should not be separated unless critical medical issues take priority.

**Preschool-Aged Children (2-8 years)**

Children ages two to eight years can walk and speak, yet (with considerable variations in physical characteristics) are clearly children.

1. Ambulatory children should be assisted in undressing with help from either the child’s caregiver or hospital decontamination personnel. All clothes and items that cannot be decontaminated should be placed in appropriate containers or bags as provided by the hospital and labeled.
2. Each child should be directly accompanied through the shower by either the child’s caregiver or hospital decontamination personnel to ensure the entire patient is properly and thoroughly decontaminated. The child should not be separated from family members or the adult caregiver.
3. Non-ambulatory children should be placed in a stretcher by hospital decontamination personnel and undressed (using trauma shears if necessary). All clothes and items that cannot be decontaminated should be placed in appropriate containers or bags as provided by the hospital and labeled.
4. Each non-ambulatory child on a stretcher should be escorted through the decontamination shower and assisted with decontamination to ensure the patient is thoroughly and properly decontaminated.
5. Once through the shower, each child should be given a towel and sheets to dry themselves, and a hospital gown. The child should immediately be given a unique identification number on a wristband and then triaged to an appropriate area for medical evaluation.
6. Children and their parents or caregivers should not be separated unless critical medical issues take priority.

**School-Aged Children and Adolescents (8-18 years)**

At the age of eight years and older, children’s airway anatomy approximates that of an adult. Although it is tempting to regard this age group as “small adults” there are special needs unique to this age group.

1. Ambulatory children should undress as instructed by hospital decontamination personnel. All clothes and items that cannot be decontaminated should be placed in appropriate containers or bags as provided by the hospital and labeled.
2. Each child should then walk through the decontamination shower, preferably in succession with their parent or caregiver, and essentially decontaminate him or herself.
3. Non-ambulatory children should be placed on a stretcher by hospital decontamination personnel and undressed (using trauma shears if necessary). All clothes and items that cannot be decontaminated should be placed in appropriate containers or bags as provided by the hospital and labeled.
4. Each non-ambulatory child should be escorted through the decontamination shower and assisted with decontamination to ensure the entire patient is properly and thoroughly decontaminated.
5. Once through the shower, each child should be given a towel and sheets to dry themselves, and a hospital gown. The child should then immediately be given a unique identification number on a wristband and triaged to an appropriate area for medical evaluation.
6. Children and their parents or caregivers should not be separated unless critical medical issues take priority.

Children may be more susceptible to injury from hazardous materials due to:

* Failure to recognize a hazardous material or situation;
* Failure to recognize signs of exposure or formulate an escape plan;
* High surface area relative to mass (allows more skin contact);
* Higher minute ventilation (allows more inhalation exposure); &
* Lower height may result in more concentrated exposure to gases with higher vapor densities.

Decontamination for children requires planning and training that must be incorporated into the facility decontamination plan. A few considerations are:

* Use dry decontamination when indicated.
* Keep families together and allow members to assist each other (though teen-aged children may wish to have privacy from the other family members).
* Children may be intimidated by PPE of providers and may resist the decontamination process.
* Children will require assistance and escort through the decontamination process, increasing workload for the decontamination team.
* Handheld or low showerheads are required for adequate bathing.
* Temperature control of the water is more critical for children than for adults —insure warm water is provided (ideally, have an in-line temperature monitor on the water supply lines).
* Hypothermia is a significant concern, so children should be undressed for brief periods of time and re-dressed as soon as possible, and warm blankets should be available.
* Re-dress kits and gowns in appropriate sizes should be available for use.
* Baby shampoo should be available to avoid eye irritation.
* Heavy-duty laundry baskets may be helpful to carry very small children.
* Parents should **not** carry their children through the decontamination process as the slip-and-drop risk is high.
* Create visual instructions on laminated cards to help non-English speaking and illiterate patients.
* Service animals should be decontaminated with the pediatric patient and be allowed to continue following the patient through the healthcare system.

**Medical Observations and Treatment of Nerve Agent Exposure in Pediatric Patients**

The Maryland Poison Center is available 24 hours a day as a consult resource. The pharmacists at the Maryland Poison Center can help identify appropriate antidotes to better patient outcomes. For consults, the Maryland Poison Center can be reached at 1-800-222-1222.

**Clinical Signs and Symptoms**

Nerve agents are potent acetylcholinesterase inhibitors causing the same signs and symptoms regardless of the exposure route. However, the initial effects depend on the dose and route of exposure.

* Children are much more vulnerable than adults to nerve agent toxicity.
* Manifestations of nerve agent exposure include:
  + Neuromuscular - pinpoint pupils (highly indicative of nerve agent exposure in a mass casualty situation), muscle twitching, confusion, seizures, flaccid paralysis, and coma.
  + In many instances, children present with only neurological signs and symptoms.
  + Pulmonary - chest tightness, wheezing, shortness of breath, respiratory failure.
  + Gastrointestinal - nausea, vomiting, abdominal cramps, involuntary defecation.
  + Other - runny nose, excessive salivation and sweating, and urination.

**Differential Diagnosis**

* The diagnosis in a severely intoxicated individual is straightforward. The combination of miosis, copious secretions, bronchospasm, generalized muscle fasciculations, and seizures is characteristic.
* Look carefully for miosis (if present will be helpful). Miosis may not be present initially following a low volatility nerve agent exposure.
* A mild vapor exposure may mimic a child having allergic rhinitis/conjunctivitis.
* A mild vapor may present with only visual complaints such as narrowing of the visual field or a sense that everything is getting dark.
* GI symptoms by themselves could be confusing and they could be the only presenting signs.
* Opioid abuse can include miosis, apnea, seizures etc.

**ABC Reminders\***

**Quickly ensure that the victim has a patent airway.** Maintain adequate circulation. If trauma is suspected, maintain cervical immobilization manually and apply a decontaminable cervical collar and a backboard when feasible. Apply direct pressure to stop arterial bleeding, if present.

**Antidotes\***

Administration of antidotes is a critical step in managing a nerve agent victim; however, this may be difficult to achieve in the Hot Zone, because the antidotes may not be readily available, and procedures or policies for their administration while in the Hot Zone may be lacking.

**Prehospital Nerve Agent Therapy\***

(Guidelines for Tabun (GA); Sarin (GB); Soman (GD); and VX)

|  |  |  |  |
| --- | --- | --- | --- |
| Patient Age | Antidotes1 | | Other Treatment |
| Mild/Moderate Symptoms2 | Severe  Symptoms3 |
| Infant (0 - 2 yrs) | Atropine: 0.05 mg/kg IM;  2-PAM Cl: 15 mg/kg IM | Atropine: 0.1 mg/kg IM;  2-PAM Cl: 25 mg/kg IM | **Assisted ventilation** should be started after administration of antidotes for severe exposures.  **Repeat atropine (2 mg IM)** at 5 ­ 10 minute intervals until secretions have diminished and breathing is comfortable or airway resistance has returned to near normal. |
| Child (2 - 10 yrs) | Atropine: 1 mg IM;  2-PAM Cl: 15 mg/kg IM | Atropine: 2 mg IM;  2-PAM Cl: 25 mg/kg IM |
| Adolescent (>10 yrs) | Atropine: 2 mg IM;  2-PAM Cl: 15 mg/kg IM | Atropine: 4 mg IM;  2-PAM Cl: 25 mg/kg IM |

**1. 2-PAMCl solution needs to be prepared** from the ampule containing 1 gram of desiccated 2-PAMCl: inject 3 ml of saline, 5% distilled or sterile water into ampule and shake well. Resulting solution is 3.3 ml of 300 mg/ml.

**2. Mild/Moderate symptoms** include localized sweating, muscle fasciculations, nausea, vomiting, weakness, dyspnea.

**3. Severe symptoms** include unconsciousness, convulsions, apnea, flaccid paralysis.

\*Information taken from CDC – Agency for Toxic Substances and Disease Registry “Medical Management Guidelines for Nerve Agents” publication October 2014.

**Emergency Department Nerve Agent Therapy\***

(Guidelines for Tabun (GA); Sarin (GB); Soman (GD); and VX)

|  |  |  |  |
| --- | --- | --- | --- |
| Patient Age | Antidotes | | Other Treatment |
| Mild/Moderate Symptoms1 | Severe  Symptoms2 |
| Infant (0 - 2 yrs) | Atropine: 0.05 mg/kg IM or 0.02 mg/kg IV; 2-PAM Cl: 15 mg/kg IV slowly | Atropine: 0.1 mg/kg IM or 0.02 mg/kg IV; 2-PAM Cl: 15 mg/kg IV slowly | **Assisted ventilation** as needed.  **Repeat atropine (2 mg IM or 1 mg IM for infants)** at 5 - 10 minute intervals until secretions have diminished and breathing is comfortable or airway resistance has returned to near normal.  **Phentolamine** for 2-PAM induced hypertension: (5 mg IV for adults; 1 mg IV for children)  **Diazepam** for convulsions: (0.2 to 0.5 mg IV for infants 5 years; 1 mg IV for children >5 years; 5 mg IV for adults) |
| Child (2 - 10 yrs) | Atropine: 1 mg IM; 2-PAM Cl: 15 mg/kg IV slowly | Atropine: 2 mg IM; 2-PAM Cl: 15 mg/kg IV slowly |
| Adolescent (>10 yrs) | Atropine: 2 mg IM; 2-PAM Cl: 15 mg/kg IV slowly | Atropine: 4 mg IM; 2-PAM Cl: 15 mg/kg IV slowly |

1. Mild/Moderate symptoms include localized sweating, muscle fasciculations, nausea, vomiting, weakness, dyspnea.

2. Severe symptoms include unconsciousness, convulsions, apnea, flaccid paralysis.

\*Information taken from CDC – Agency for Toxic Substances and Disease Registry “Medical Management Guidelines for Nerve Agents” publication October 2014.

### Special Pathogens

The purpose of this section is to guide healthcare facilities involved with a major communicable disease emergency in managing exposure risks between and among differentially-affected children (contacts, suspected cases) and their adult caregivers.

The Maryland Department of Health (MDH) along with the Assistant Secretary for Preparedness and Response (ASPR) have created a novel pathogen care/treatment infrastructure within the State; primarily focused on the Ebola Virus Disease with expectations for any novel virus pathogen. The healthcare tiered response is identified in Table 9 below.

#### Table 9: Regional Ebola Care Facilities

|  |  |  |
| --- | --- | --- |
| City/County | Facility | Level of Care |
| Ebola Treatment Center | | |
| Baltimore | Johns Hopkins Hospital | Regional Ebola Treatment Center (1 of 10 in the U.S.) |
| Baltimore | University of Maryland Medical Center | MD State Ebola Treatment Center |
| Ebola Assessment Hospital | | |
| Anne Arundel | Anne Arundel Medical Center | Assessment Hospital |
| Ebola Frontline Hospital | | |
| Anne Arundel | University of Maryland Baltimore Washington | Frontline Hospital |
| Baltimore City | Bon Secours | Frontline Hospital |
| Johns Hopkins Bayview | Frontline Hospital |
| MedStar Good Samaritan | Frontline Hospital |
| MedStar Union Memorial | Frontline Hospital |
| Mercy | Frontline Hospital |
| Sinai of Baltimore | Frontline Hospital |
| University of Maryland Medical Center Midtown Campus | Frontline Hospital |
| University of Maryland Medical Center Rehabilitation and Orthopedic | Frontline Hospital |
| Baltimore County | Greater Baltimore | Frontline Hospital |
| MedStar Franklin Square | Frontline Hospital |
| Northwest | Frontline Hospital |
| University of Maryland Medical Center St. Joseph | Frontline Hospital |
| Carroll County | Carroll Hospital | Frontline Hospital |
| Harford | University of Maryland Medical Center Harford Memorial | Frontline Hospital |
| University of Maryland Upper Chesapeake | Frontline Hospital |
| Howard County General | Frontline Hospital |

Activation of the hospitals’ emergency plan for infectious diseases should include direct communication with local and state health departments to communicate and coordinate resources. MDH has procedures for initial notification of a patient infected with a novel pathogen at a hospital, to include:

* Recognition and isolation of patient with probable infectious novel pathogen;
* Use of approved Isolation Room for patient care/treatment;
* Selection and use of select Personal Protective Equipment;
* Communication with internal Infection Prevention/Infectious Disease Practitioners
* Communication with local and state health departments as well as EMS-approved transport agencies; &
* Communication with approved Maryland Frontline/Treatment Hospital(s).

This Annex will be coordinated with and through the local and state health departments’ command centers. Hospital command centers may also be activated in response to an infectious disease emergency and will coordinate response activities with public health entities.

# CAPABILITIES

## Security/Safety

Security plays an integral role in any pediatric disaster event. Each individual agency employs their own law enforcement/security teams. During local disasters, healthcare facilities will rely upon their internal security resources first and communicate additional needs to the Coalition.

Many types of disasters could involve increased security risks, such as a complex coordinated attack, an active shooter, or terrorist activities. In addition, as families attempt to find their loved ones, crowds will form requiring an increased need for security personnel.

It is important to engage institutional security leadership early in the planning process. At a minimum, the hospital family reunification plan should include the creation of a security leader within its command structure. Hospital security personnel can also assist with coordination between the institution and outside law enforcement. Ideally, an individual with preexisting relationships with law enforcement on local and regional levels, including relevant federal entities (e.g., Federal Bureau of Investigation [FBI]; Bureau of Alcohol, Tobacco, Firearms and Explosives [ATF]), may fill this position. There will need to be a continual security presence in the FRC and the PSA.

## Evacuation

Evacuation of pediatric populations from hospitals can be stressful and critical. Movement of any patient during an evacuation can induce additional physical and mental stressors; patient statuses can deteriorate quickly based on the medical equipment needed for life sustaining care. Evacuation of neonatal and intensive care pediatrics (NICU, PICU) may include movement of patient with multiple monitors, IV pumps, or specialized equipment such as incubators/isolettes.

Typically, two forms of evacuation are conducted: horizontal and vertical.

Horizontal evacuation includes the movement of people across the unit/department to another location on the same floor or directly outside. Horizontal evacuation is the first consideration and may include the movement into a fire compartment that can sustain a safe environment until fire rescue arrives.

Vertical evacuation includes the movement of people to another floor above or below. Vertical evacuation usually occurs after horizontal evacuation and requires movement in stairwells, as elevators should not be used during an evacuation). Due to the movement up or down stairwells, specialized equipment is needed. This equipment involves mechanical chairs (Stair chair) or a rigid sled device. Resources available to the coalition can be found within the Region III Resource Management Plan.

Strategies for transporting infants include:

* Determine triage protocol for which patients will be evacuated first.
* Identify internal and external evacuation routes, including the receiving pediatric hospital(s).
* Assign staff with knowledge and training to lead evacuation response and management of evacuating pediatrics.
* Identify medical equipment needed to support patient care that **must** go with patient during evacuation (Some equipment, such as ventilators, may not be practical, and medical providers may need to assign staff to manually provide oxygen).
* Obtain patient medical records and medications needed to accompany the patient.
* Consider environmental conditions when evacuating (i.e., need for warm blankets during winter).
* Maintain accountability (tracking) for all patients being evacuated.
* Identify transport assets (Neonatal ambulances) and staging area(s) for pick-up/drop-off locations.
* Maintain ongoing communications with the hospital Incident Management Team (IMT).
* Ensure oxygen quantities/volumes/respiratory masks are appropriate for each specific patient’s need for the length of transportation.
* For medical equipment in use during evacuation, check battery status and bring extra batteries as needed.
* Establish ongoing communications with patients’ families to notify them of the evacuation order and new alternate care site, whether internal or external.
* Have pastoral care and social workers available for support.
* Determine needs and roles for volunteers.

# Operations – Medical Care

## Triage

Disaster triage is a method of quickly identifying victims with life-threatening injuries who have the best chance of survival. Identification of such victims serves to direct other rescuers and health care providers to these patients first when they arrive on the scene. The use of disaster triage involves a change of thinking from everyday care to:

* High intensity care should go to the sickest patient doing the greatest good for greatest number.
* Identify victims with best chance of survival for immediate intervention focusing care on those with serious and critical injuries but who are salvageable.
* Identify victims at extremes of care by sorting those who are lightly injured and those who are so severely injured that they will not survive.
* Immediate treatment to only those victims that procedure or intervention may make difference in survival.
* Altered standards of care based on resource availability.

Disaster triage must be dynamic and fluid in its execution. Primary triage is done at the scene by first responders; the triage category is assigned rapidly and is based on physiologic parameters and survivability. Secondary triage typically occurs at the facility where the patient is transported. The initial triage assignments may change and evolve based on changes in the patient’s condition, so reassessment is crucial. It is essential that medical personnel prioritize transport and treatment based on level of injury and available resources.

MIEMSS has established state-wide protocols for prehospital primary triage of pediatric and adult patients using the Simple Triage and Rapid Treatment (START) method and JumpSTART (see Graphics 2 and 3). The first arriving medical personnel will use triage tags to categorize the victims by the severity of their injury. The victims will be easily identifiable in terms of what appropriate care is needed by the triage tags they are administered. Once the evaluation is complete, the victims are labeled with one of the four color-coded triage categories:

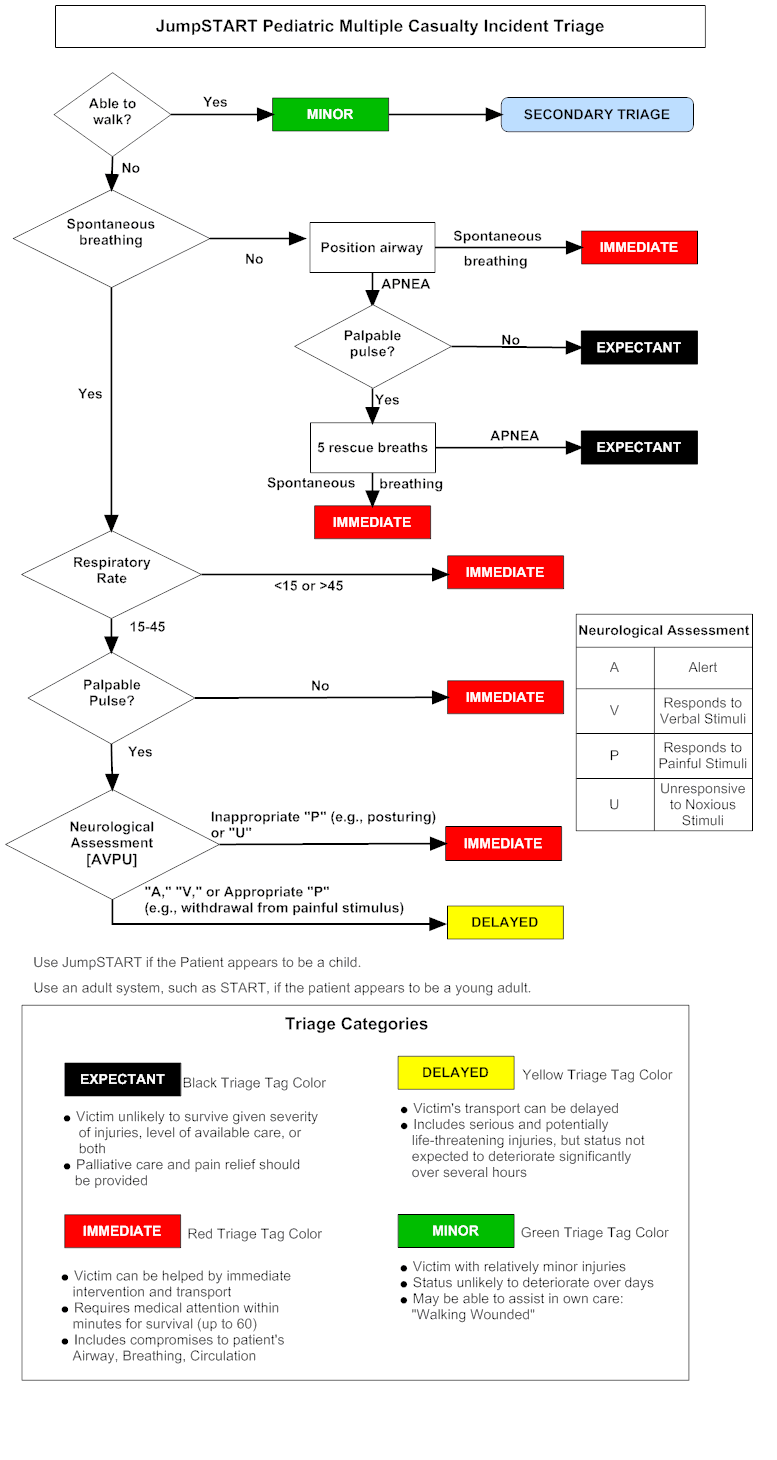
* **Minor (Green)** – Delayed care required/Can delay care up to three hours
* **Delayed (Yellow)** – Urgent care required/Can delay care up to one hour
* **Immediate (Red)** – Immediate care required/Life-threatening
* **Deceased (Black)** – Victim is dead or mortally wounded/No care required

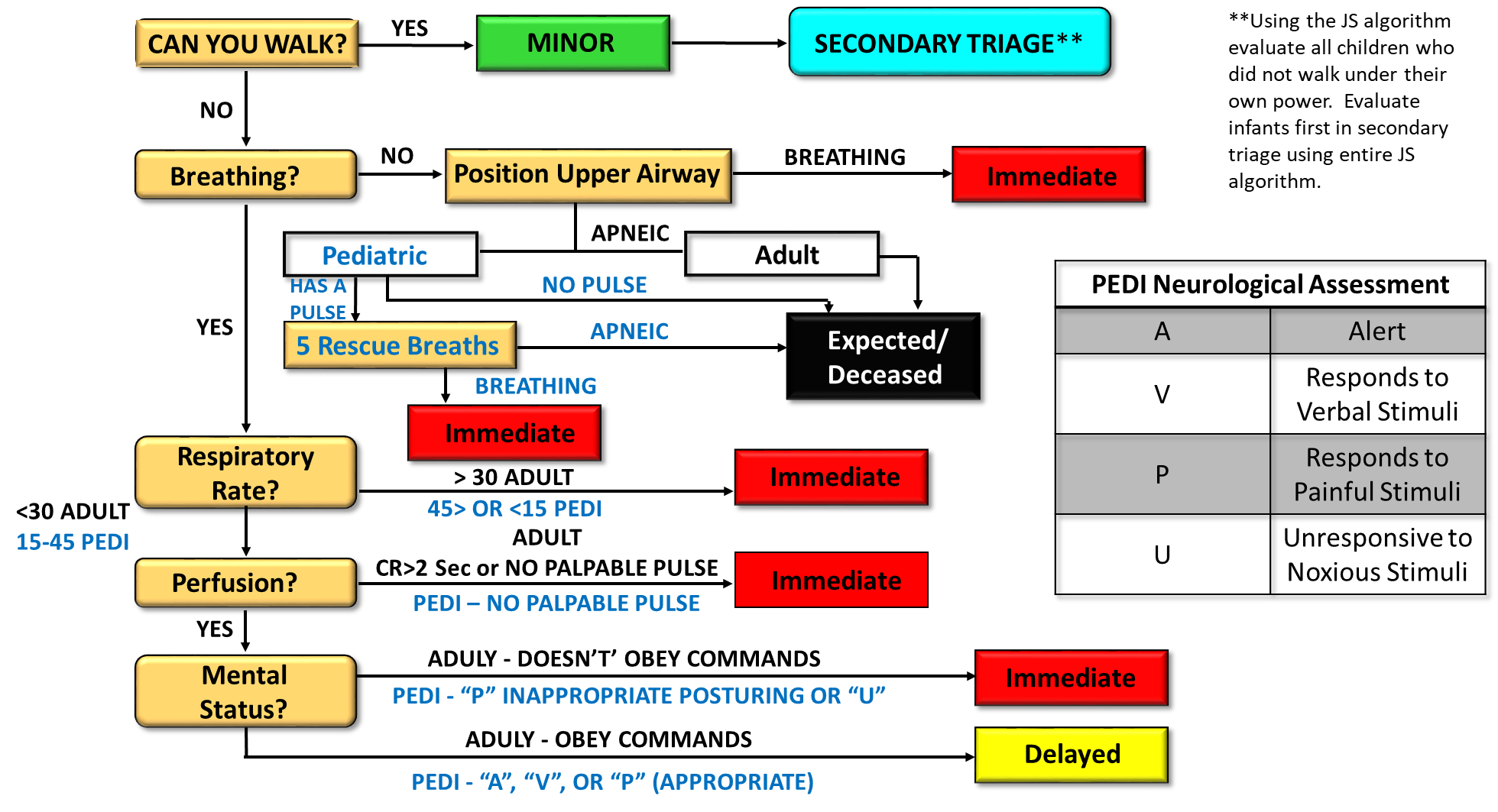
Pediatric patients can be difficult to triage. Pediatric patients with obvious external bleeding or soft tissue wounds and those who are crying uncontrollably are often assigned triage categories higher than justified. There is increased risk of resources being provided to these patients and, as a result, not having necessary resources available for more seriously injured children.

Additionally, a percentage of patients may not be transported by EMS and may arrive by family vehicles, citizens or police. Health care facilities need to be ready to triage patients as they arrive. Triage tags must be available and the emergency department should be divided up into areas of Red, Yellow and Green. When there is a large volume of pediatric patients, JumpSTART and START are two methods of triage.

Information on JumpSTART and START can be found at: <https://www.miemss.org/home/Portals/0/Docs/Triage_Tag/Triage%20Training%20Program/Triage-START-Tag-REVISION-2019.pdf?ver=2019-02-22-140455-433>.

#### Graphic 2: JumpSTART Triage Algorithm



Graphic 3: Combined START and JumpSTART Triage Algorithm

Children with the following signs and symptoms should be triaged as ‘Red’ or the highest priority, and be cared for by the most experienced providers in the resuscitation area of the emergency department:

* Altered mental status
* Respiratory distress
* Signs of shock

Advanced Pediatric Life Support (APLS) uses the Pediatric Assessment Triangle (PAT) (Graphic 4), for a quick initial assessment of the pediatric patient. The only threat not addressed by the PAT is a finding of penetrating injury to the chest or abdomen, which should categorize the patient as ‘Red’ or critical—these may be subtle and should be carefully looked for following any explosion.

#### An external file that holds a picture, illustration, etc. Object name is nihms-659206-f0001.jpgGraphic 4: Pediatric Assessment Triangle

Vital signs can be of some help in determining priority. However, the normal ranges by age are wide, and thus clinical correlation to the injuries/symptoms is required. Persistent tachycardia or tachypnea exceeding the ranges below, after appropriate analgesia, should prompt a careful evaluation for severe illness/injury.

#### Table 10: Vital Signs Normal Ranges by Age

|  |  |  |
| --- | --- | --- |
| Respiratory Rate and Heart Rate Range by Age | Respiration Rate (per minute) | Heart Rate (per minute) |
| Newborn | 30 – 60 | 100 – 180 |
| Infant (1-12 months) | 30 – 60 | 100 – 170 |
| Toddler (1-3 years) | 24 – 40 | 80 – 150 |
| Preschooler (3-5 years) | 20 – 34 | 70 – 130 |
| School age (6-12 years) | 15 – 30 | 65 – 120 |
| Adolescent (13-17 years) | 12 – 20 | 55 – 90 |

Early assessment should consider the need for decontamination if the patient was exposed to hazardous chemicals. It is important to note that those patients exposed to irritant gases do **not**require specific decontamination. Exposure to liquid or solid irritants or those exhibiting cholinergic syndrome symptoms (small pupils, excess secretions) requires specific decontamination.

Mass psychogenic illness is a syndrome that should also be given consideration; it is usually mistaken for a hazardous materials release. It occurs when a stimulus (such as an odor) triggers one person (usually a school-aged child) to have shortness of breath or nausea and vomiting. The occurrence of these symptoms triggers others in the group to have similar symptoms. Communication with fire services at the scene of the event is critical in order to determine if there are any dangerous chemicals involved, but usually the symptoms are limited to the sensation of shortness of breath, headaches, and nausea and vomiting without evident cause or other findings. Symptomatic treatment is recommended, and these patients should **not**be cohorted together at risk of exacerbating symptoms.

## Treatment

### Emergency Department Care

Red-tagged patients (critical/unstable):

* Place in the most acute (e.g., resuscitation) beds of the pediatric or, as necessary, adult areas of the Emergency Department (ED).
* Management: ED attending physicians; transfer to PICU or pediatric ward attending physicians, if available (or arrange consultation with referral center).
* Alert surgery (pediatric, when available) or Trauma Team.
* Place all other surgical specialties on standby as required/available.

Yellow-tagged patients (moderately injured or ill/potentially unstable):

* Place in acute care beds in ED if possible—consider overflow to procedure areas and other locations per surge capacity plan.
* Reevaluate frequently and assign disposition in a timely manner.
* Ideally, providers assigned to patients should stay with that patient through the ED course if resources allow.
* When enough clinical staff are not available, an escort should be assigned to each unaccompanied child to maintain continuity and safety—unsupervised children should always be avoided.

Green-tagged patients (minor or non-injured/stable):

* Triage to secured waiting room, other large waiting area or clinic (if available) *with* supervision to ensure safety of unaccompanied children
* Reevaluate frequently - discharge after care is completed to an appropriately identified adult

#### Table 11: Emergency Department Placement

|  |  |  |  |
| --- | --- | --- | --- |
| Color | Red | Yellow | Green |
| Category | Immediate life threat | Potential life threat (within hours) | No immediate life threat |
| Clinical | Altered mental status, respiratory distress, signs of shock, truncal penetrating injury | Generally non-ambulatory with an injury or injuries that may become life-threatening if untreated | Generally ambulatory with isolated injuries that should not be life or limb-threatening |
| Placement | Resuscitation area | Acute treatment and re-triage area | Waiting are/clinic/urgent care are |

## Transportation

MIEMSS provides the first line of emergency transportation needs throughout the State of Maryland. Additional transportation resources from neighboring counties or other States may be requested through agreements to aid in transporting pediatric patients. Additionally, the Coalition has access to mobile surge buses to aid in transporting multiple patient causalities during a disaster.

All hospitals within Region III should be prepared to provide extended care to children during a disaster whether due to lack of transportation resources, insufficient pediatric bed capacity, or other means such as impassable roadways.

Even when transfer to pediatric specialty hospitals is possible, limitations for resources may exist. Therefore, hospitals should develop alternative mechanisms for safely transferring children based on the following guidelines:

### Stable Children

Arrange for child car safety seats, including:

* Rear-facing seats for children younger than two years of age or who weigh less than 40 pounds;
* Forward-facing seats for children two to four years of age or who weigh more than 40 pounds or are more than 40 inches tall;
* Booster seats for children four to eight years of age or taller than 4' 9"; &
* Rear seats with seat belts for children 8 to 12 years of age (Children younger than 13 years should not ride in the front seat).

To obtain appropriate car seats:

* Purchase them;
* Request them through donations;
* Prepare a list of potential local sources to approach for car seats during a disaster; and/or
* Survey employees to identify car seats available in personal vehicles.

### Unstable Children or Potentially Unstable Injured or Ill Children

Potential transport vehicles include ambulances staffed with emergency medical technicians or paramedics and include:

* Hospital staff skilled in pediatric airway care and resuscitation;
* Equipment appropriate for the child’s age and acuity;
* Specialty pediatric transport vehicles and teams from referral pediatric institutions; &
* Paramedic ambulances with no additional hospital staff for less critical patients only.

If ambulances are not available, appropriate transport possibilities include:

* Cars, vans and city or private buses for children who can sit up (Car seats may be necessary);
* School buses for children aged five years and older who can sit up;

Drivers must be able to communicate with hospital emergency command centers by cell phone or radio. Ideally, mental health personnel or staff trained in children’s psycho-social needs should accompany children.

When transporting children, the following guidelines are recommended to ensure compliance with State or local laws regarding child safety seats:

* Children will remain in a rear facing car seat until at least 2 years old unless the child weighs 40 or more pounds or is 40 or more inches tall.
* Forward-facing car seats will be used for children who are older than 2 years old or meet the maximum weight and height limit of their convertible car seats to remain rear facing. These children will be harnessed in a 5-point restraint forward facing until they meet the maximum height and weight limit of the car seat.
* Children who meet the maximum weight and height limit of the forward-facing car seat will be transported in a booster seat using the lap and shoulder belt.
* Children can be transported in a seat belt when their knees bend at the edge of the vehicle seat, their backs and bottoms are against the vehicle seat back, the vehicle lap belt fits across the upper thighs, and the shoulder belt fits across the shoulder and chest.
* Children under the age of 13 will be transported in the back seat of the vehicle.

#### Table 12: Appropriate Use and Type of Car Seats for Transporting Children

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Infants | Toddlers | School-aged Children | School-aged Children >8 years |
| Age/Weight | Birth to 2 years old or 40 lbs and 40 inches in height | 2 years and older who have out grown the maximum height and weight limit of their rear-facing convertible car seat | Children reaching the maximum height and weight limit of their forward facing harnessed car seat | Children whose knees bend at the edge of the vehicle seat, their backs and bottoms are against the vehicle seat back, the vehicle lap belt fits across the upper thighs, and the shoulder belt fits across the shoulder and chest. |
| Seat Type | Infant-only or rear- facing convertible seats | Convertible/forward- facing harnessed and tethered car seat | Belt-positioning booster seat | Seatbelt |
| Seat Positioning | Rear-facing seat only | Forward-facing seat | Forward-facing seat | Forward-facing seat |

*\*Follow Maryland Department of Transportation laws regarding restraining passengers in a moving vehicle.*

### Within the Hospital

Equipment:

* Adult stretchers may be appropriate for children older than 8 years.
* Cribs or additional personnel with a padded adult stretcher may be appropriate for smaller children (Stretcher rails may allow entrapment/falls, which could cause significant injury to the child).

Personnel:

* Parents or adult caregivers should stay with children.
* If no parent is available, appropriate personnel must be identified to supervise pediatric patients.

### From Hospital to Other Facilities

Patients requiring Intensive Care Unit (ICU) care who cannot be accommodated at the healthcare facility should be transferred to referral centers. Priority should be given to those with the most critical injuries and those of less age. Medical air transfers to appropriate referral centers should be considered depending on distance and road conditions. Parents should accompany the child whenever possible.

Neonatal transport should be arranged with the receiving specialty center and an appropriate air transport, or a ground transport team should be arranged.

## Tracking

Children may become separated during a disaster. This separation can lead to increased stress and could potentially induce psychological trauma. Citizens in the community may transport children to the nearest hospital without a parent or guardian. Therefore, unaccompanied children during a disaster is a probability.

MIEMSS provides on-scene tracking of patients including triage to the nearest, most appropriate hospital for care/treatment. During large scale disasters, MIEMSS will conduct a bed status assessment to determine appropriate bed availability per patient needs. Additionally, WebEOC will be activated to provide a means to document and maintain an ongoing assessment of patient dispersal.

The Chesapeake Regional Information System for our Patients (CRISP) is a newly-implemented data system to provide for family reunification and may aid in the tracking of pediatric patients within Maryland Region III or across the entire State of Maryland. Access is available to hospital contacts, local health departments, and state partners.

Hospitals or shelters caring for pediatric patients that do not routinely care for this population should develop site-specific safety and security plans for the duration of their stay. These plans should address the management of the patient care/treatment areas, including monitoring capability.

### Accompanied Children in a Disaster

There are two populations of accompanied children during a disaster that should be addressed:

1. The pediatric patient who is a patient of the hospital because of the disaster and who may become separated from the responsible adult; for example, if the responsible adult is also a patient.
2. The pediatric visitor who is **not**a patient of the hospital but who may be accompanying an adult person who is a patient; for example, a critical adult patient who was caring for a minor at the time of the disaster or event.

Healthcare facilities should employ a means to identify each pediatric patient that is triaged/admitted to their facility. This could include a patient wristband that is placed on the patient as soon as possible, or electronic bracelets that alert staff when a patient leaves a specific area. Hospitals should follow their facility plans/policies regarding the tracking and care of pediatric patients.

The identification bands used should include the following information which will be useful in maintaining a tight link between pediatric patient/ visitor and adult:

* Name of pediatric patient/visitor and Date of Birth (DOB);
* Name of adult and DOB;
* Admission date of adult;
* Admission date of pediatric patient; &
* Date of visit of pediatric visitor.

### Displaced or Unaccompanied Children in a Disaster

Rapid identification and protection of displaced children (less than 18 years) is imperative to reduce the potential for maltreatment, neglect, exploitation, and emotional injury. The separation of children from significant others is a recognized factor influencing the psychological responses of children after a disaster.

Protocol to rapidly identify and protect displaced children:

* Survey all children in your hospital, medical clinic, or shelter to identify children who are not accompanied by an adult.
  + These children have a high probability of being listed as missing by family members. Find out where they are sleeping/being held and the name and age of person(s) who is/are supervising them, if available.
* Place a hospital-style identification bracelet on the child and a matching one on the supervising adult(s), if such an adult is available.
  + Check frequently to make sure that the wrist band matches that of the adult(s) seen with the child in the hospital or shelter. Some children may also have a triage tag number that will accompany the child from the field to the hospital that must not be removed.
  + If there is no supervising adult, the child should be taken to the hospital’s pre-determined PSA where they can be appropriately cared for until a safe disposition or reunification can be made.
* The names of all children identified as not being with their legal guardians or who are unaccompanied should be considered at high-risk and immediately reported to the hospital’s Incident Command Center.
  + Additional reporting should also be made to Child Support Services notifying them that there are unaccompanied minors at the facility.
* Unaccompanied children and those who are not with their legal guardians should undergo a social and health screening taking into consideration an assessment of the relationship between the child and accompanying adult, ideally performed by a physician with pediatric experience.

## Coordination with School Systems

School systems are a valuable asset for health and reunification information for students. Each school district has its own Emergency Operating Procedures relating to family reunification. Many school systems utilize the “Standard Reunification Method” as a building block for their planning. Free information and planning tools on the Standard Reunification Method can be found at: <https://iloveuguys.org/srm_training.html>.

For the purposes of reunification or planning, the Department of School Safety or Emergency Management should be contacted. Contacts are listed in the Emergency Contact Table at the beginning of the document.

## Reunification

It is essential that children are definitively identified and matched to their legal custodial parent/guardian before release from the hospital. Accurate identification of children before releasing them from the hospital is key to preventing harm. Mistaken identity may lead to:

* Release of a child to the wrong family;
* Release of a child to an unauthorized noncustodial parent;
* Delay of reunification with the child’s actual family (this affects both the child and the family);
* Failure to identify significant medical and other conditions important to the care of the child.

Most children will be able to self-identify verbally, as well as identify their parents. Children who can identify both themselves and their parents can typically be released to their parents following usual hospital policies.

For those children who cannot be definitively identified, it is recommended that hospitals develop procedures to safely maintain care for all unidentified children until they can later be definitively reunited with their families. This includes planning for a PSA as identified later in this document.

For children unable to be reunited with a parent or legal guardian, child protective services should be notified to take emergency custody. Protective services will work with law enforcement personnel to continue the search for the legal custodians and will work with hospital personnel to arrange temporary placement for the child, as either a temporary social admission to the hospital or placement with a child’s relatives or a foster family.

### Family Reunification Center (FRC)

Any influx of patients, whether pediatric, adult, or geriatric, will also include an influx of their family members, friends, and/or acquaintances seeking information. In planning for a pediatric surge, healthcare facilities should also plan for an FRC where those seeking information can be temporary housed, such as in a large auditorium or conference room. Situational awareness early in the disaster response phase will be chaotic, and oftentimes misinformation will be circulated. Having a physical location will greatly reduce the added stressors to healthcare leadership.

An FRC is meant to:

* Provide a private and secure place for families to gather, receive, and provide information regarding children and other loved ones who may have been involved in the incident;
* Provide a secure area for these families away from the media;
* Facilitate efficient information sharing among hospitals and other response partners to support family reunification;
* Identify and support the psychosocial, spiritual, informational, medical, and logistical needs of family members to the best of the hospital’s ability; &
* Coordinate death notifications, when necessary.

Healthcare facilities should consider locations that are best suited to effectively and respectfully establish an FRC. Some considerations to keep in mind are:

* Locate the FRC away from the hospital ED and media staging sites as well as away from the designated pediatric safe area.
* Ensure there is enough space to accommodate many individuals.
  + Adequate space facilitates communication between designated hospital personnel and family members.
* Provide access to private rooms that may be used for confidential discussions, notifications, and provision of other support.
  + Distraught family members may need additional space to help both psychologically and with security.
* Ensure the space has an area for food and beverage.
* Ensure restrooms are easily accessible.
* Ensure the space is accessible to patients and family members with considerations for access and functional needs.
* Ensure that access to the FRC can be controlled and security can be provided within the site.

### The Family Reunification Site

The physical space where reunification of the child and parents/guardians takes place should be located away from the FRC and the PSA. This is to allow the reunification to occur in a safe, well-controlled area located well away from the noise and distractions of the other areas. The family reunification site should allow for secure and simple departure from the facility.

Families arriving at the hospital will be under a tremendous amount of stress and may have limited ability to process instructions or other information while they are looking for their children. Therefore, staff members in the FRC must have experience in helping people under stressful conditions. Hospital staffing may include, but are not limited to, the following departments:

* Safety
* Security
* Case Management
* Social Work
* Nursing
* Chaplain
* Psychiatry or Psychology
* Pediatrics
* Family Medicine
* Child Life
* Healthcare Executive Leaders

### Pediatric Safe Area (PSA)

To ensure the pediatric patients’ safety, as well as to help patients cope, a PSA should be established in an appropriate location that allows children to play and move about safely. Therefore, the healthcare facility should preplan for, and be able to securely operate, a PSA. The PSA is a controlled and supervised space where children can play and wait safely and securely while awaiting reunification with their families. This space should be in an area separate from both the ED and the FRC. The following are some issues to consider when determining a PSA location:

* The PSA should be away from the hospital ED and media staging sites as well as the FRC.
* Ensure there is enough space to accommodate children of different ages with age- appropriate activities for each group; consider leveraging an existing infrastructure such as a child care center.
* Provide nearby access to smaller rooms or adjacent spaces that may be used for younger children such as babies or for children with sensory integration issues.
* Ensure that restrooms are easily accessible and appropriate for pediatric patients.
* Ensure the space has an area for food and beverage; ensure attention to patients with possible food allergies.
* Ensure access to the PSA and restrooms can be controlled, and security is assured around and within the site.

## Deactivation and Recovery

This Plan will be deactivated once the incident is declared stable and each healthcare organization has deactivated their respective Command Centers/EOPs. IMTs and emergency plans may be considered partially activated to support long term reunification, resource management needs, or financial implications for reimbursement.

Individual healthcare facilities and emergency management agencies will conduct an After-Action Report (AAR) to detail “promising practices” and “areas for improvement”. An Improvement Plan will accompany the AAR. The Region III Coalition will also conduct an AAR to identify findings from a regional perspective.

All AARs will be archived for reference and to ensure “areas for improvement” findings are incorporated into future drills/exercises.

# APPENDICES

## Additional Resources/References

American Academy of Pediatrics “Family Reunification Following Disasters: A Planning Tool for Health Care Facilities.” <https://www.aap.org/en-us/Documents/AAP-Reunification-Toolkit.pdf>