Central Florida Disaster Medical Coalition Burn Annex

Approved by CFDMC Board 2/22/22

Table of Contents

1.   Introduction

1.1 Purpose

The Central Florida Disaster Medical Coalition(CFDMC)'s goal is to develop and promote healthcare emergency preparedness and response capabilities in the East Central Florida Domestic Security Task Force Region 5 (RDSTF Region 5). CFDMC does this through facilitation with healthcare organizations and other key partners to work collaboratively to build, strengthen, and sustain a healthcare preparedness and response system in the region. This annex provides guidance to support a burn mass casualty incident (BMCI) in which the number and severity of burn patients exceeds the capability of CFDMC member facilities. The annex will identify the experts and specialized resources that exist within and external to the CFDMC that must be engaged in a mass burn response, and the mechanisms/processes that will be used to determine which patients go to which facilities.

1.2 Scope

This plan applies to the CFDMC and its nine counties and does not supersede the authorities or any plans of the participating entities. This plan achieves the capability as defined in the 2017-2022 Health Care Preparedness and Response Capabilities, Capability 1, Objective 3: Develop a Health Care Coalition Burn annex to our operational plan.

This plan applies to all Coalition member organizations, when an event occurs that is beyond the individual health care organization's ability to manage the response.   This plan does not supersede or conflict with applicable laws and statutes and is intended to supplement the state and local emergency operations plans with information specific to burn related events.

1.3 Overview/Background of HCC and Situation

1.3.1 Coalition Overview

Central Florida is uniquely vulnerable to large scale disasters. The July 2019 US Census estimates 4.5 million people reside in the nine counties in RDSTF-5 (Brevard, Indian River, Lake, Martin, Orange, Osceola, Seminole, St. Lucie and Volusia). Winter residents dramatically increase this population. In addition, domestic and international tourists flock to Central Florida for golf, shopping, water sports, theme parks and conventions. Orlando is the number one most visited destination in the world. Orlando International Airport was the 10th busiest airport in the nation before the pandemic with approximately 50 million passengers each year and rebounded at twice the average rate of travelers in December 2020. Visitors also arrive in Central Florida via cruises at Cape Canaveral, Florida's fastest growing port and the second busiest port in the world, with more than 5 million travelers annually. There are three large chemical manufacturing plants within the region. There are multiple international and

commercial airports, as well as both freight and passenger railroad service across the region. All of these factors increase the potential for a large-scale trauma/burn event in Central Florida.
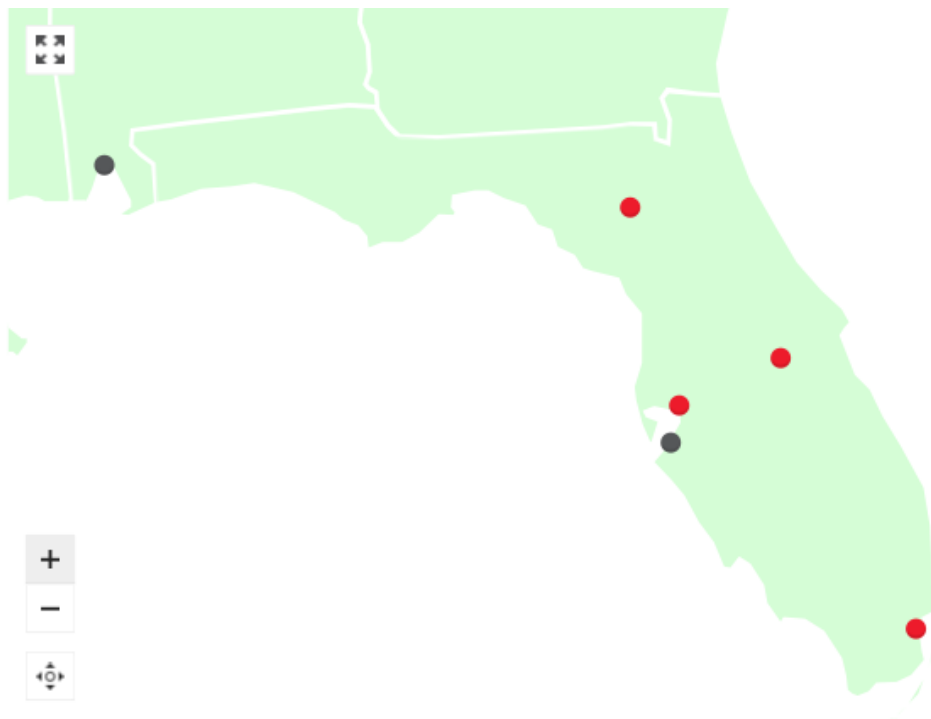
1.3.2 Burn Centers

A Burn Center provides a comprehensive team approach to the care of burn victims. The specialized clinical team, including burn surgeons, advanced practice providers, nurses, skilled technicians, occupational therapists, physical therapists, respiratory therapists, social workers, clinical nutritionists, pharmacists, and psychologists provide care throughout the continuum of care in the hospital and post-discharge through reintegration back into the community.

After completing the rigorous process set forth by the American Burn Association (ABA) and American College of Surgeons (ACS), the Burn Center is awarded national verification status. This verification demonstrates a continued commitment to the treatment of patients suffering burn injuries and the allocation of resources necessary to ensure the best outcomes. The State of Florida Trauma Standards also address burn care; however, both the ACS and the State of Florida follows the ABA's criteria with regard to burn center and burn care specifics. In addition, the Burn Center Director for each center maintains open communication with directors of other burn centers throughout the state as well as the Southern Region Coordination Center (SRCC) as a resource. Thru the SRCC, the disaster facilitator has access to essential contact information, predetermined regional burn center capabilities, information on regional transport capabilities, and a spreadsheet of ground transportation distances between all Southern Region burn centers (AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV).

Burn Center Verification is overseen by the American Burn Association (ABA) Verification Committee with endorsement of the American College of Surgeons Committee on Trauma (ACS-COT). Verified burn centers will have guidelines for transfer, triage, and treatment of burns. Providers must demonstrate competency in caring for the burn injured patient, and there must be adequate outpatient clinic facilities and post-injury burn recovery support. Verification – American Burn Association (ameriburn.org)

1.3.3 Burn Centers of Florida Map

The below map shows available Burn Centers. There are 85 ABA verified burn beds and 42 non-verified for a total of 127 beds with the potential to surge to a higher volume.

Red dots represent locations with ABA Verified Burn Centers

1.3.4 CFDMC's Burn Center

Within the boundaries of CFDMC and RDSTF-5 there is only one ABA verified burn center, the Warden Burn Center of Orlando Health, Orlando Regional Medical Center. The Orlando Health – Warden Burn Center is the destination for burn care within RDSTF-5 and the CFDMC.

Warden Burn Center
52 W. Underwood St.
Orlando, Florida 32806
United States

Adult Outpatient Burn Service
1335 Sligh Blvd, Suite 200
Orlando, Florida 32806
United States
407-649-6884
Region: Southern (AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV)

Burn Center Director Name: Howard G. Smith, MD
Burn Center Director Phone: 407-841-5142
Total Number of Beds: 10
Type of Burn Center: Adult
ABA Verified Burn Center: Yes, Verification Expires On: 3/31/2022
Head of Nursing: Kristy Hemingway
Burn Clinical Coordinator: Elizabeth Kovalovsky
Nursing Phone: 407-230-8406

1.3.5 Other Florida Burn Centers

Additional burn centers (4 verified and one not currently verified) are as follows:

University of Miami Jackson Memorial Burn Center
1800 NW 10th Ave
Miami, Florida 33136-1018
Region: Southern (AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV)
Burn Center Director Name: Louis R. Pizano, MD
Burn Center Director Phone: (305) 585-1290
Disaster Contact Emergency Phone: (305) 585-1822
Number of ICU Acute Care Burn Beds: 5
Number of Non-ICU (Step Down) Burn Beds: 25
Total Number of Beds: 30
Surge Capacity: 45
Type of Burn Center: Adult & Pediatric
ABA Verified Burn Center: Yes
Verification Expires On: 6/30/2021
Head of Nursing: Olga Quintana APRN, MSN
Nursing Phone: 305-585-1140

Shands Burn Center at the University of Florida
1600 SW Archer Rd. Box 100335
Gainesville, Florida 32610
Region: Southern (AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV)
24/7 Emergency Phone: (352) 265-0200
Burn Center Director Name: David W. Mozingo, MD, FACS
Burn Center Director Phone: (352) 273-5670
Disaster Contact Emergency Phone: (352) 265-0200
Number of ICU Acute Care Burn Beds: 15

Number of Non-ICU (Step Down) Burn Beds: 12
Total Number of Beds: 27
Surge Capacity: 40
Admission Ages: Adults & Pediatrics
ABA Verified Burn Center: Yes
Verification Expires On: 2/28/2022
Head of Nursing: Janet Popp, MSN, RN, CCRN
Nursing Phone: (352) 265-0200

Tampa General Hospital Regional Burn Center
1 Tampa General Cir
Tampa, Florida 33606-3571
Region: Southern (AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV)
24/7 Emergency Phone: (813) 844-7979
Burn Center Director Name: David Smith, MD
Burn Center Director Phone: (813) 844-8416
Disaster/Emergency Preparedness Contact: Wayne Cruse, MD
Disaster Contact Office Phone: (813) 844-8416
Number of ICU Acute Care Burn Beds: 6
Number of Non-ICU (Step Down) Burn Beds: 12
Total Number of Beds: 18 adults + peds ICU
Type of Burn Center: Adult & Pediatric
ABA Verified Burn Center: Yes
Verification Expires On: 8/31/2022
Head of Nursing: Lancia Simmons
Nursing Phone: 8138447103

Blake Medical Center
2020 59th St W
Bradenton, Florida34209-4604
Region: Southern (AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV)
Burn Center Director Name: Michael Van Vliet, MD
Burn Center Director Phone: 706-863-9595
Disaster Contact Emergency Phone: 855-863-9595
Number of ICU Acute Care Burn Beds: 6
Number of Non-ICU (Step Down) Burn Beds: 36
Total Number of Beds: 42
Surge Capacity: 21

Admission Ages: Adults Only 16 and older
ABA Verified Burn Center: No
Head of Nursing: Alexandara Cavallo
Nursing Phone: 941-567-2865

1.3.6 Trauma Centers
Although trauma centers have more capacity to treat burn victims than acute care facilities, they will not have the full capacity to treat the burn injured patient of a burn center. Patients with 2°/3° burns on less than 20% total body surface area (TBSA) of the body or do not otherwise meet the transfer criteria set forth by the ABA can be managed at trauma centers during a mass casualty situation. Region 5 has the following Trauma Centers:

Central Florida Regional Hospital - Level II
Halifax Hospital Medical Center - Level II
Holmes Regional Medical Center - Level II
Lakeland Regional Medical Center, Inc. - Level II
Lawnwood Regional Medical Center & Heart Institute - Level II
Orlando Regional Medical Center - Level I and ABA Verified Burn Center
Arnold Palmer Hospital - Pediatric Level I
Osceola Regional Medical Center - Level II

1.3.7 Non-Burn Center Acute Care
Burn injured patients may receive care at non-burn centers if they are not critically ill, have a less than 10% total body surface area (TBSA), are without inhalation injury, have not suffered concomitant trauma, and do not meet the transfer criteria set forth by the ABA. In large mass casualty event, where the nearest trauma centers are overwhelmed, this criteria may change to include larger TBSA burns up to 19%.

1.3.8 Regional Trauma Coordination Center
CFDMC's Regional Trauma Coordination Center (RTCC) makes data-and stakeholder-informed decisions to balance patient load and ensure high-quality care. The RTCC ensures that clinical decision-making directs the movement of patients and resources from one facility to another, or re-directs referrals that would usually go to an overwhelmed facility or system to one with capacity.

1.4 Assumptions
All hospitals providing emergency care may receive burn patients and should be able to provide initial assessment and stabilization. The agencies (EMS, fire, hospitals, public health, emergency management) within the jurisdiction will have primary responsibility for initial response including casualty distribution and triage of patients for forward movement.
The agencies (state public health, emergency management) will have primary responsibility for support of the response and will help coordinate transfers with the closest burn center/ABA

regional coordinating facility in accordance with established regional protocols and ABA burn transfer criteria.

Central Florida Disaster Medical Coalition and the state of Florida follow the Southern Region Burn Disaster Plan. In the event that more beds are needed for a mass casualty event, the Burn Director will contact the Southern Region Coordination Center, which will activate the Southern Region Burn Disaster Plan, conduct a burn bed census of non-affected burn centers in the region, and coordinate patient transfers out to those beds.

Southern Region Burn Disaster Plan expectations of preparedness and coordination are that Burn Centers and Level 1 and Level 2 trauma centers should plan for a major role in the receipt and care of burn patients and understand their role in a BMCI in their community or state. Care of critical burns is extremely resource-intensive and requires specialized staff, expert advice, and critical care transportation assets.
Severe burn patients often become clinically unstable within 24 hours of injury, complicating transfer plans after this time frame.
Federal resources (e.g., ambulance contract, National Disaster Medical System teams), though potentially available to assist, cannot be relied upon to mobilize and deploy for the first 72 hours.

2.   Concept of Operations

2.1 Activation
This plan will be activated upon rapid identification and communication to the local jurisdiction of a potential BMCI incident. This plan can be initiated by any of the region's hospitals, health clinics and offices, local health departments, emergency medical services, or County Emergency Operations Centers when potential BMCI occurs.

The Coalition staff activate whenever the state EOC is activated or for any event in the region that is larger than a single county. The Coalition has redundant communication capabilities with its members, including more than nineteen hundred individuals representing almost 700 organizations.

2.2 Notifications
The Coalition has redundant communication capabilities with its members and has demonstrated its effectiveness during real world incidents including the COVID-19 pandemic. During blue skies, the Coalition uses Constant Contact to share information on meetings, plans, trainings, and exercises with its members. During exercises and gray skies, the Coalition uses the Everbridge health alert network to share information with members. CFDMC has defined the essential elements of information (EEIs) that HCC members should report to the HCC, and coordinate with other HCC members and with federal, state, local, and tribal response partners during an emergency (e.g., number of patients, severity and types of illnesses or injuries,

operating status, resource needs and requests, bed availability). A platform(E-ICS) has been identified for information sharing.
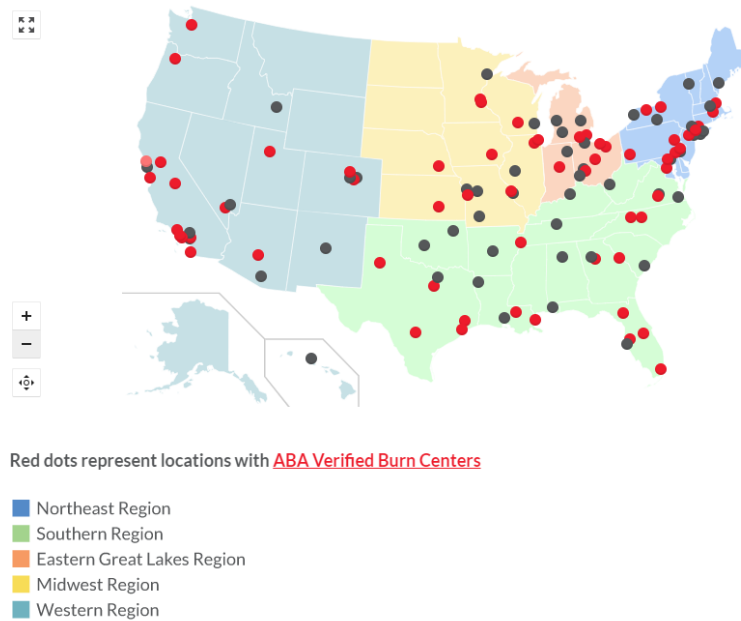
2.3 Roles and Responsibilities

2.3.1 Command and Coordination

The Incident Command System (ICS) is a management system that is used to achieve optimal command and control within an organization as well as seamless inter-agency coordination during any type of emergency. It uses a clearly defined chain of command with a limited span of control. The overarching goal is to assist Emergency Management and Emergency Support Function 8 (ESF-8) with the National Preparedness Goals mission areas: Prevention, Protection, Mitigation, Response, and Recovery as it relates to healthcare disaster operations.

- State Role: The Florida Department of Health (FDOH) State Surgeon General is responsible for the overall direction, management and control of all Department personnel and resources committed from the state. Once the State Emergency Response Team (SERT) is activated this plan is incorporated into the established state emergency management structure.
- Regional Role: The State and local ICS structure will expand and contract as the situation warrants. If an area command or multi-agency coordination system (MAC) is used, it will follow Regional Domestic Security Taskforce (RDSTF) geographical boundaries.
- Local Role: The Health and Medical Emergency Support System (ESF - 8) will coordinate and manage the response to an incident and will utilize the incident command system (ICS).
- EMS Role: EMS agencies provides emergency medical services outside of a hospital setting.
- Hospital Role: Hospitals are responsible for acute health care service provision.
- Coalition Role: The Coalition's role in information sharing is to monitor communications from local and State ESF8 and share information with member organizations that is not provided via other partners, such as regional status. CFDMC monitors all event systems used at the local and state levels for all disasters and shares relevant information. Informational posts are monitored, and relevant information is forwarded or included in the daily situation report. County situation reports are reviewed for situational awareness. Each county's mission requests submitted through WebEOC is reviewed to determine if local resources from within the Coalition can meet the need. If a resource requested is readily available locally through the Coalition or other member organizations, the Coalition will notify the State ESF8 desk and the local requestor of the available local resources. I directed by the State ESF8 desk, the Coalition will put the requesting organization in touch with the organization providing the resource to arrange transfer of the resource.
- Burn Center Roles: The American Burn Association (ABA)-designated Southern Region 1 encompasses Burn Centers located along the southeast and gulf coasts of the United States extending from Virginia through Texas, including West Virginia, Kentucky, Tennessee, Arkansas, and Oklahoma. For a BMCI occurring anywhere within the

Southern Region of the United States, the Southern Region Coordination Center (SRCC) serves as a communications and coordination center to support Burn Center(s) with burn bed census and/or patient triage and transfer. A BMCI is defined as any incident where capacity and capability significantly compromises patient care, as identified in accordance with individual Burn Center(s), state, regional or federal disaster response plans.

Red dots represent locations with ABA Verified Burn Centers

■ Northeast Region
■ Southern Region
■ Eastern Great Lakes Region
■ Midwest Region
■ Western Region

Upon request by a referring Burn Center, the SRCC will conduct a bed census of Southern Region Burn Centers to support and assist with regional efforts for patient triage and transfer. To request SRCC assistance contact: SRCC at University of Alabama at 800-359-0123.

The diagram below demonstrates how the SRCC plan revolves around two key personnel: the Burn Center Director at the center experiencing the emergency and an experienced burn surgeon located distant from the disaster site who functions as a disaster facilitator.

```
                        ┌──────────────────────────────────────┐
                        │        DISASTER IN PROGRESS           │
                        │ Burn patients transported to closest  │
                        │            burn center                │
                        │ Burn Center Director notifies SR CC    │
                        └──────────────────────────────────────┘
                                        │
                        ┌──────────────────────────────────────┐
                        │               SRCC                    │
                        │ Pages on-call Disaster Facilitator     │
                        │        (UAB burn surgeon)             │
                        └──────────────────────────────────────┘
                                        │
                        ┌──────────────────────────────────────┐        INFORMS
                        │        DISASTER FACILITATOR           │──────────┐
                        │  Reviews: pre-plans                   │   ┌──────────────────────────┐
                        │           burn center preferences     │   │ Southern Region Director  │
                        │           regional burn assets         │   │ ABA national leadership   │
                        │  Contacts: burn center director at     │   │ regional burn center      │
                        │            disaster hospital           │   │   directors               │
                        └──────────────────────────────────────┘   │ Burn Specialty Team Leader│
                                                                     └──────────────────────────┘
        COMMUNICATION
        ┌──────────────────────────────────────┐
        │    DISASTER BURN CENTER DIRECTOR       │              ┌─────────────┐
        │  Assessment of situation and needs     │              │  DISASTER   │
        │  Requests for any or all of :          │──────────────│ SITUATION IS│
        │     activation of regional disaster    │              │ STABILIZED ?│
        │       plan                             │              └─────────────┘
        │     diversion of further local          │            NO        YES
        │       admissions                        │
        │     patient transfer to other centers   │
        │     supplies from vendors or other      │
        │       centers                           │
        │     advice and assistance to civil      │
        │       leaders for activation of NDMS     │
        │       system                            │              ┌─────────────┐
        │     termination of disaster status      │              │    BURN     │
        │     return of transferred patients      │          NO  │ RESOURCES   │
        └──────────────────────────────────────┘              │ SUFFICIENT ?│
                                                                 └─────────────┘
    ┌──────────────────────────────────────┐                          YES
    │ LOCAL CAPABILITIES EXCEEDED or        │
    │ ADDITIONAL PATIENTS EXPECTED or       │
    │ SITUATION IS UNSTABLE, ONGOING or     │
    │ UNPREDICTABLE                         │
    └──────────────────────────────────────┘
```

STATUS: OFFLOAD	STATUS: DIVERT
Mass casualty situation exceeds local resources	Burn center can handle all present admissions
Patients will be transferred to other burn centers	No further disaster admissions anticipated
New admissions will go to next closest burn center	Burn center closes to all new local admissions for 2-4 days
Possible use of Burn Specialty Teams	New local admissions go to next closest center
Daily status re-evaluation	Possible use of Burn Specialty Teams
	Daily status reevaluation

2.4 Logistics

Resource management include logging, tracking, and vetting resource requests across the HCC and in coordination with the ESF-8 lead agency. This is done at the county level ESF-8. The state uses WebEOC to track all mission requests and the Coalition monitors all resource requests and

attempts to find needed resources from with-in the region.

The state of Florida utilizes ESS software system to monitor bed availability by type. This information is shared with the Coalition and the Coalition then shares this with its member agencies. Prioritization, transfer locations and the movement of patients to other facilities or specialty transfers is done in accordance with the state of Florida Patient Movement plan, the CFDMC Regional Trauma Coordination plan.

2.4.1 Space

Alternate care sites (ACS) may be identified by local emergency management, public health, or hospitals and may be used for surge capacity. Each county has an alternate care site plan and there is a regional ACS cache available upon request.

2.4.2 Staff

Maintaining appropriate staffing in healthcare facilities is essential to providing a safe work environment for healthcare personnel (HCP) and safe patient care. Maintaining appropriate staffing in healthcare facilities is essential to providing a safe work environment for healthcare personnel (HCP) and safe patient care. Healthcare facilities must be prepared for potential staffing shortages and have plans and processes in place to mitigate these, including communicating with HCP about actions the facility is taking to address shortages and maintain patient and HCP safety and providing resources to assist HCP with anxiety and stress. Health care facilities should be in communication with local healthcare coalitions, federal, state, and local public health partners (e.g., public health emergency preparedness and response staff) to identify additional HCP (e.g., hiring additional HCP, recruiting retired HCP, using students or volunteers), when needed. The state of Florida has an approved vendor list that includes nursing and support staff through contractual augmentation. This was tested in the real world pandemic response.

2.4.3 Supplies

Resource management include logging, tracking, and vetting resource requests across the HCC and in coordination with the ESF-8 lead agency. This is done at the county level ESF-8. The state uses WebEOC to track all mission requests. The Coalition monitors all resource requests and attempts to find needed resources from with-in the region.

The process for redistribution of available resources in the event of a medical surge event is outlined below:

- If a Coalition member organization needs assistance during a disaster response (staff, equipment, supplies, or other resources), the member organization submits a request to the County Emergency Operations Center (EOC). It is the county's responsibility to try to fulfill the organization's request.
- If the County EOC is unable to fulfill the request, the County submits requests to the State EOC through WebEOC. Once a request has been received by the State EOC from a county, it is initially processed by the County Liaison Desk under the direction of the

Operations Support Branch, who verifies the information. From there, it is assigned to the proper branch for tasking to the appropriate ESF. If the ESF can meet the provisions of the request, resource information is forwarded to the county EOC. If the ESF cannot provide the requested resources, it is then forwarded to the Logistics Section, who will work with either private vendors or through the Emergency Management Assistance Compact (EMAC) to secure the resources. If the resources are identified from private sources, the vendor information is given to the county emergency operations center.

- The Coalition monitors all resource requests and attempts to find needed resources from within the region.
- If a resource requested is readily available locally through the Coalition or other member organizations, the Coalition will notify the State ESF8 desk and the local requestor of the available local resources. If directed by the State ESF8 desk, the Coalition will put the requesting organization in touch with the organization providing the resource to arrange transfer of the resource.

2.5 Special Considerations

2.5.1 Behavioral Health

Disaster Behavioral Health responders work with survivors, families, responders, and the community to assist with the mitigation of emotional, psychological, and physical effects of a disaster, natural or man-made. Disaster behavioral health responders apply the concepts of psychological first aid to help those affected overcome the initial impact of shock, denial, and depression when confronting disasters.

2.5.2 Pediatric

Pediatric burns of minor to moderate severity will go to Arnold Palmer pediatric trauma center, which is not an ABA verified burn center. Severe or larger burns meeting transfer criteria should be transported to a verified pediatric burn center within the state once stabilized at a pediatric trauma center.

2.5.3 Combined Injury

The following are recommendations adapted from "Guidelines for Burn Care under Austere Conditions: Surgical and Nonsurgical Wound Management" (2017) developed by the physician leadership of the American Burn Association.

- Before assisting anyone, verify scene safety. Once you reach the patient with a burn injury, follow with general assessments for airway, breathing, circulation and address any potential for spine injuries with application of cervical collar and spinal immobility, if indicated. Follow disaster triage procedures for determining the priority of care needs. Always treat life threatening trauma injuries first.
- Identify and train a wound care team. Prepare a venue for wound care. Protect burn patients from extremes of temperature, especially prevent hypothermia and unprotected sun exposure as possible.
- Determine availability of topical antimicrobials and other wound care supplies.

- Use a potable water supply and soap to clean loose debris from burns. Then apply antimicrobial ointment to non-adherent gauze and place on open wounds and secure with dry gauze for once daily dressing changes.
- Provide adequate multimodal narcotic and non-opioid analgesia and anxiolysis.
- For patients with minor burns (<10% TBSA), consider having them perform their own wound care or help each other if resources are limited.

American Burn Association. (2018). *Advanced Burn Life Support Course – Provider Manual 2018 Update.* Chicago.

Cancio, L. C., Barillo, D. J., Kearns, R. D., Holmes, J. H., Conlon, K. M., Matherly, A. F., Cairns, B. A., Hickerson, W. L., & Palmieri, T. (2017). *Guidelines for Burn Care Under Austere Conditions: Surgical and Nonsurgical Wound Management, 34*(4), 203-214. http://doi.org/10.1097/BCR.0000000000000368

2.6 Operations- Medical Care

2.6.1 Triage and Secondary Triage

Below are considerations for triage of burn patients and expectations for hospital transport including patient allocation by number of patients, age, and severity priority for burn and non-burn hospitals.
- If facility resources are overwhelmed, triage according to the "Resource Triage Diagram for Burn Injury in a Disaster" (see Rule of Nine's below). To estimate Total Body Surface Area (TBSA) burn use the "Rule of Nines" or Palmar Method. Note: Only 2nd and 3rd degree burns are tallied.
- Direct exposure to ionizing radiation (even as low as 2-6 Gy) may change the above triage categories (worsened outcomes).
- Consider concomitant injuries from the effect of the blast.
- Follow Advanced Trauma Life Support (ATLS) guidelines.

Secondary triage of patients to an appropriate center for continued care will be critical – this function may have to be delegated to burn experts outside the immediately affected area, due to competing demands for direct patient care and based on available resources within the Coalition. In this event the CFDMC and the local jurisdiction having authority may activate the RTCC to assist with patient placement.

The following criteria is recommended for consideration during triage:

Scene Triage:
- ≥20% TBSA or Inhalation Injury with Respiratory Distress go to the closest trauma center
- <20% TBSA go to the closet acute care hospital

Secondary Transfer Triage:

- ≥20% or inhalation injury stabilize at trauma center and transfer to burn center
- All other patients requiring admission: stabilize and consult Burn Center (Transfer center will be in connection with incident command at the Burn Center) Burn Surgeon will triage based on Burn Center, regional, state, and Southern Burn Region situation as well as clinical burn care needs.

2.6.1 Rule of Nine's

Front of Body

4.5% Face/Neck
9% Entire Head/Neck

9% Entire Right Arm
9% Entire Left Arm

9% Upper Anterior Trunk
9% Lower Anterior Trunk
18% Entire Anterior Trunk

1% Perineum

9% Upper Front Leg
9% Lower Front Leg
18% Entire Leg

Back of Body

4.5% Back of Head/Neck
9% Entire Head/Neck

9% Upper Posterior Trunk
9% Lower Posterior Trunk
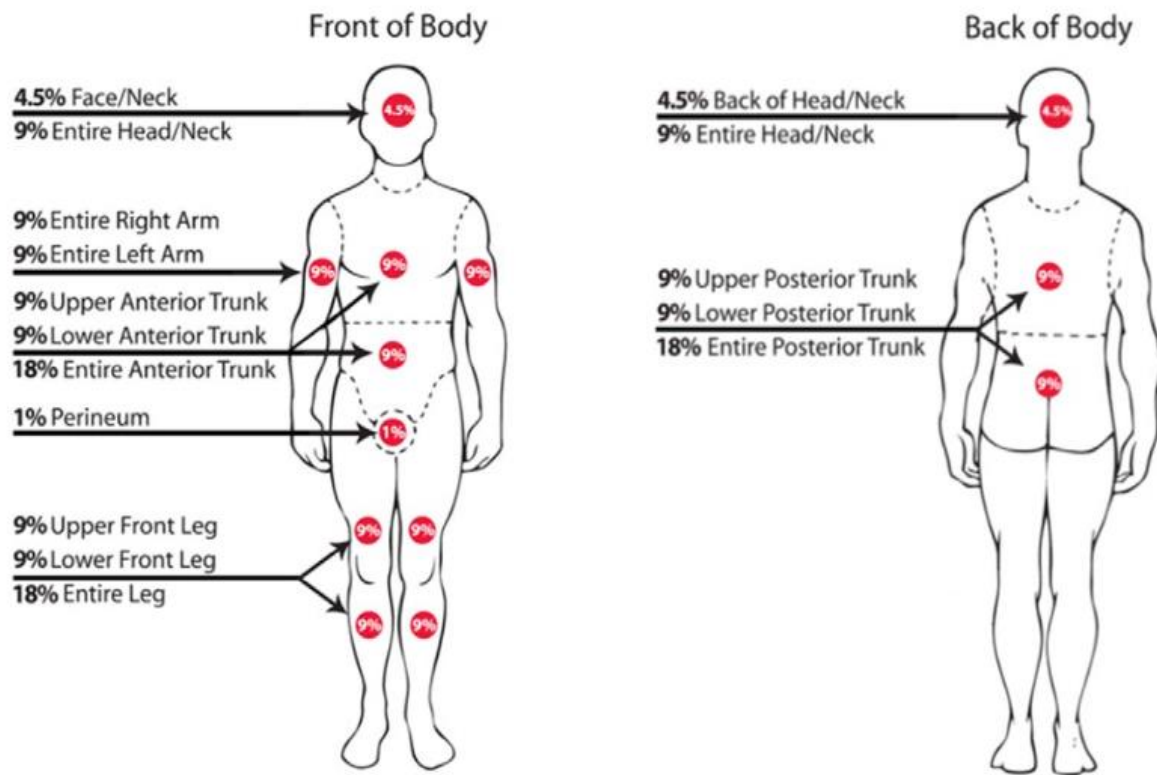18% Entire Posterior Trunk

Figure 1. Depiction of the Rule of Nine's and Palmar Method of burn size estimation. For the Rule of Nines, each body region has a surface area in a multiple of nine. In the Palmar Method, the patient's palm represents approximately 1% of that patient's BSA. Reprinted with courtesy from The Burn Center at Saint Barnabas Medical Center, Livingston, New Jersey.

Burn Center Referral Criteria

A burn center may treat adults, children, or both.

Burn injuries that should be referred to a burn center include:

1. Partial thickness burns greater than 10% total body surface area (TBSA).
2. Burns that involve the face, hands, feet, genitalia, perineum, or major joints.
3. Third degree burns in any age group.
4. Electrical burns, including lightning injury.
5. Chemical burns.
6. Inhalation injury.
7. Burn injury in patients with preexisting medical disorders that could complicate management, prolong recovery, or affect mortality.
8. Any patient with burns and concomitant trauma (such as fractures) in which the burn injury poses the greatest risk of morbidity or mortality. In such cases, if the trauma poses the greater immediate risk, the patient may be initially stabilized in a trauma center before being transferred to a burn unit. Physician judgment will be necessary in such situations and should be in concert with the regional medical control plan and triage protocols.
9. Burned children in hospitals without qualified personnel or equipment for the care of children.
10. Burn injury in patients who will require special social, emotional, or rehabilitative intervention.

2.6.3 Circulation (Resuscitation)

The below sections come directly from the Advanced Burn Life Support (ABLS) Manual and are based upon "Guidelines for Burn Care Under Austere Conditions". Our region follows what is taught in the most current version of ABLS.

Oral resuscitation should be considered for awake and alert pediatric patients with burns < 10% TBSA, and adult patients with burns < 20% TBSA.
In the pre-hospital and early hospital settings, prior to calculating the Total Body Surface Area (TBSA) burned, the initial fluid rates for patients with visibly large burns are based on patient age:
5 years old and younger: 125 ml Lactated Ringers (LR) per hour
6-13 years old: 250 ml LR per hour
14 years and older: 500 ml LR per hour

Definitive calculation of hourly fluid rates (termed "adjusted fluid rates") occurs during the secondary survey. The adjusted fluid rates below are also known as the Consensus Formula. The adjusted fluid rates are calculated according to the table below:

Category	Age and weight	Adjusted fluid rate
Flame or scald	Adults and older children (≥ 14 years old)	2 ml LR x kg x % TBSA
	Children (<14 years old)	3 ml LR x kg x % TBSA
	Infants and young children (≤ 30kg)	3 ml LR x kg x % TBSA Plus D_5LR at maintenance rate
Electrical Injury	All ages	4 ml LR x kg x % TBSA Plus D_5LR at maintenance rate for infants and young children

Check the patient's urinary output and physiological response to decide further fluid titration. It is better to increase fluids based on response than to attempt to remove excess fluids once given. Some patients, including those with a delayed start of fluid resuscitation, prior dehydration, chronic or acute alcohol use or abuse, methamphetamine lab injuries, high voltage electrical injuries, or inhalation injuries may require more than the estimated fluids. Again, the adjustments to fluid rates are based on patient response.

If the patient is not responding to increases crystalloid volume, consider 5% Albumin or FFP. If means of communication available, contact a burn surgeon for assistance or consider re-triage of resources.

2.6.4 Airway/Breathing
Considerations:
• If there is a lack of ventilators, separate the need for airway protection from the need of mechanical ventilation.
• Utilize airway adjuncts where necessary.
• May need to ration oxygen.
• Conduct periodic airway/ventilator needs assessment rounds.
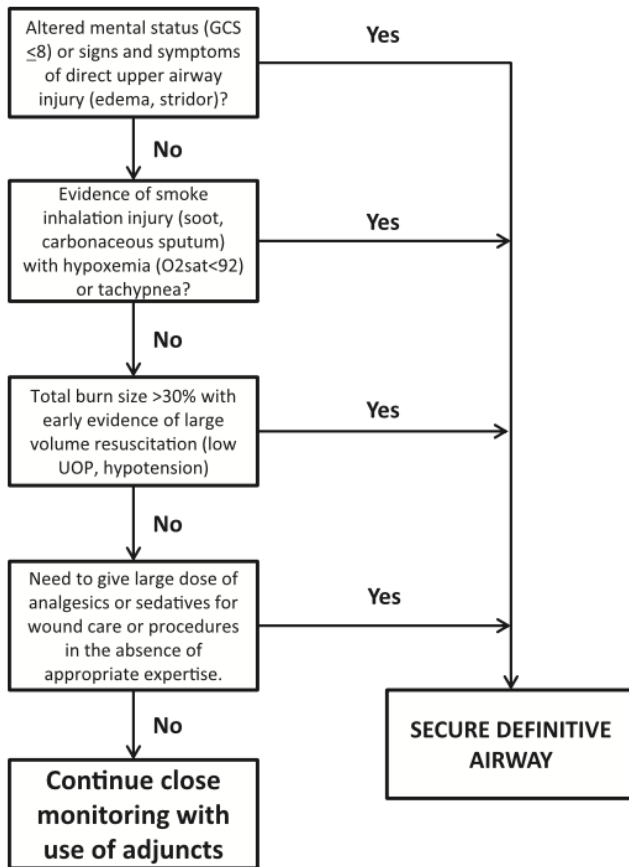• C-spine precautions as needed.

Figure 2. Proposed decision matrix for airway management during burn disasters.

2.7 Transportation

The Trauma Coordination Center transport coordinator will coordinate with EMS for patient transport. The appropriate EMS asset will be assigned based on the level of care required during the transfer, the acuity of the patient, and the destination. The Trauma Coordination Center will contact the requestor based on the appropriate level of care and bed availability information, in consultation with or by the Trauma Coordination Center medical officer.

Once a receiving facility has been identified and confirms acceptance of the patient(s), the Trauma Coordination Center transfer coordinator will coordinate a clinical provider call between the requesting facility and receiving facility.

2.8 Tracking

The primary purpose of patient movement and tracking within the plan is to decompress overwhelmed healthcare facilities through an equitable distribution of patients. The Trauma Coordination Center will coordinate the inter-facility transfer of patients, including to alternate care sites, if all conventional care resources in the region have been exhausted and the State ESF8 is unable to find conventional care resources in neighboring regions. CORVENA E-ICS has been identified as a platform to assist with this.

The Trauma Coordination Center has responsibility for patient tracking, with assistance from the EMS agencies conducting the patient transport, using the CORVENA E-ICS platform. The Trauma Coordination Center is responsible for entering patient data into the system and verifying patient locations and dispositions.

2.9 Rehabilitation and Outpatient Follow Up Services

Burn rehabilitation starts within the first 24 hours of admission, where a burn patient is evaluated by a Burn Center trained physical and occupational therapists. They are then seen for therapy daily while admitted to the hospital, and can be seen by the same burn-trained OT/PT during their follow-up appointments in the outpatient burn clinic.
 Outpatient Burn clinic is held 5 days a week, and a patient can self-refer, may be referred upon discharge from the Emergency Department, or may be sent to us from a rehab center, SNF, or other facility.

Orlando Health also has a burn survivor support group that meets every other month on the first Tuesday, from 6p-7p. Orlando Health are also in the process of launching a Phoenix Society SOAR chapter, which connects burn survivor peer supporters with acute burn patients. (phoenix-society.org)

2.10 Deactivation and Recovery

Demobilization can be done by scaling back services as they are no longer needed. Tasks associated with this include:
- Coordinate demobilization with Agency Representatives.
- Identify surplus resources and probable release time.
- Develop incident check-out function for all units.
- Evaluate logistics and transportation capabilities to support demobilization.

3.   Appendices (links)

3.1 Training and Exercises
3.2 Legal Authorities
   2019-2023 HPP Funding Opportunity Announcement (FOA)

3.3 Burn Care Resources

Burn Care

Pediatric Considerations

Mass Burn Event Overview

Just-in-Time Training Summary Sheet

Southernregionmciplan.pdf (ameriburn.org)

Disaster Response – American Burn Association (ameriburn.org)

Advanced Burn Life Support (ABLS)

American Burn Association. (2018). Advanced Burn Life Support Course – Provider Manual 2018 Update. Chicago.