CHNC Educational Web Series:

Emergency Preparedness and Disaster Management for NICUs

CHNC
Children's Hospitals Neonatal Consortium

Welcome to the Emergency Preparedness and Disaster Management web series!

This series is developed in collaboration with the CHNC Educational Advisory Committee, CHNC Transport Focus Group, and the Pediatric Pandemic Network.

Calls occur the 2nd Wednesday of each month
3-4pm CT / 4-5pm ET

Next call will be September 10, 3-4pm CT / 4-5pm ET

If you are registered for this call, you should have all the 2025 invites on your calendar. If you need to register, please reach out to eac@thechnc.org

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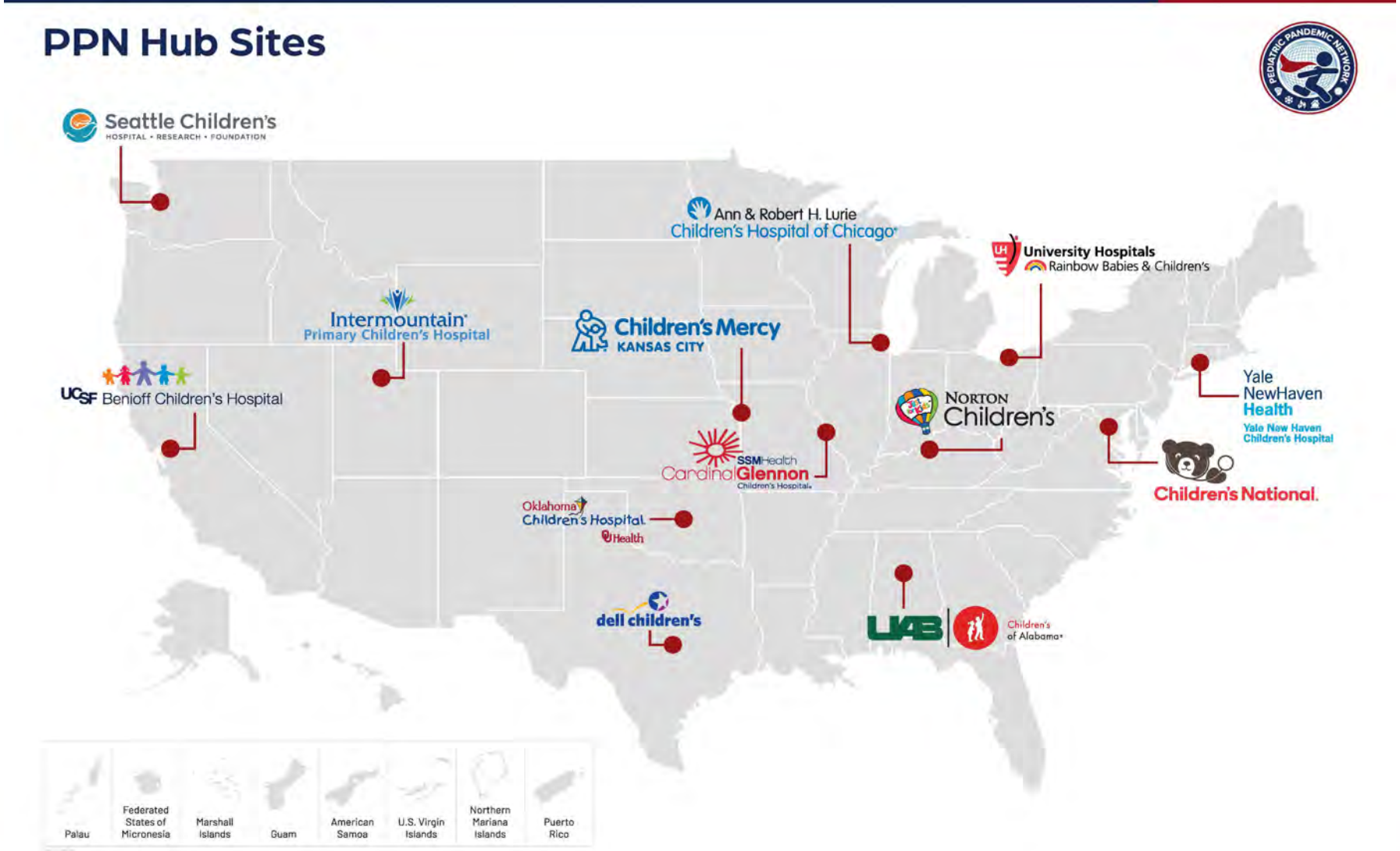
Pediatric Pandemic Network



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The Role of the Transport Team in Emergency Preparedness

CHNC Transport Focus Group

CHNC
Children's Hospitals Neonatal Consortium

Our Speakers

Emergency Preparedness

Bernie Estiandan, RRT, NPS, C-NPT
Respiratory Care Practitioner Transport Specialist
Alan Purwin Emergency Transport Program
Children's Hospital Los Angeles

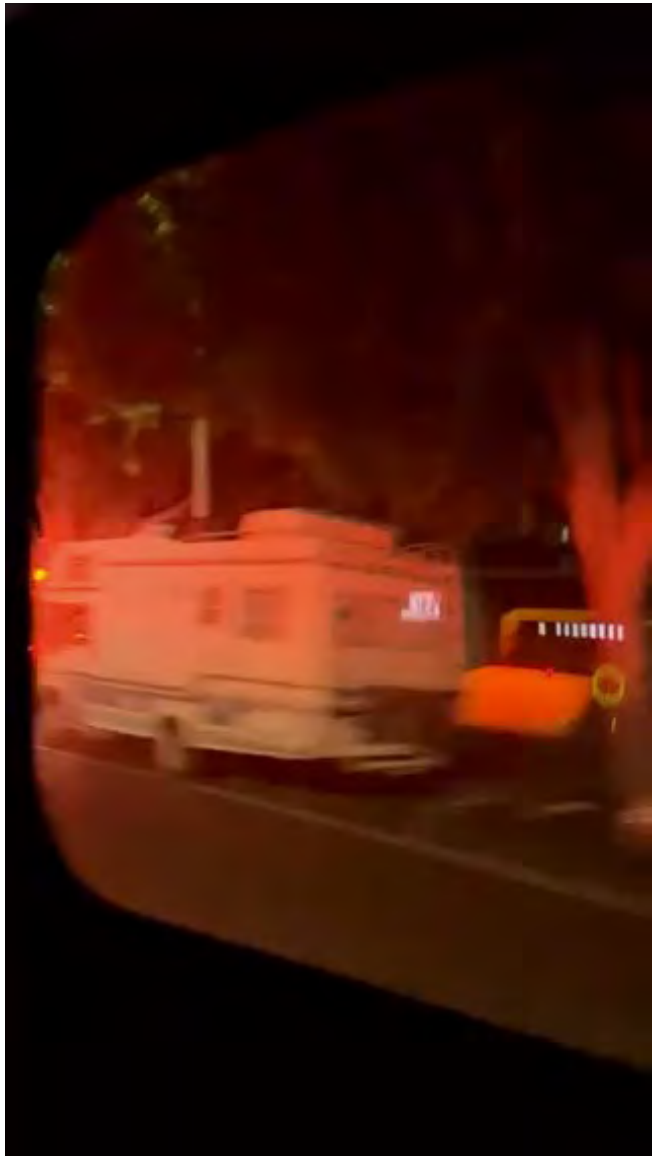
CHNC

Generator Failure

- August 21 2023 White Memorial lost power during tropical storm Hilary.
- 241 patients were moved. 30 of which were deemed critical.

Arriving on scene

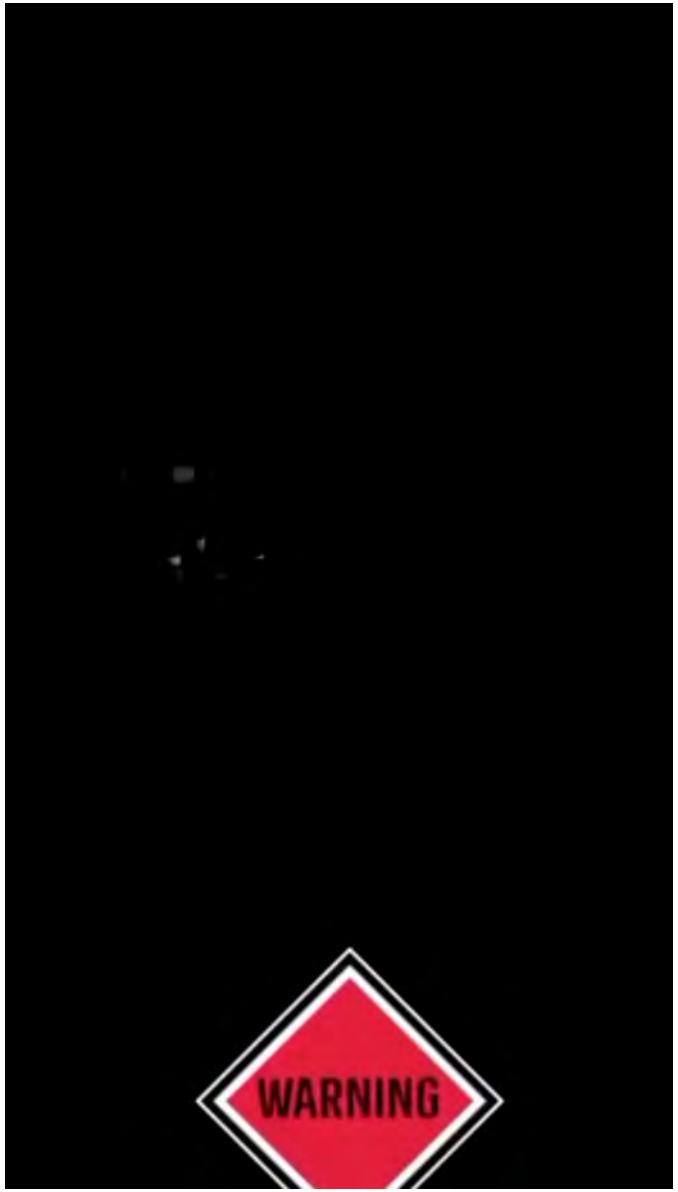
- Our team was not dispatched for Critical NICU patients.
- Navigating traffic of incoming and out going LAFD Ambulances.
- LAFD had a single gurney carrying two or three NICU patients.
- Lack of resources.
  - No monitors
  - 100% oxygen
  - Open to elements



Children's Hospital LOS ANGELES

Evacuation

- No elevator
- No visibility
- No emergency evacuation equipment available.
- Assigned roles for patient transport to ensure patient safety.



Lessons Learned & Preplanning

- Evaluation of resources available
  - Oxygen sources
  - Transportation devices
  - Effective strategies for maneuvering through LAFD traffic.
- Yearly competencies = Equipment day
  - Understanding how and when to use emergency evacuation equipment.
    - Medsled and Medsled Evac Basket
    - Emergency action plan binders in Office and Helipad
  - Annual emergency training provided by department disaster leaders.
    - Command center communication

Transport Disaster Preparedness: The El Paso Experience

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Chair of the Quality and Patient Safety Committee
El Paso Children's Hospital
Associate Professor
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Texas Tech University Health Sciences- El Paso

Wanda L. Helgesen, MSN, RN
Executive Director
BorderRAC

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BORDER RAC REGIONAL ADVISORY COUNCIL

Transport Disaster Preparedness The El Paso Experience

Sadhana Chheda MD

Associate Professor, Division of Neonatology | Department of Pediatrics TTUHSC-EL Paso

Medical Director of Neonatal Transport & Chair of the EPCH Quality and Patient Safety Committe

El Paso Children's Hospital

Wanda Helgesen MSN, RN

Executive Director of the BorderRAC

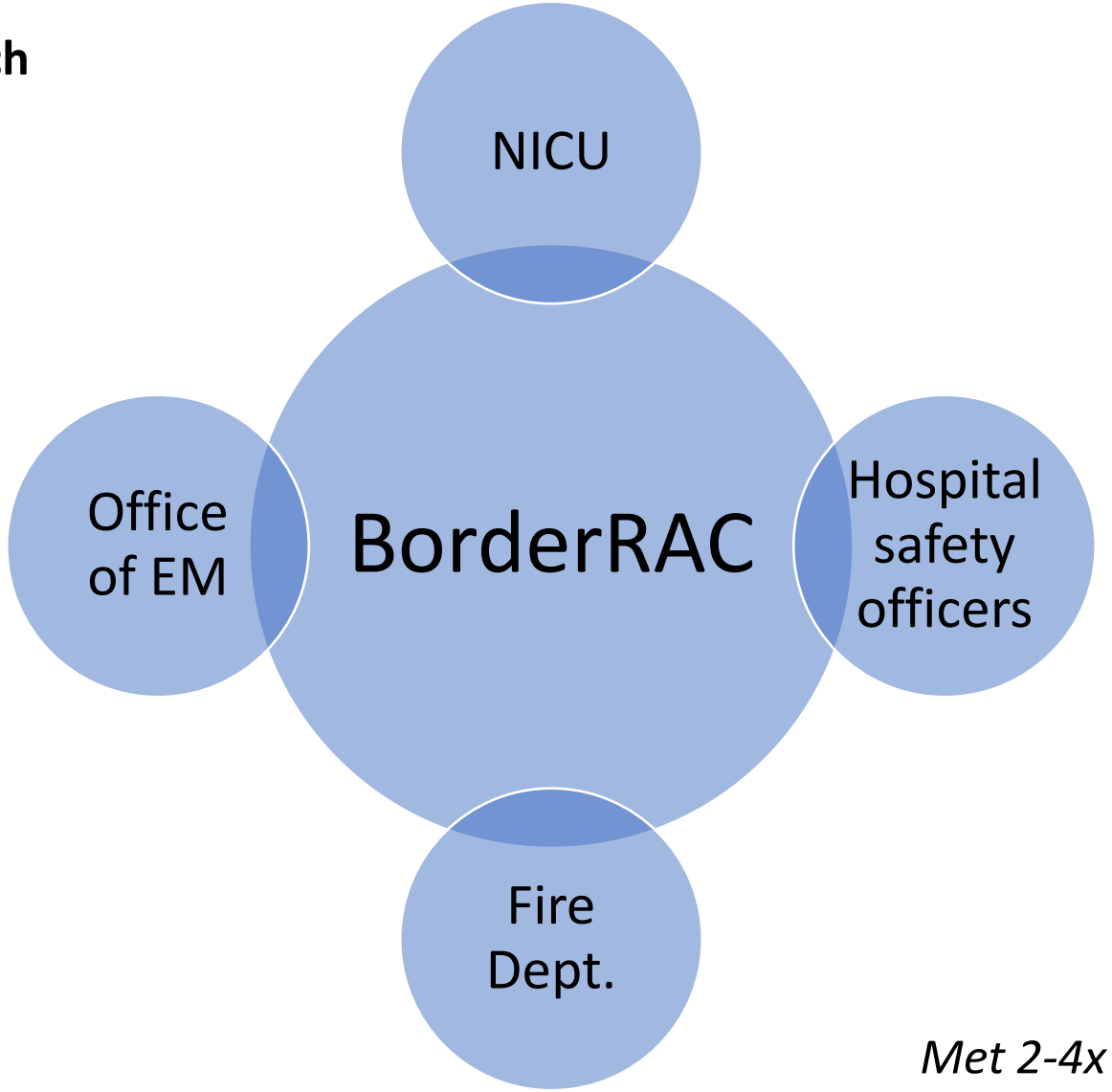
City-Wide NICU Evacuation Simulation

- Rationale:
  - Federal requirement
  - An actual fire that occurred in a NICU in 2012
  - The creation of levels of care designations for neonatal services in 2013

Planning

- City-wide Perinatal Committee
- Under the RAC umbrella
- Utilizing the Homeland Security Exercise Evaluation Program

Multidisciplinary Approach



Met 2-4x before exercise (6 weeks)
Tabletop exercise performed

Scenario

- Simulated electrical fire in the neonatal intensive care unit.
- NICU had to vertically evacuate 6 simulated patients of varying acuity into awaiting ambulances in the hospital parking lot with intent to transfer to another facility
- Evacuated simulated patients included 1 of the highest acuity (intubated, mechanically ventilated, and on multiple continuous intravenous infusions), 2 of medium-acuity (on oxygen and intravenous infusion), and 3 low-acuity patients (on gavage feedings)
- Elevators could not be used.
- The evacuation exercise included actual response from the EPFD and ambulance services.
- Parents were notified in advance, and signs were placed outside the NICU doors when drill was taking place

Objectives

- Implement hospital interagency notification protocols and activate Hospital Command Center.
- Begin evacuation and mobilize all available critical resources.
- Coordinate triage and evacuation from NICU facility with pre-hospital providers within 10-15 minutes of incident.
- Evacuate each patient outside to hospital grounds to await ambulance arrival. As soon as safe to do so, continue providing patient care for neonatal patients. The exercise ends when the critical infant is loaded into an ambulance.
- Establish and evaluate incident command and unified command between the participating organizations.
- Establish effective communication and coordinate public safety.
- Issue public information, alert, warnings and notifications to the public in a timely and accurate manner.

Core capabilities and emergency response objectives for each NICU evacuation exercise

Core Capability	Objective
Communication	Establish emergency/disaster communication utilizing equipment and methods to include: - Appropriate and timely external notification of the emergency and coordinate with public safety. - Effective and timely internal notification. ◦ Notification of hospital operator, activation of fire alarm, notification of necessary personnel within 5 minutes of incident. - Effective communication within the facility among the various elements and locations of emergency response to include utilization of all communication methods used such as telephones, radios, cell phones, and runners.
Staff Responsibilities	Utilization of fire response procedures – Rescue, Alarm, Confine, Extinguish/Evacuate (RACE)
Safety and Security	Secure the area and assure the safety of associates, visitors, and patients.
Patient and Clinical Support Activities Resources/Assets	Coordinate triage and initiate evacuation from NICU within 10 minutes, ensuring patient care was provided during horizontal and vertical (if applicable) evacuation.
Staff Responsibilities Facility Emergency Response	Activation of hospital command center within 10 minutes of initial fire and utilization of hospital incident command system.
Resources/Assets	Issue public information, alert, warnings, and notifications to the public in a timely manner.
Patient Clinical and Support Activities	Tracking of patients and staff during evacuation.

Post Event Analysis

- The timed objectives were completed in the majority of NICUs.
- In 5 out of 6 NICUs notification of fire within 5 minutes was performed without challenges
- In 4 out of 6 NICUs, establishment of a hospital incident command within 10 minutes was performed without challenges
- In 4 of 6 of the NICUs, triage and initiation of evacuation within 10 minutes was performed without challenges
- Only 2 NICUs thought to utilize their transport teams

Post Event Analysis

	Theme	Number of NICUs Reporting This Theme*
Areas of Strength	Patient Headcounts/Tracking Performed	6
	Quick arrival of personnel reinforcements from other departments	6
	Availability and knowledge of evacuation equipment	5
	Teamwork	4
	Clear leadership assumed within NICU	4
	Successful use of a staging area/rally point in another part of hospital	3
	Quick internal notification of incident	3
Areas for Improvement	Lack of understanding of incident command structure	6
	Lack of enough resources/equipment for care in staging areas/rally points	5
	Inadequate communication with EPFD	5
	Evacuation route unclear or lack of knowledge of alternative evacuation route	5
	Head counts/tracking of staff and visitors	4
	Staff slow to move away from fire areas/ re-entered fire areas	3
	Requested more evacuation drills	6

Post Event Analysis --- Areas of Struggle

Tasks	Number of NICUs Reporting This Theme*
NICU staff labels and stores patient's medication properly, when transporting from one area to another	6
Unified Command personnel will develop a message and select appropriate person to deliver message to the media and alert the public to the incident, as soon as possible	6
NICU staff establishes minimum supply of formulas for infant feeding. NICU staff has adequate supply of waterless hand cleaners, gloves, diapers, feeders/nipples, IV tubing and solutions	5
Hospital Command Staff will be communicating and coordinating all response activities with other agencies in the Hospital Command Center that have arrived to assist	4
NICU staff gathers and utilizes alternative medical equipment to use during the evacuation process such as self-inflating bag valve masks, gas powered ventilators, battery powered monitors such as pulse oximeters, bulb syringes or other non-electric suction devices, flashlights, additional blankets/hats, chemical warming mattress, battery operated fans, and baby evacuation vests	3
Ensure others who may have been injured during the incident, receive the appropriate treatment	2

Post Event Analysis

- Staff are protective of babies and were unrealistic in:

  Being able to re-enter the building in a fire

  Who should go first (not always the sickest)

  Having the tools to resuscitate at “the bottom” knowing some of the sickest of the sick would come out in the arms of firefighters, not hospital staff.

EPFD Comments

- Solid teamwork and the ability of the NICU staff to start evacuation before EPFD arrival
- Lack of organization and communication within the incident command structure
- Lack of knowledge of alternate evacuation
- Staff were unrealistic about the ramifications of smoke exposure
- Walking briskly, not running, while carrying patients
- Use of ‘spotters’ for staff carrying patients in stairwells

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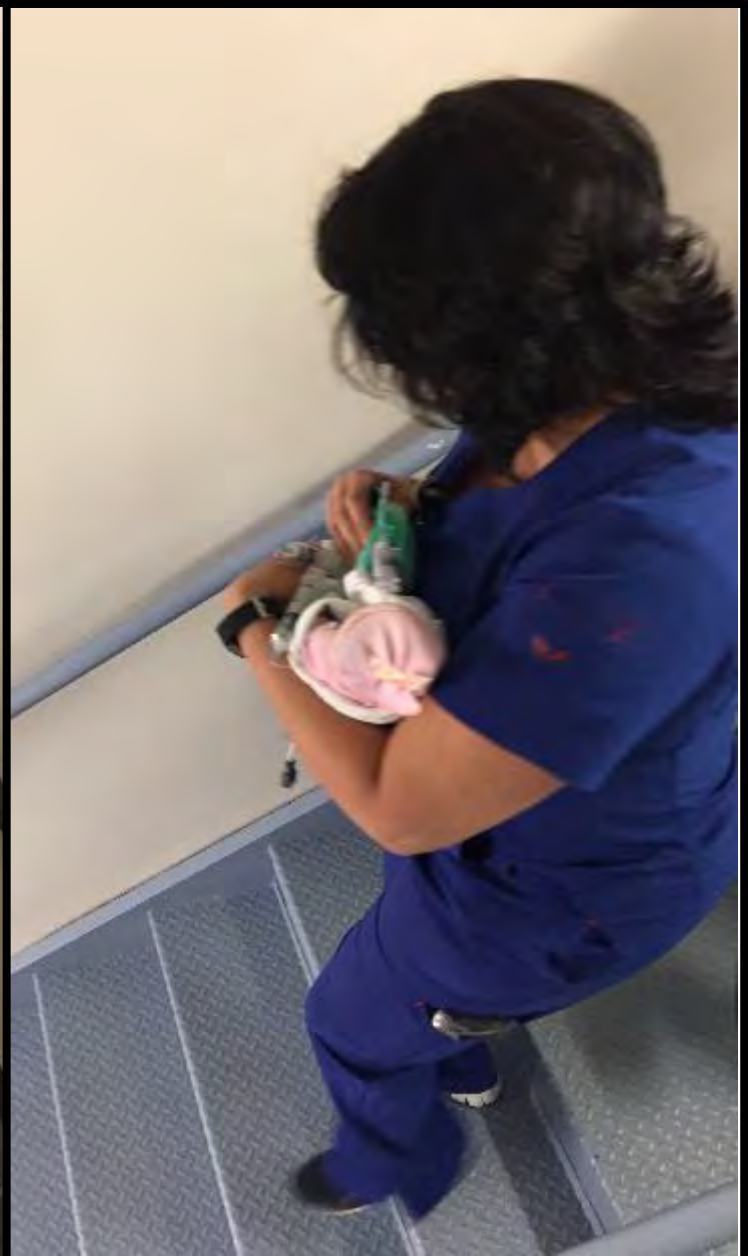


AVIATOR

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Summary

- NICU staff do not have a clear understanding of the hospital-wide incident command structure and their role within that
- The mass casualty mind frame, known well to our trauma compatriots, is not common among the NICU community
- Passive training does not consider equipment needs for post-evacuation care, alternative evacuation routes, understanding of incident command structure, and unified communication with first responders, the public, and other facilities
- Concepts specific to the care of the neonate were performed well (patient identification & patient care)

Lessons Learned

- Incident command training for NICU leadership is needed.
- Mass casualty triage strategies are necessary when evacuating large numbers of patients (most good for the most patients)
- A neonatologist should assume the role of incident commander (“captain of ship:) who in coordination with nursing leadership provides clear instructions to teams of staff to prepare patients for evacuation.

Lessons Learned

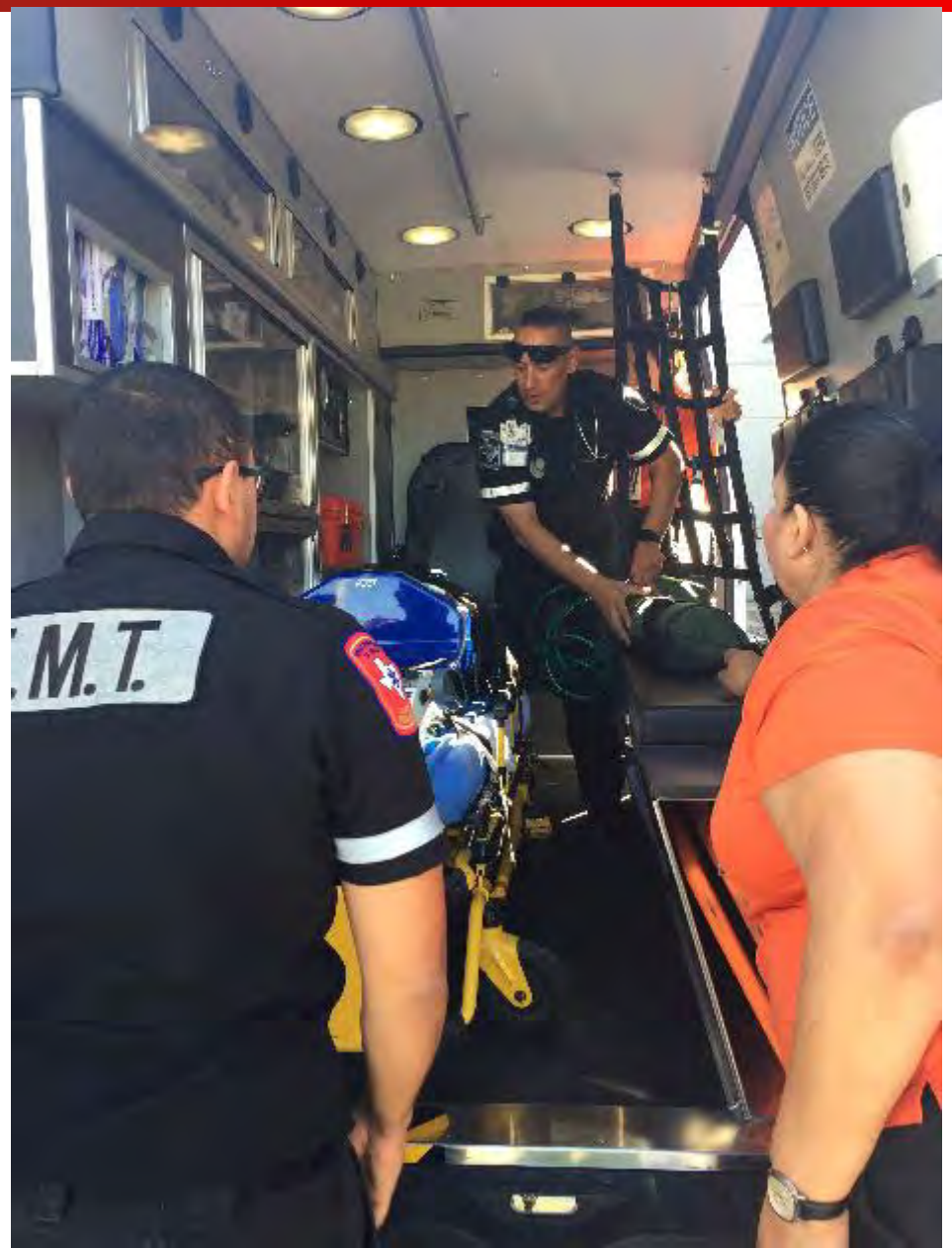
- Establish a communication process within the NICU and with the EOC
- Communication has to be simple. Use common terminology and clear text
- Appoint triage leader (neonatologist) to determine which babies leave first (mass casualty attitude) & what meds & equipment will be utilized for the evacuation
- Determine all possible evacuation routes within the Unit
- Place way-finders along the evacuation route

Lessons Learned

- Set up a staging area (staffed with Neo & RN) at the exit point where babies & staff can be processed.
- Prepare "GO Kits" and pre-filled backpacks with infant care supplies that would be required to meet patient needs. The back packs should be filled with enough supplies to carry us forward for about 4-6 hours

Conclusion

- Although hospitals have an extensive disaster plan, the expertise and knowledge to execute an efficient and effective evacuation needs to be the responsibility of the caregivers working in NICU.
- Simulation is an effective way for hospitals to bolster staff knowledge in emergency preparedness


E.M.T.


TEXAS
M-6784

The Triage by Resource Allocation for INpatients (TRAIN®) Tool Overview

Ronald Cohen, MD
Clinical Professor of Pediatrics
Stanford University School of Medicine

The **T**riage by **R**esource **A**llocation for **IN**patients (TRAIN®) Tool: An Overview



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Stanford | MEDICINE

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The TRAIN® Tool – What is it?

- Triage tool designed for hospitalized patient movement
- Uses resource needs of patient to determine transport needs in case of evacuation
- Created by expert opinion and aligned with local EMS protocols for transport
- Over a decade of experience & trial

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The TRAIN® Tool: Developed at Stanford Children's Health

- Tested for the following populations:
  - Neonatal
  - Pediatrics
  - Obstetrics
  - Adults
- Integrated into different electronic health records
- Easy just-in-time training
- Used in multiple organization

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Neonatal/Pediatric TRAIN® Tool

Transport	*Blue/Car*	*Green/BLS*	*Yellow/ALS*	*Orange/ CCT*	*Red/ Specialized*
Life Support	Stable	Stable +	Minimal	Moderate	Maximal
Mobility	Car/Carseat	Wheelchair or Stretcher	Wheelchair or Stretcher	Stretcher	Incubator or Immobile
Nutrition	All PO	Intermittent Enteral	Continuous Enteral or Partial Parenteral	TPN Dependent	
Pharmacy	PO Meds	IV Intermit meds	IV Fluids	IV Drip x1	IV Drip ≥2

Life Support	**Stable + =**	Low flow oxygen
	Minimal =	Oxygen hood, chest tube, etc.
	Moderate =	CPAP/BiPAP/Hi-Flow, Conventional Ventilator, Peritoneal Dialysis, Externally paced, continuous nebulizer treatments, etc.
	Maximal =	Highly specialized equipt., e.g., Neonatal Ventilator, HFOV, ECMO, iNO, CVVH, Berlin Heart, wt ≤ 1.5 kg, specialized medical personnel, etc.
Mobility	**Car/Carseat =**	Able to ride in automobile with age-appropriate restraints
	Incubator =	Transport incubator with equipment for connecting to ambulance
	Immobile =	Unsafe to move without special equipment e.g., neurosurgical/bariatric

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Neonatal TRAIN® Case

Neveah is a 3-day old 29-week premature baby girl who has severe hypoxemic respiratory failure. She is requiring high frequency oscillatory ventilation with inhaled nitric oxide. She is on multiple pressor infusions. She has been NPO and is on total parenteral nutrition.

Using the TRAIN® Matrix, how would this patient be categorized?

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Transport	Blue/Car	Green/BLS	Yellow/ALS	Orange/ CCT	Red/ Specialized
Life Support	Stable	Stable +	Minimal	Moderate	Maximal
Mobility	Car/Carseat	Wheelchair or Stretcher	Wheelchair or Stretcher	Stretcher	Incubator or Immobile
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	Incubator =	Transport incubator with equipment for connecting to ambulance
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Neveah would be **RED**.

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Integration of TRAIN® Tool into the EHR

- Automation decrease clinical workflows
- Non-biased categorization
- Discreet data points from nursing chart rather than from orders
- Validation to ensure that the coding is correct

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Time Comparison Data

Computer

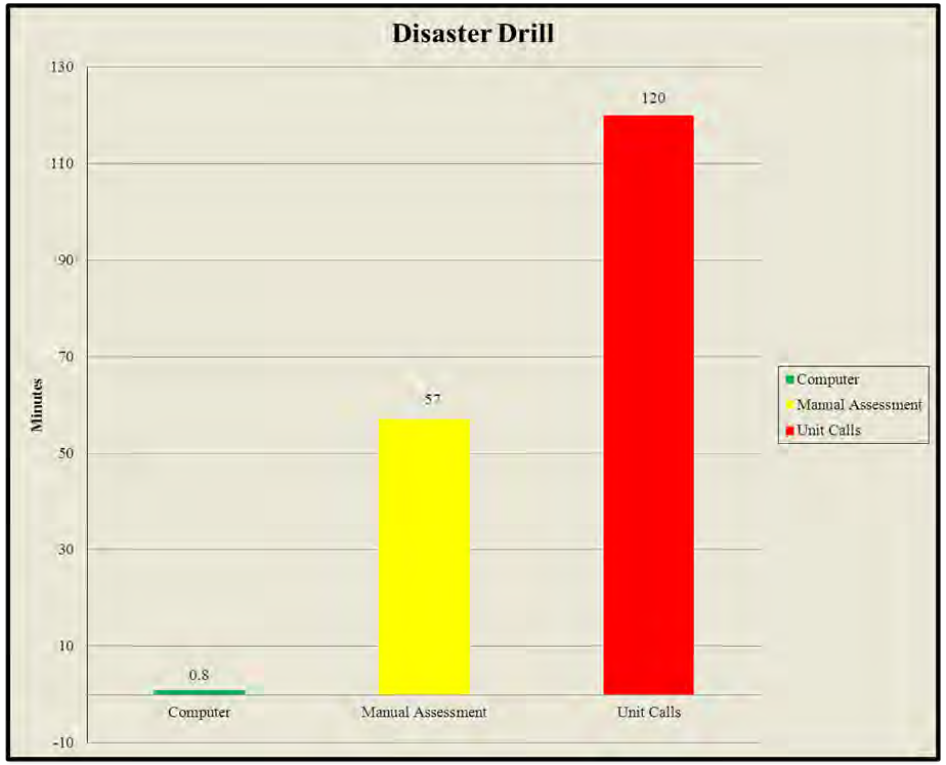
- 48 second

Manual

- 57 minutes

Command center request

- over 2 hours



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Uses for TRAIN® Tool in the EHR

- Daily reports
  - Office of Emergency Management
  - Administrative Nurse Supervisor
- Updates with any change in documentation
- Report is available to run at anytime
- Downtime report
- Decision making regarding personnel

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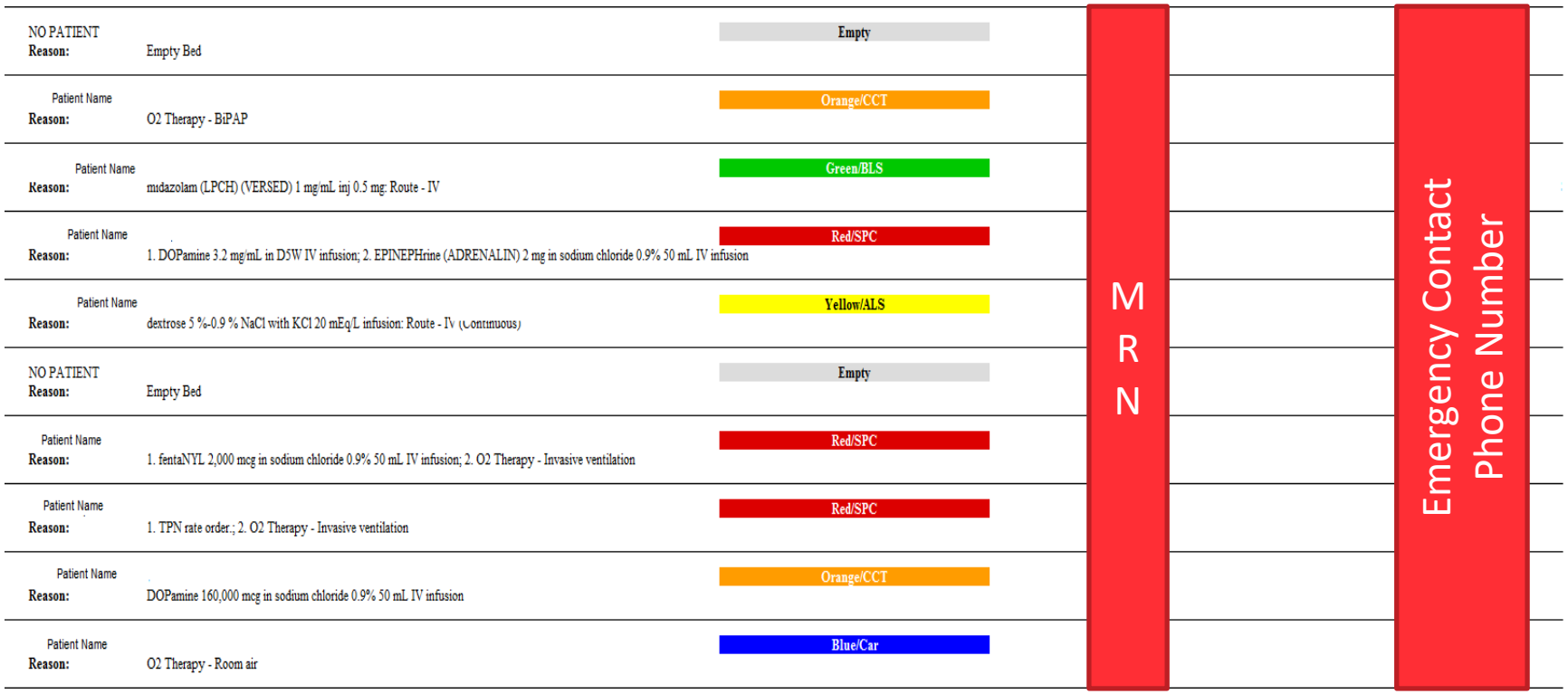
TRAIN® unit report



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Summary Report

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TRAIN Category Summary

Unit	Blue/Car	Green/BLS	Yellow/ALS	Orange/CCT	Red/SPC	Total	Empty	Disaster
160 HEMATOLOGY/ONCOLOGY	0	0	11	3	1	15	0	5
160 STEM CELL TRANSPLANT	0	0	7	2	3	12	0	0
190 ICN 1	3	6	0	0	0	9	12	0
255 PICU	0	0	9	10	4	23	1	6
260 CVICU	0	1	1	2	8	12	8	5
270 NICU	2	6	5	6	9	28	13	5
290 ICN 2	2	2	2	1	0	7	7	0
290 NEWBORN NURSERY	36	0	0	0	0	36	0	0
350 PCU	0	1	10	4	1	16	1	5
360 PCU	2	0	9	3	0	14	0	5
374 PCU	4	5	6	1	4	20	0	5
380 PCU	0	0	7	0	3	10	0	5
LABOR & DELIVERY	0	0	1	3	0	4	26	0
MATERNITY 192	8	0	4	9	1	22	4	5
MATERNITY 292	6	1	5	8	0	20	6	5
TOTALS	63	22	77	52	34	348	78	51

TRAIN Category Summary: Offsite

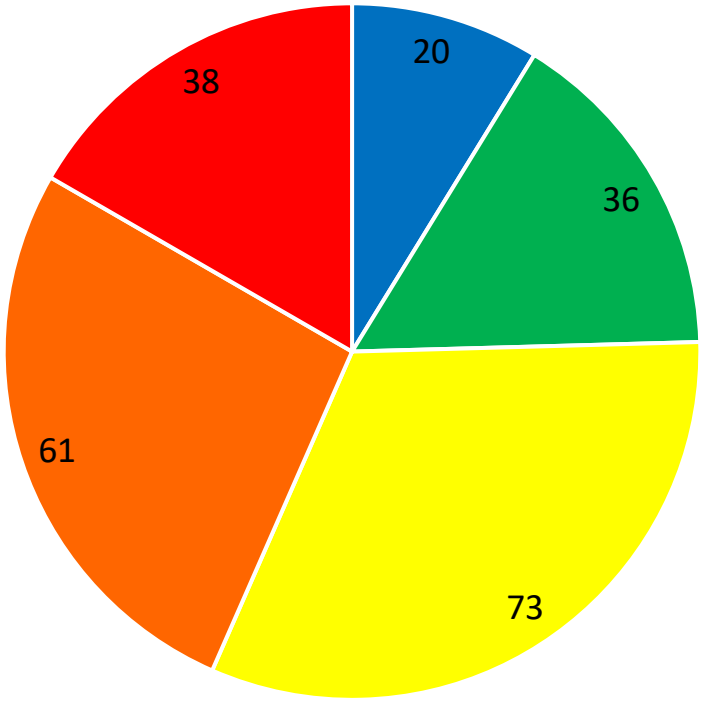
Unit	Blue/Car	Green/BLS	Yellow/ALS	Orange/CCT	Red/SPC	Total	Empty	Disaster
COMPREHENSIVE CARE PGM	9	0	2	0	0	11	4	0
PEDI EL CAMINO	0	1	3	0	0	4	11	0
SEQ SPEC CARE NURSERY	1	3	0	0	0	4	5	0
TOTALS	10	4	5	0	0	19	20	0

TRAIN Category Summary: Other

Unit	Blue/Car	Green/BLS	Yellow/ALS	Orange/CCT	Red/SPC	Total	Empty	Disaster
APU PERIOP	0	0	0	0	0	0	0	0
DIALYSIS-IP	0	0	0	0	0	0	0	0
INFUSION CENTER	0	0	0	0	0	0	0	0
MAIN OR PERIOP	1	0	0	0	0	1	0	0
SHORT STAY UNIT	0	0	5	0	0	5	4	4
TOTALS	1	0	5	0	0	6	4	4

The TRAIN® Tool: Day at-a-Glance

N = 228 Pediatric/Neonatal Patients



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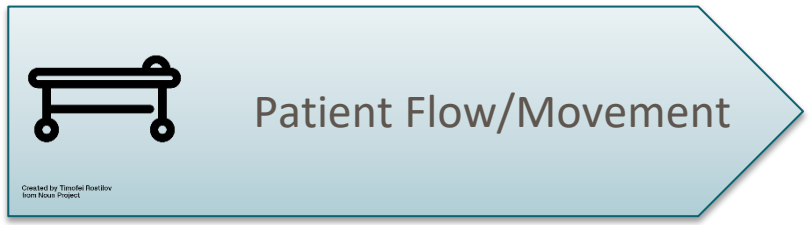
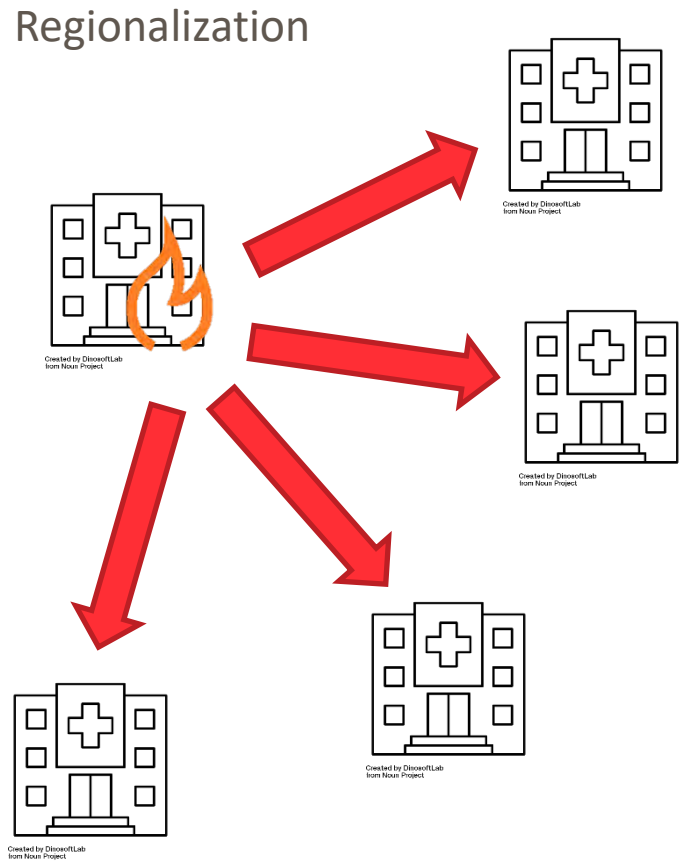
Uses for the TRAIN® Tool





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TRAIN® Tool: Advantages

- Implement a standardized, objective, and automated inpatient triage system with ***minimal impact to workflow.***
- *In event of emergency,* ***Quickly Assess*** and ***Accurately Request*** the ***right resources*** from the emergency operations center.
- Streamline communication with a common code for regional disaster coordination.

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TRAIN® Tool: Advantages

- Don’t use any triage system – join others in using the TRAIN® tool
- Included in FEMA/TEEX training as best practice
- Adopted (or in the process of being adopted) by all NICUs in CA, San Diego County, Central Florida, NYC, Sutter, and others
- Endorsed by Western Regional Alliance for Pediatric Emergency Management (WRAP-EM)

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TRAIN® Resources:

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- Lin A, King M, Eriksson C, McCarthy D, Newton C. Cohen RS. Universal Level Designations for Hospitalized Pediatric Patients in Evacuation. *Hosp Pediatr* 2022; 12:333-6.

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Learn More:

Go to: TRAIN.stanfordchildrens.org

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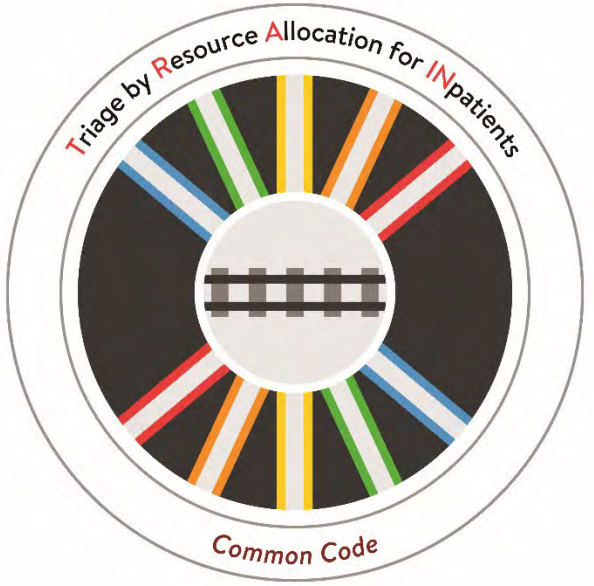
Discussion

- Questions/Comments?



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Storm Surge and Small Survivors: The High-Stakes Hospital Evacuation

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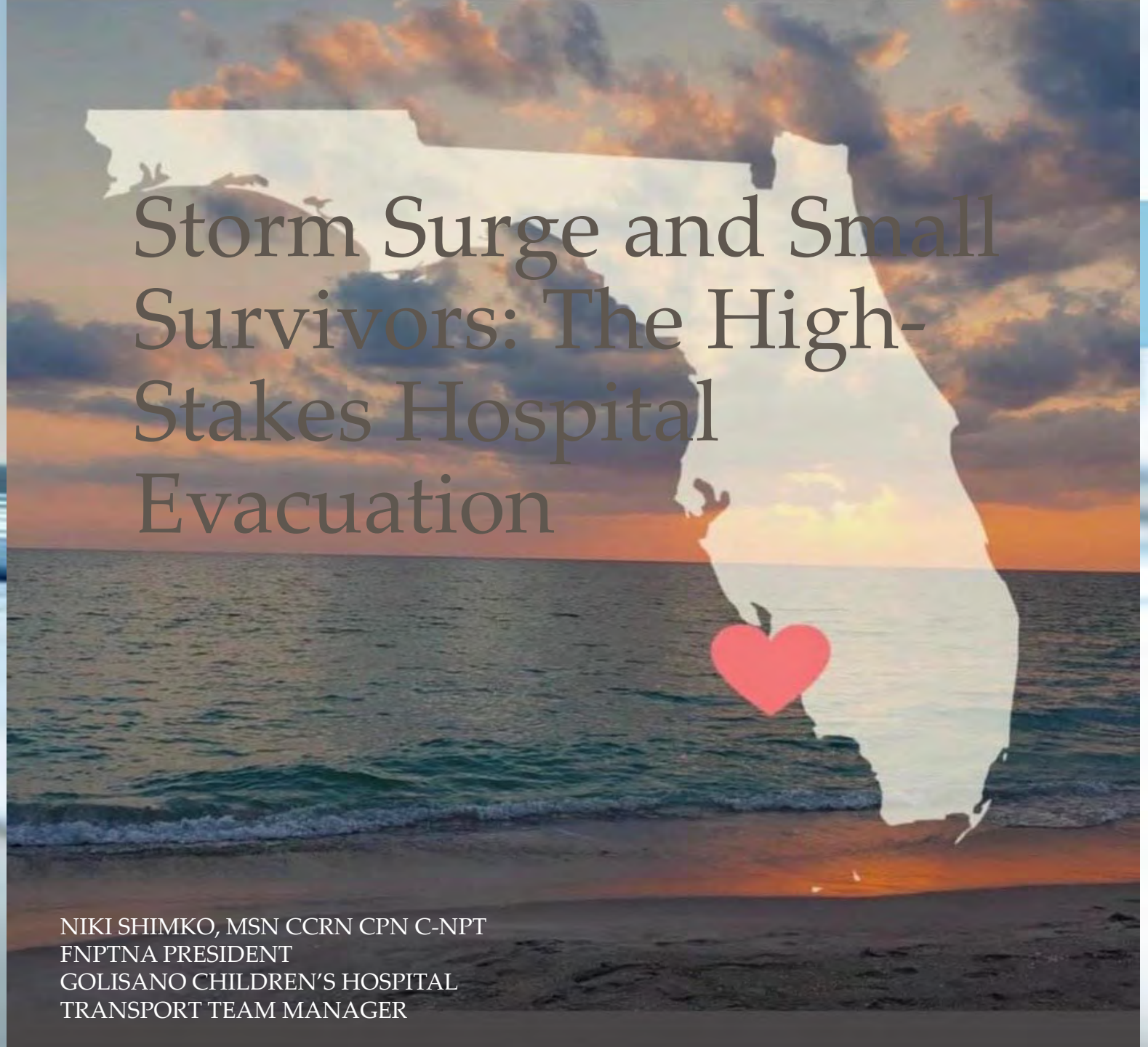

Storm Surge and Small Survivors: The High-Stakes Hospital Evacuation

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DISCLOSURE

I have no financial disclosure or conflict of interest with the presented material in this presentation

OBJECTIVES

01 **Examine lessons learned on hurricane preparation for the NICU**

02 **Illustrate the key factors that contributed to evacuation**

03 **Identify three differences and triage tactics for evacuating a neonatal patient**

04 **Understand the relationship impact of teamwork in evacuations**

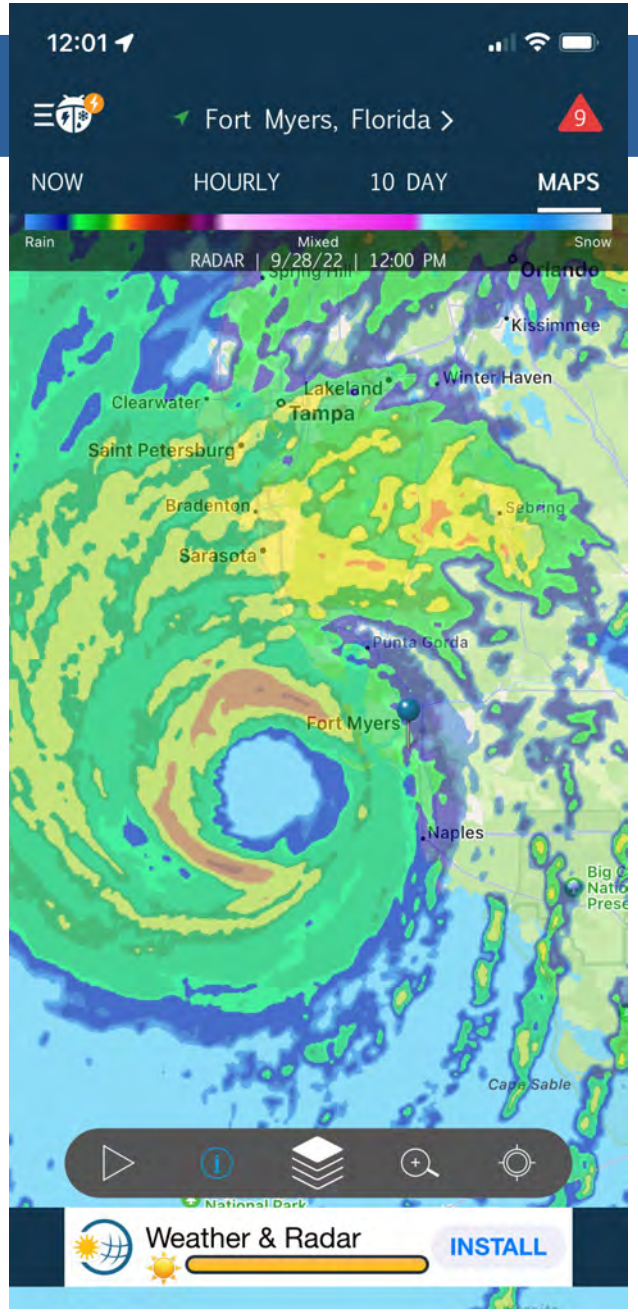
05 **Describe repatriation and challenges faced with neonatal patients**

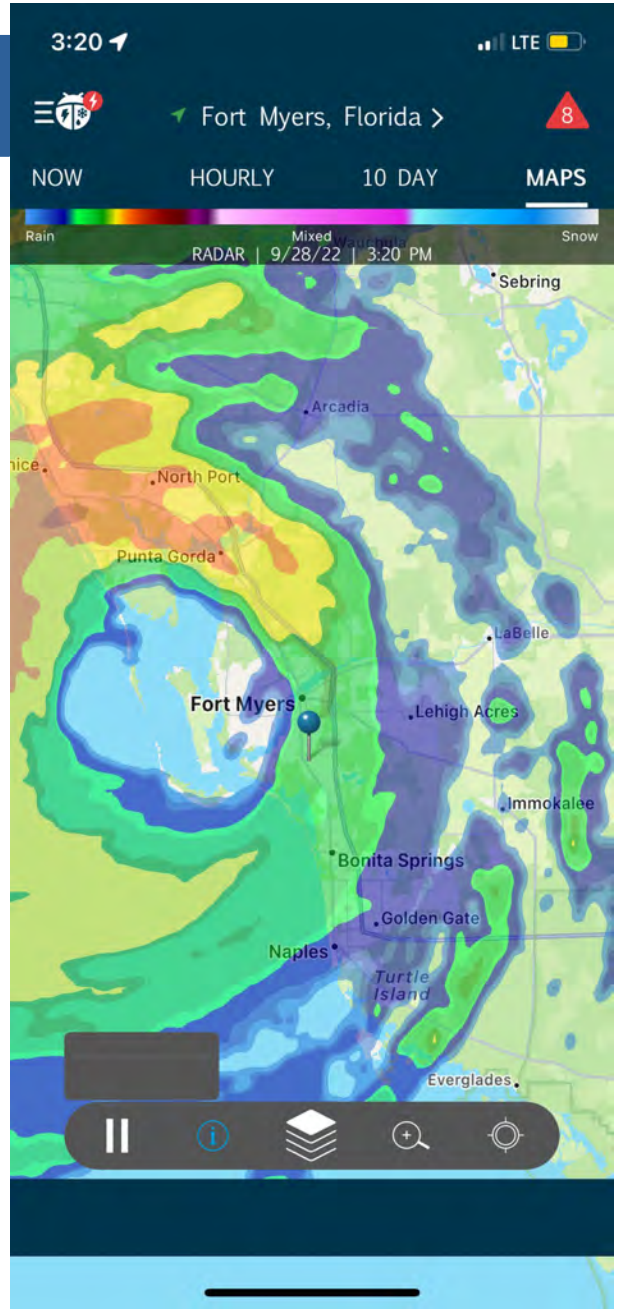
LEE HEALTH

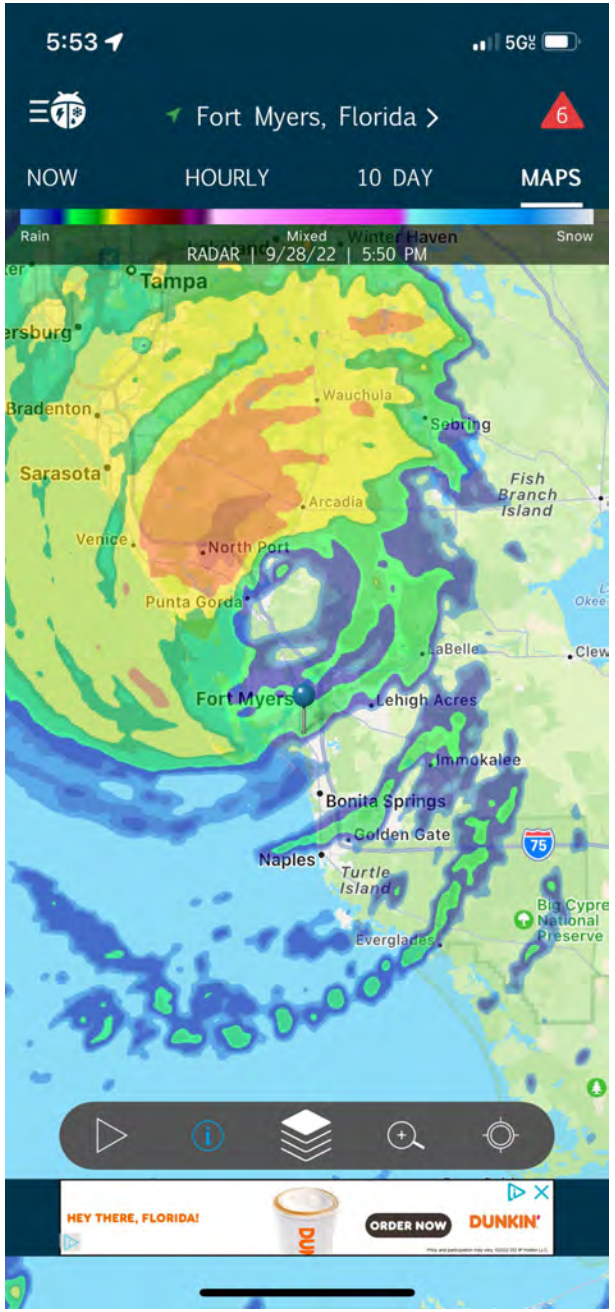
Hurricane Ian Evolution & Facts

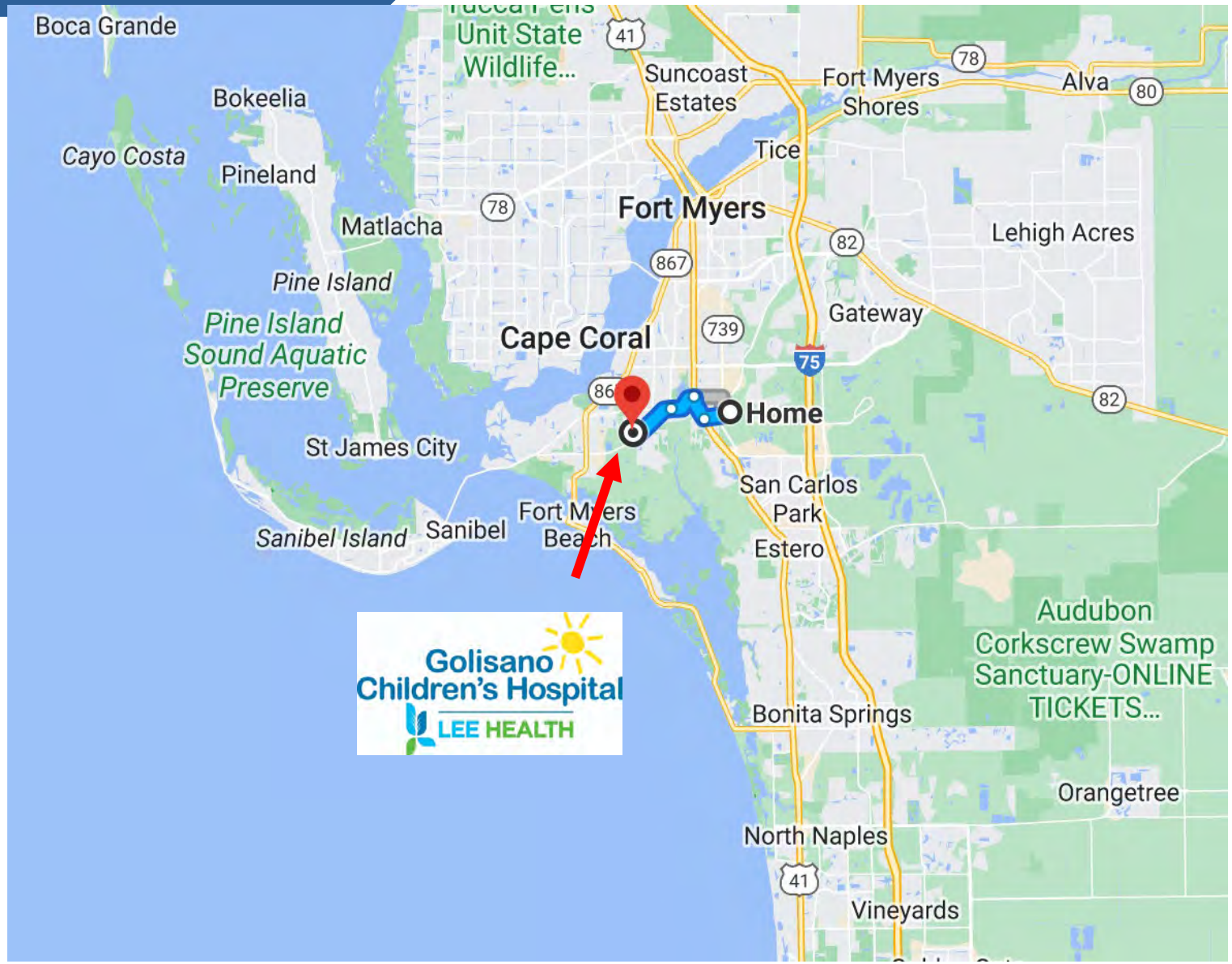
September 19	Tropical wave
September 23	Tropical depression
September 23	Tropical storm
September 26	Category I hurricane
September 26	Landfall in Cuba as Category III
September 28	Category IV – Landfall Cayo Costa 3:05 pm

5th	Strongest hurricane on record to strike the US
161mph	Category 4 Winds (Category 5 prior to landfall)
156 / 41	Storm related lives Lost / Due to Storm Surge
2.6 Million	People lost power
1,100	Cell Phone Towers lost due to power outages
$112.9/ $109 Billion	Estimated damages overall / Florida


12:01
Fort Myers, Florida >
9
NOW
HOURLY
10 DAY
MAPS
Rain
Mixed
Snow
RADAR | 9/28/22 | 12:00 PM
Orlando
Kissimmee
Lakeland
Winter Haven
Clearwater
Tampa
Saint Petersburg
Bradenton
Sebring
Sarasota
Punta Gorda
Fort Myers
Naples
Cape Sable
Weather & Radar
INSTALL


3:20
LTE
Fort Myers, Florida >
8
NOW
HOURLY
10 DAY
MAPS
Rain
Mixed
Snow
RADAR | 9/28/22 | 3:20 PM
Sebring
Arcadia
North Port
Punta Gorda
LaBelle
Fort Myers
Lehigh Acres
Immokalee
Bonita Springs
Golden Gate
Naples
Turtle Island
Everglades

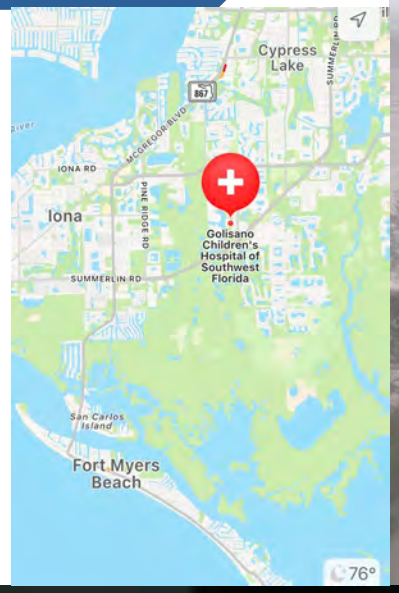

5:53
5G
Fort Myers, Florida >
6
NOW
HOURLY
10 DAY
MAPS
Rain
Mixed
Snow
RADAR | 9/28/22 | 5:50 PM
Tampa
Bradenton
Wauchula
Sebring
Sarasota
Fish Branch Island
Arcadia
Venice
North Port
Punta Gorda
LaBelle
Fort Myers
Lehigh Acres
Immokalee
Bonita Springs
Golden Gate
Naples
Turtle Island
Everglades
Big Cypress National Preserve
75
HEY THERE, FLORIDA!
ORDER NOW
DUNKIN'


Boca Grande
Unit State
Wildlife...
41
Suncoast
Estates
Fort Myers
Shores
78
Alva
80
Bokeelia
Cayo Costa
Pineland
Tice
78
Fort Myers
Matlacha
Lehigh Acres
82
867
Pine Island
Pine Island
Sound Aquatic
Preserve
Gateway
Cape Coral
739
75
86
Home
82
St James City
San Carlos
Park
Fort Myers
Beach
Sanibel Island
Sanibel
Estero
Golisano
Children's Hospital
LEE HEALTH
Audubon
Corkscrew Swamp
Sanctuary-ONLINE
TICKETS...
Bonita Springs
Orangetree
North Naples
41
Vineyards

SURGE

Here is the link for a video showing the response and collaboration of FNPTNA post-Hurricane Ian.

https://youtu.be/SiXCEiTJ5AM?si=73glilvmL-vaK3bR



STATE PREPARATION

Florida HEALTH

BUREAU OF EMERGENCY MEDICAL OVERSIGHT

PATIENT MOVEMENT SUPPORT

STANDARD OPERATING GUIDANCE

State Emergency Response Team
ESF-8
PUBLIC HEALTH & MEDICAL

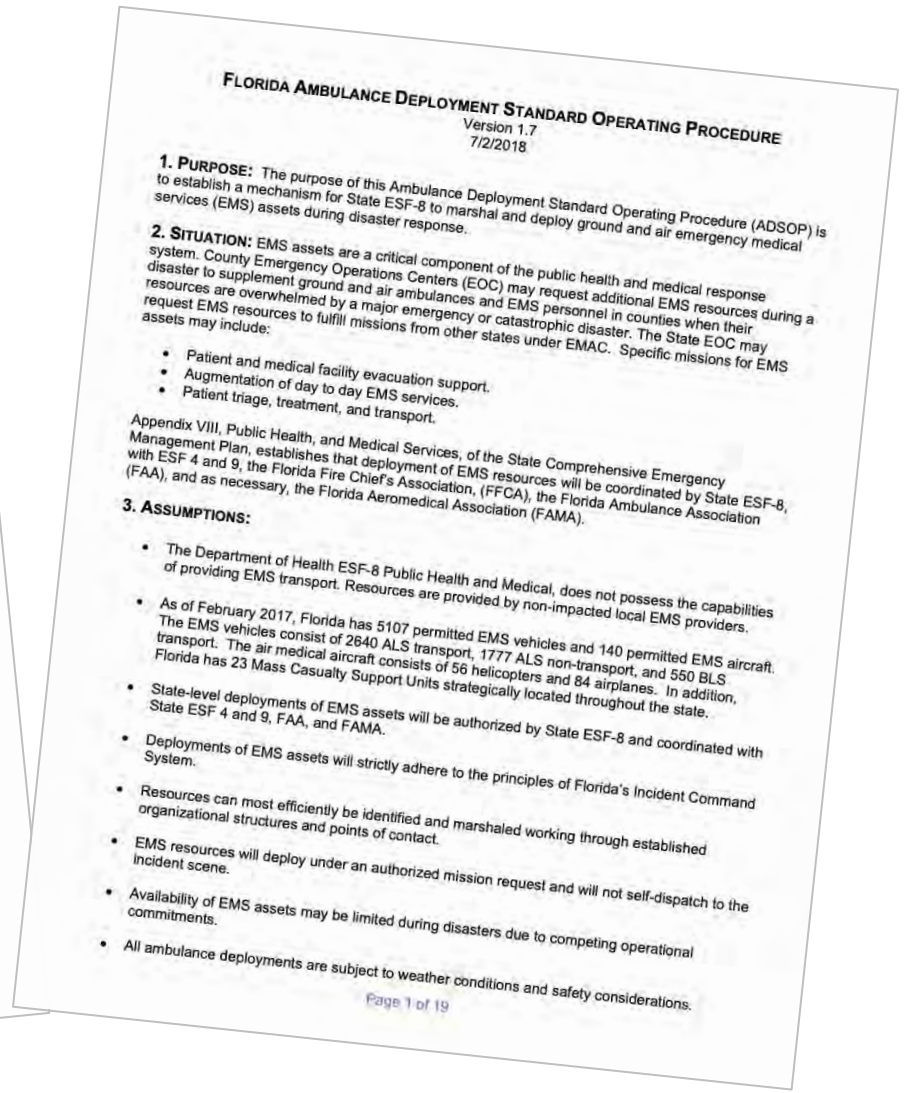
Florida Department of Health,

Division of Emergency Preparedness and Community Support

Bureau of Emergency Medical Oversight

_____ 2023

Page 1 of 102



FLORIDA AMBULANCE DEPLOYMENT STANDARD OPERATING PROCEDURE

Version 1.7
7/2/2018

1. PURPOSE: The purpose of this Ambulance Deployment Standard Operating Procedure (ADSOP) is to establish a mechanism for State ESF-8 to marshal and deploy ground and air emergency medical services (EMS) assets during disaster response.

2. SITUATION: EMS assets are a critical component of the public health and medical response system. County Emergency Operations Centers (EOC) may request additional EMS resources during a disaster to supplement ground and air ambulances and EMS personnel in counties when their resources are overwhelmed by a major emergency or catastrophic disaster. The State EOC may request EMS resources to fulfill missions from other states under EMAC. Specific missions for EMS assets may include:

- Patient and medical facility evacuation support.
- Augmentation of day to day EMS services.
- Patient triage, treatment, and transport.

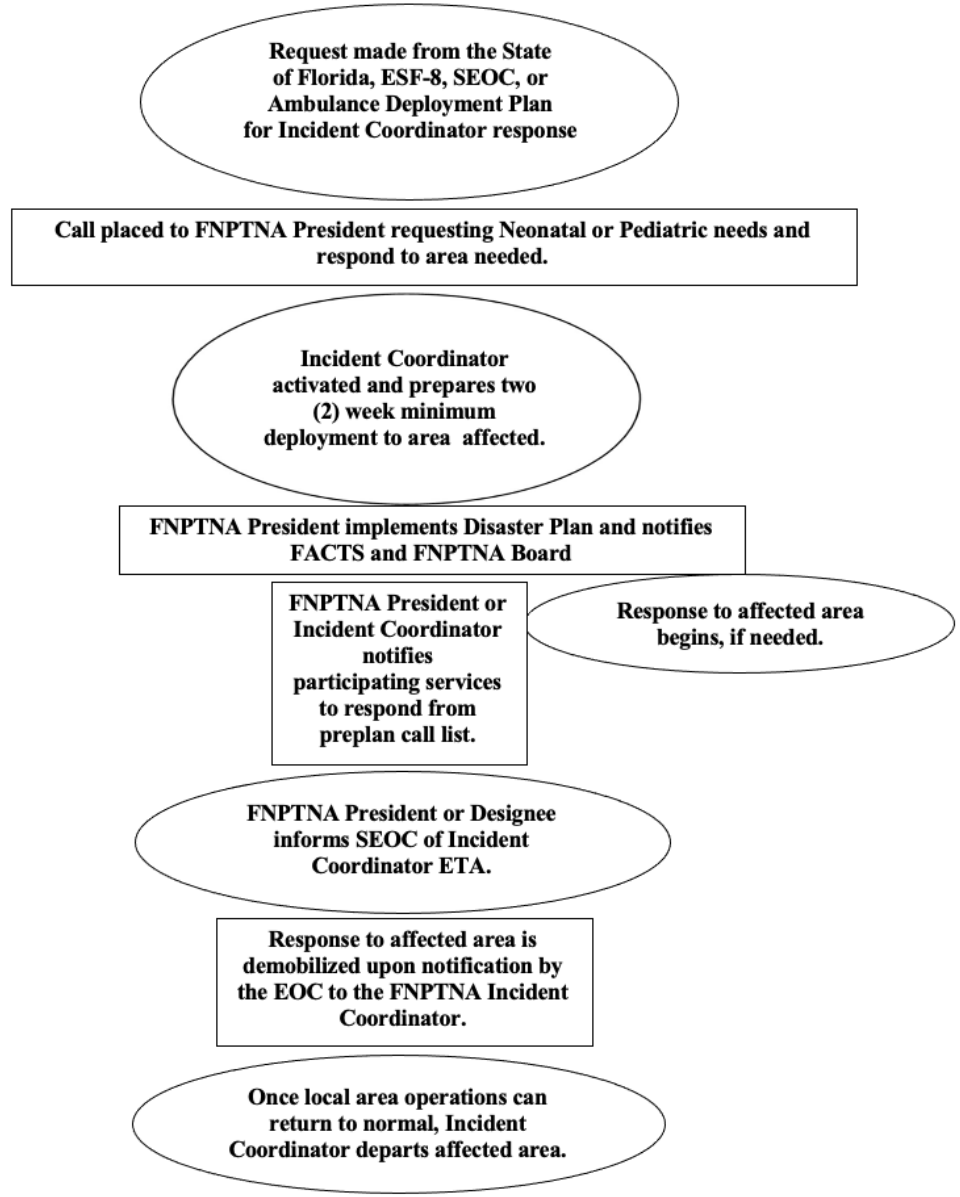
Appendix VIII, Public Health, and Medical Services, of the State Comprehensive Emergency Management Plan, establishes that deployment of EMS resources will be coordinated by State ESF-8, with ESF 4 and 9, the Florida Fire Chief's Association, (FFCA), the Florida Ambulance Association (FAA), and as necessary, the Florida Aeromedical Association (FAMA).

3. ASSUMPTIONS:

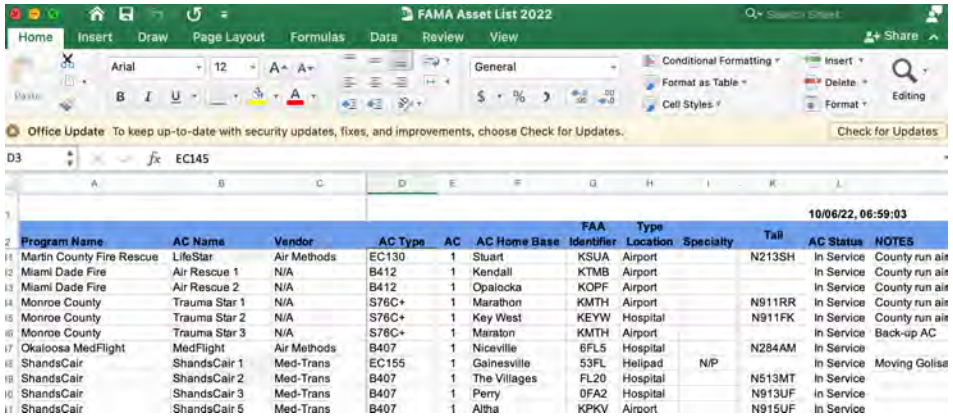
- The Department of Health ESF-8 Public Health and Medical, does not possess the capabilities of providing EMS transport. Resources are provided by non-impacted local EMS providers.
- As of February 2017, Florida has 5107 permitted EMS vehicles and 140 permitted EMS aircraft. The EMS vehicles consist of 2640 ALS transport, 1777 ALS non-transport, and 550 BLS transport. The air medical aircraft consists of 56 helicopters and 84 airplanes. In addition, Florida has 23 Mass Casualty Support Units strategically located throughout the state.
- State-level deployments of EMS assets will be authorized by State ESF-8 and coordinated with State ESF 4 and 9, FAA, and FAMA.
- Deployments of EMS assets will strictly adhere to the principles of Florida's Incident Command System.
- Resources can most efficiently be identified and marshaled working through established organizational structures and points of contact.
- EMS resources will deploy under an authorized mission request and will not self-dispatch to the incident scene.
- Availability of EMS assets may be limited during disasters due to competing operational commitments.
- All ambulance deployments are subject to weather conditions and safety considerations.

Page 1 of 19

Appendix 1: Disaster Plan Design



COMMUNICATION



Program Name	AC Name	Vendor	AC Type	AC	AC Home Base	FAA Identifier	Type Location	Specialty	Tail	AC Status	NOTES
Martin County Fire Rescue	LifeStar	Air Methods	EC130	1	Stuart	KSUA	Airport		N213SH	In Service	County run air
Miami Dade Fire	Air Rescue 1	N/A	B412	1	Kendall	KTMB	Airport			In Service	County run air
Miami Dade Fire	Air Rescue 2	N/A	B412	1	Opalocka	KOPF	Airport			In Service	County run air
Monroe County	Trauma Star 1	N/A	S76C+	1	Marathon	KMTH	Airport		N911RR	In Service	County run air
Monroe County	Trauma Star 2	N/A	S76C+	1	Key West	KEYW	Hospital		N911FK	In Service	County run air
Monroe County	Trauma Star 3	N/A	S76C+	1	Maraton	KMTH	Airport			In Service	Back-up AC
Okaloosa MedFlight	MedFlight	Air Methods	B407	1	Niceville	6FL5	Hospital		N284AM	In Service	
ShandsCair	ShandsCair 1	Med-Trans	EC155	1	Gainesville	53FL	Helipad	N/P		In Service	Moving Golisa
ShandsCair	ShandsCair 2	Med-Trans	B407	1	The Villages	FL20	Hospital		N513MT	In Service	
ShandsCair	ShandsCair 3	Med-Trans	B407	1	Perry	0FA2	Hospital		N913UF	In Service	
ShandsCair	ShandsCair 5	Med-Trans	B407	1	Altha	KPKV	Airport		N915UF	In Service	

01 Asset List

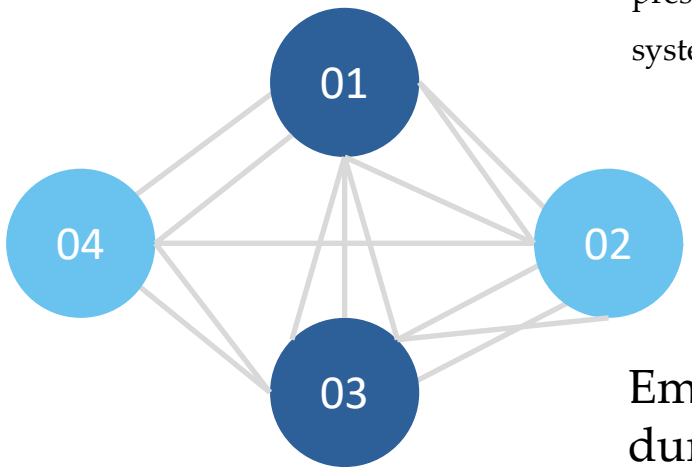
02 Text Thread

03 Board Call

WATER MAIN BREAK

Loss of water pressure

The critical challenge, due to multiple undefined breaks in the community water system, was a loss of water pressure, and concerns of cross-contamination with the sewage system. Our facility sustained loss of the domestic water plumbing function, loss of air conditioning, and loss of fire suppression sprinkler systems



Address loss of water pressure

Unable to address loss of water pressure for wet fire suppression system

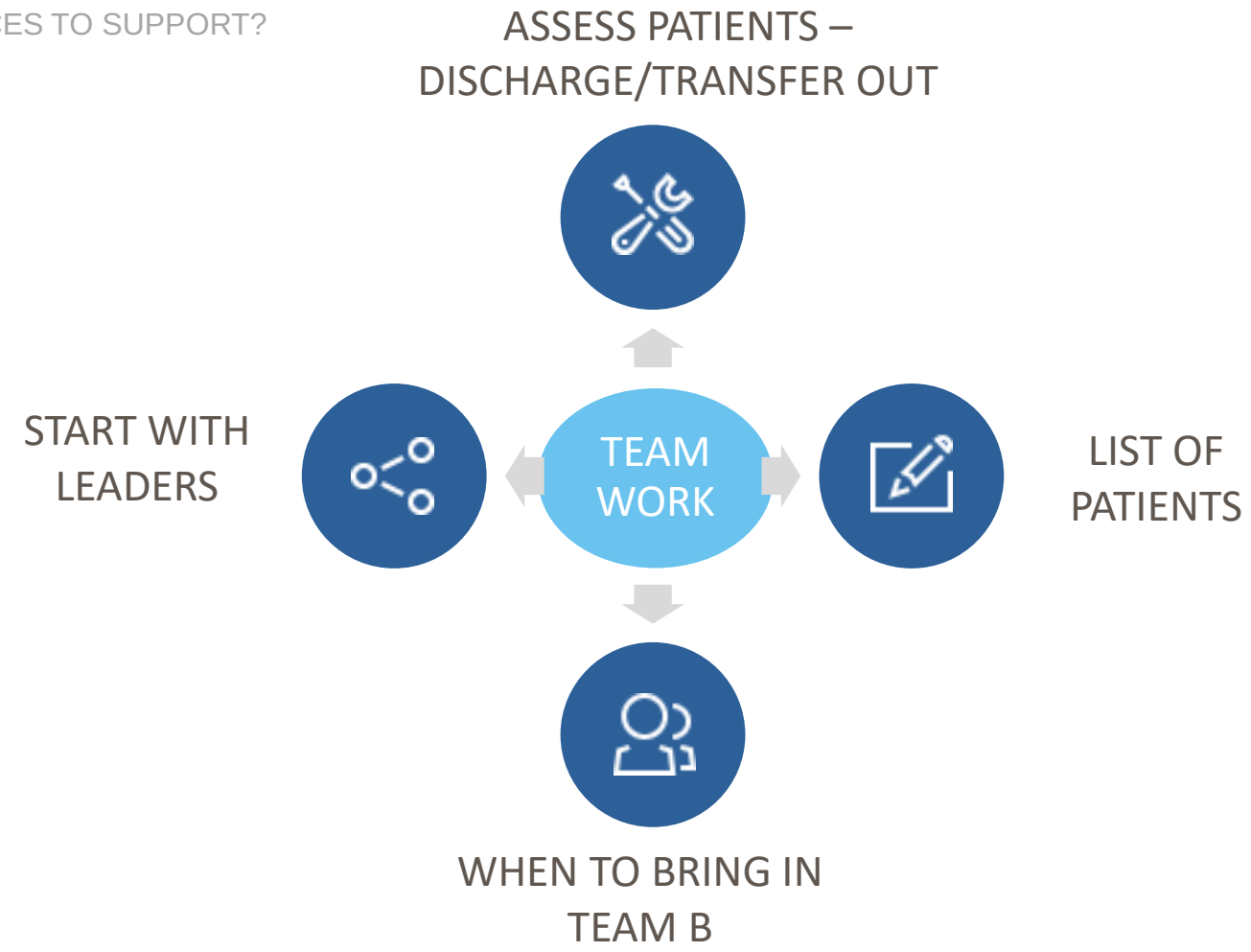
Emergent action during the storm

Used contiguous lake water to support condenser water that flows through chillers to remove the transfer of heat- able to maintain air-conditioning function in both facilities.

COMMUNICATION WITH STAFF

HOW DO YOU TELL STAFF YOU ARE EVACUATING?

DO YOU HAVE RESOURCES TO SUPPORT?



INTERNAL COMMUNICATION

TWO WAY RADIOS

HAVE YOU EVERY MOVED A HOSPITAL?

POINT PERSON AT AMBULANCE

SHOULD HAVE PLACED ONE AT HELIPAD

POINT PERSON ON EACH UNIT

POINT PERSON AT ENTRANCE OF UNIT

Golisano Children's Hospital
LEE HEALTH

TRIAGE

Not so typical triage:

- Most PICU/Peds kids our before NICU started
- Who were Level II or Level III
- Who were on vents
- Open crib = stretcher
- Warmer = isolette
- Keep families/multiples together
- Who could tolerate over 2-hour trip in an ambulance
  Or with a nonneonatal team?

TRIAGE TOOL

Lucile Packard Children's Hospital

LPCH TRAIN MATRIX

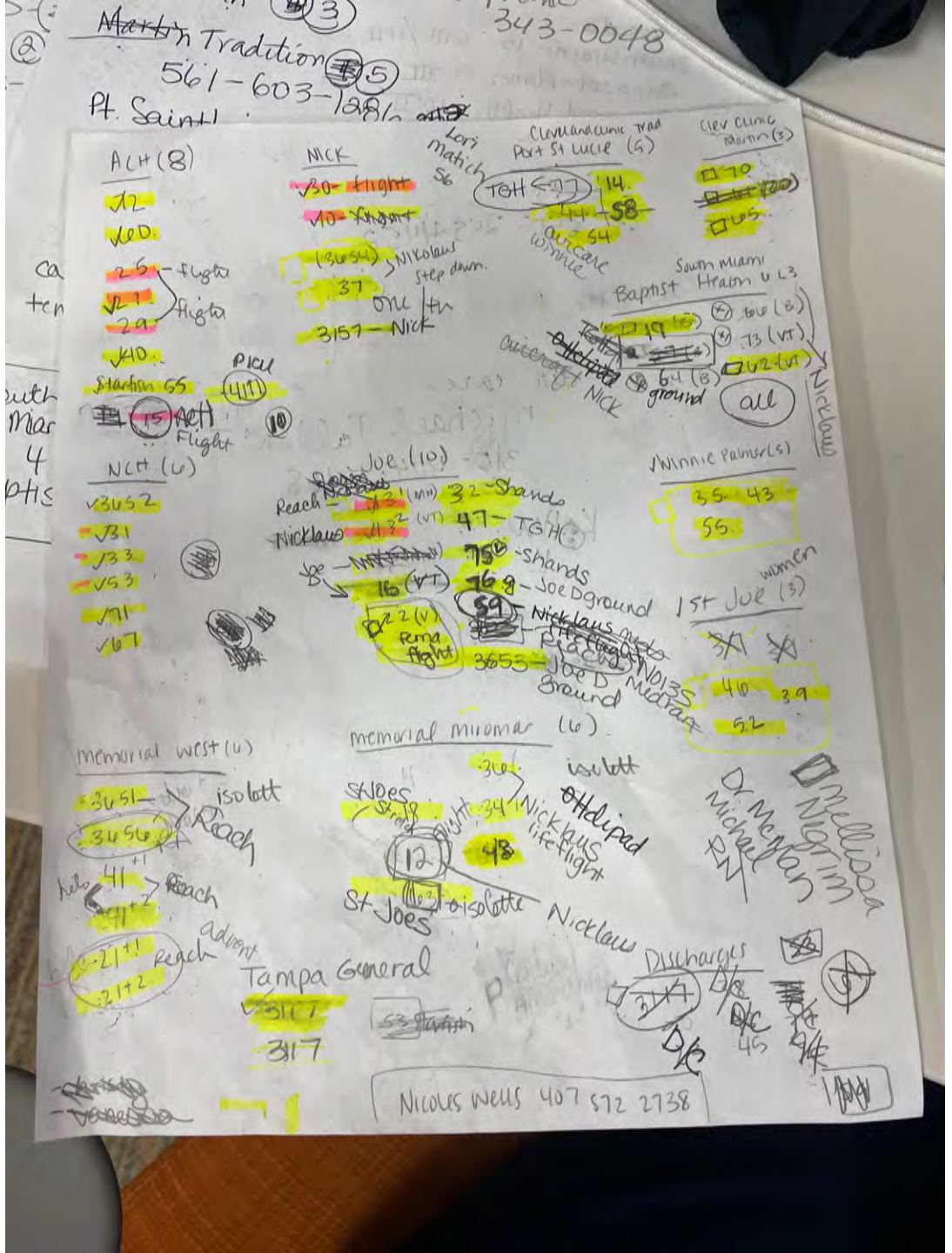
Triage by Resource Allocation for IN-patients [TRAIN]©				
Transport	***Car***	***BLS***	***Critical Care***	***Specialized***
Life Support	Stable	Minimal	Moderate-Stable	Max-Unstable
Mobility	Car/Carseat	Wheelchair/stretcher	Transport rig	Immobile
Nutrition	PO Feeds	PO/NG	NG/PO + TPN/IL	NPO & TPN/IL
Pharmacy	PO Meds	PO Meds/IV Meds/IV Fluids	IV Drip x1	IV drip ≥ 2

Life Support	Minimal = Hood or Low Flow Cannula O2, Peritoneal Dialysis, etc. Moderate-Stable = Conventional Ventilator, CPAP/BiPAP/Hi-Flow, Externally paced, chest tube, wt < 1500 grams, etc. Max-Unstable = Highly specialized equipt., e.g., HFOV, ECMO, iNO, CVVH, Berlin Heart, etc.
Mobility	Car/Carseat = able to ride in automobile with age-appropriate restraints Transport rig = age-appropriate rig with equipment for connecting to ambulance Immobile = Unsafe to move without special equipment e.g., neurosurgical/bariatric

https://asprtracie.hhs.gov/technical-resources/resource/1875/preplanning-disaster-triage-for-pediatric-hospitals-train-toolkit

CHALLENGES

- Paper tracking- HICS forms
- Neonatologists used to transfers – not evacuation
- Communication with families
- How could we have prepared better prior
  - Print a master patient list
  - Preprint face sheets



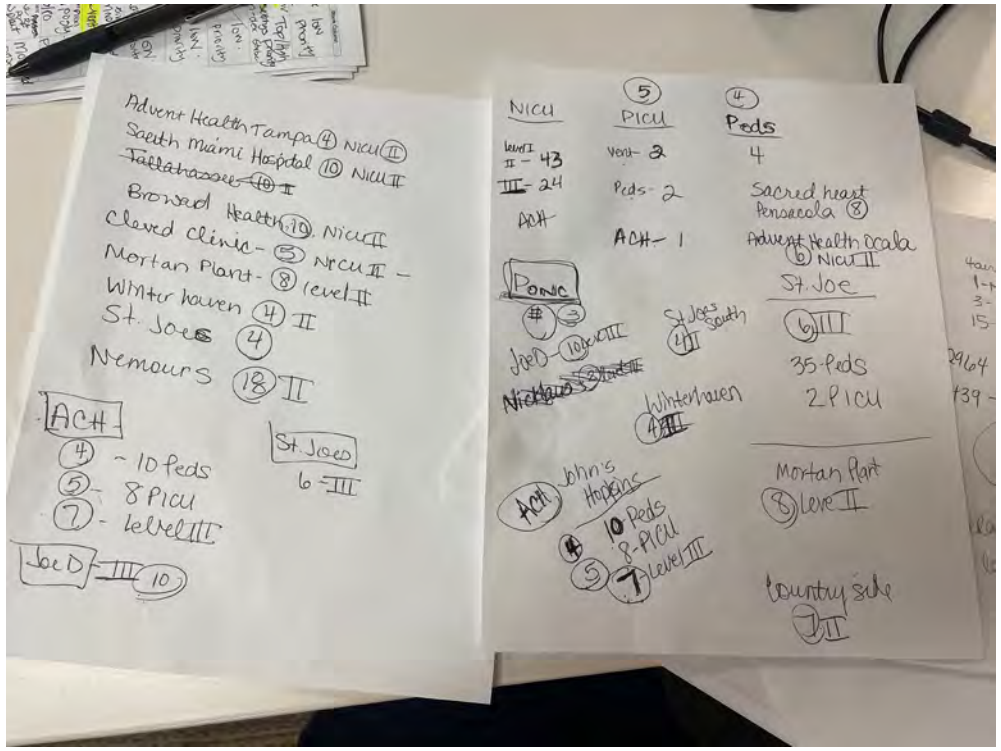
BED PLACEMENT

Multiple people calling for beds

- Who owns bed capacity?
- State – FHA System Command?
- General site to say what beds where and where we place?
- With phone numbers?

Facilities

- Level II and Level III
- Helipad or not



LANDING ZONE

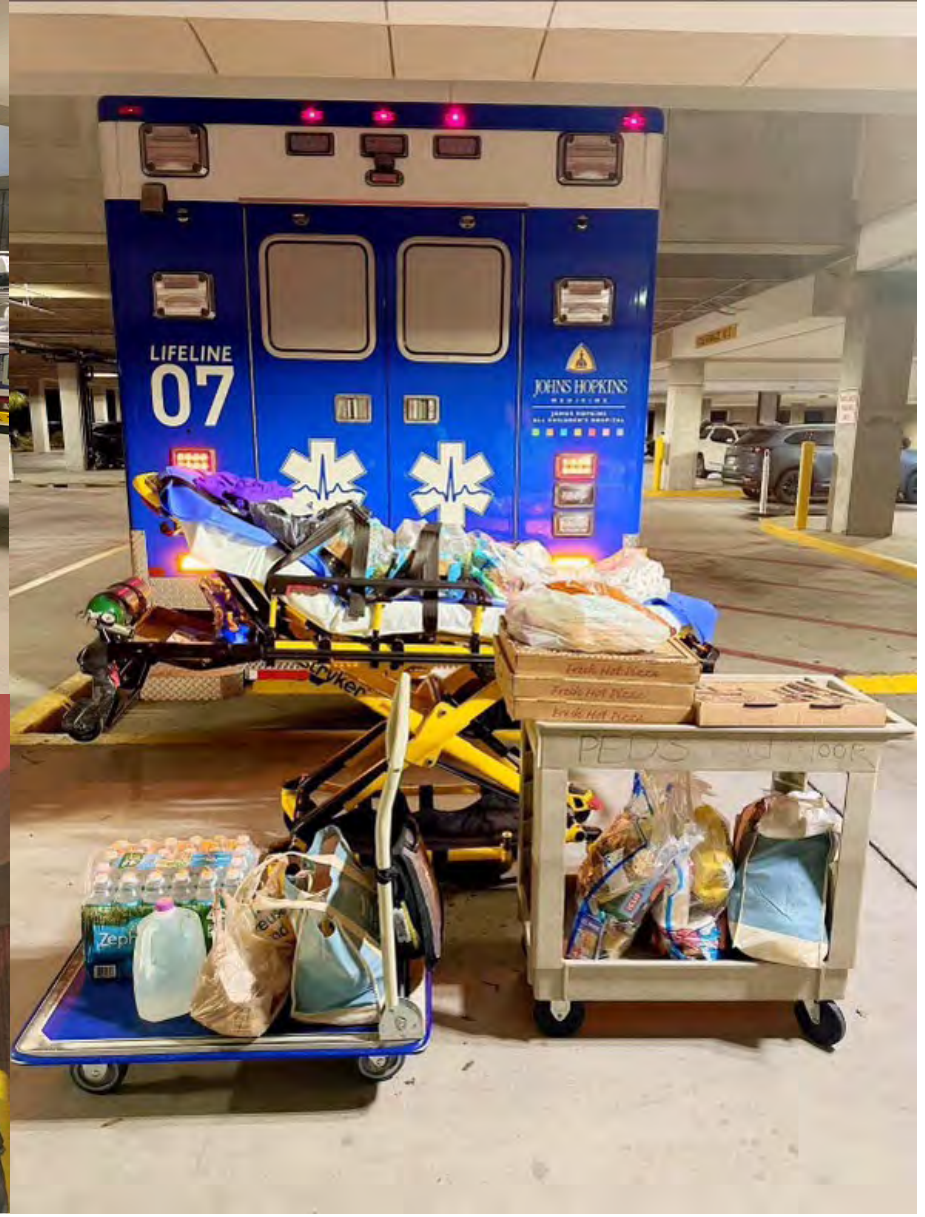

LOADING
&
UNLOADING
ONLY
15
MINUTE
PARKING
MED-TRANS
MED-TRANS

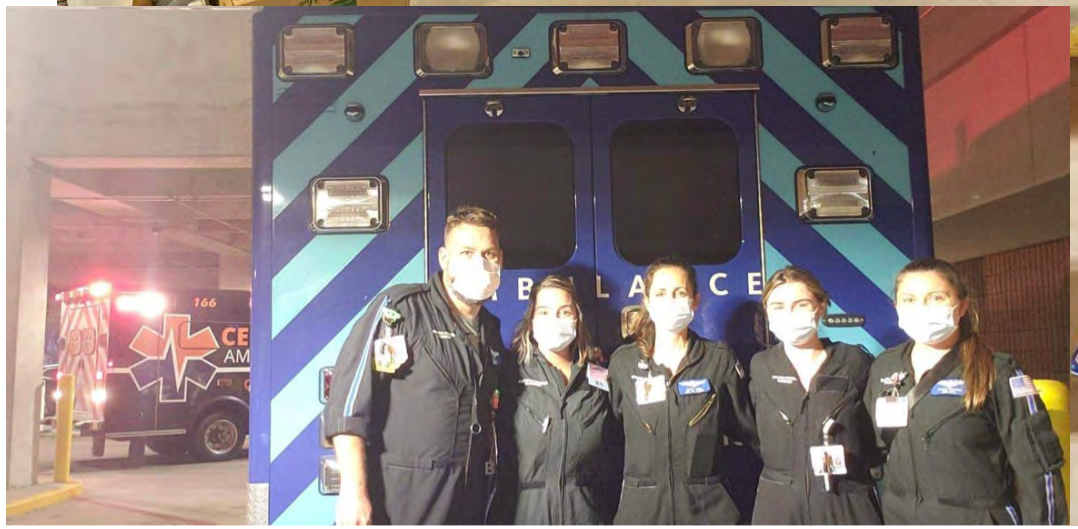

LIFELINE
JOHNS HOPKINS
All Children's Hospital

WEATHER

AMBULANCES

- Not all ambulances are equipped the same
- Power Source
- PEDIMATES





© 2021, Lucile Packard Children's Hospital St

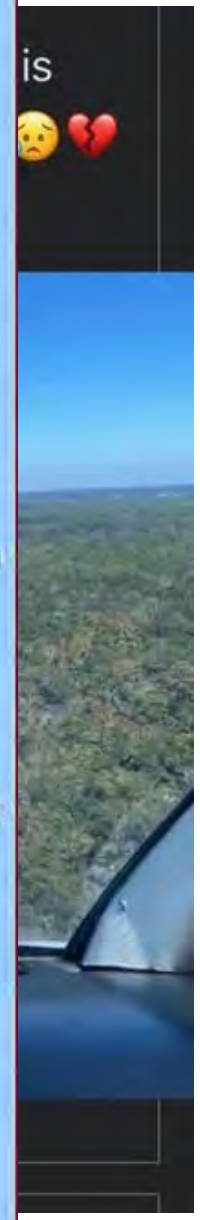
Golisano Children's Hospital
LEE HEALTH

All moved in 36 hours

81 total patients
62 Neonates
8 PICU
6 Peds
3 PONC
2 Peds ED

Golisano Children's Hospital
LEE HEALTH

Well al
until th

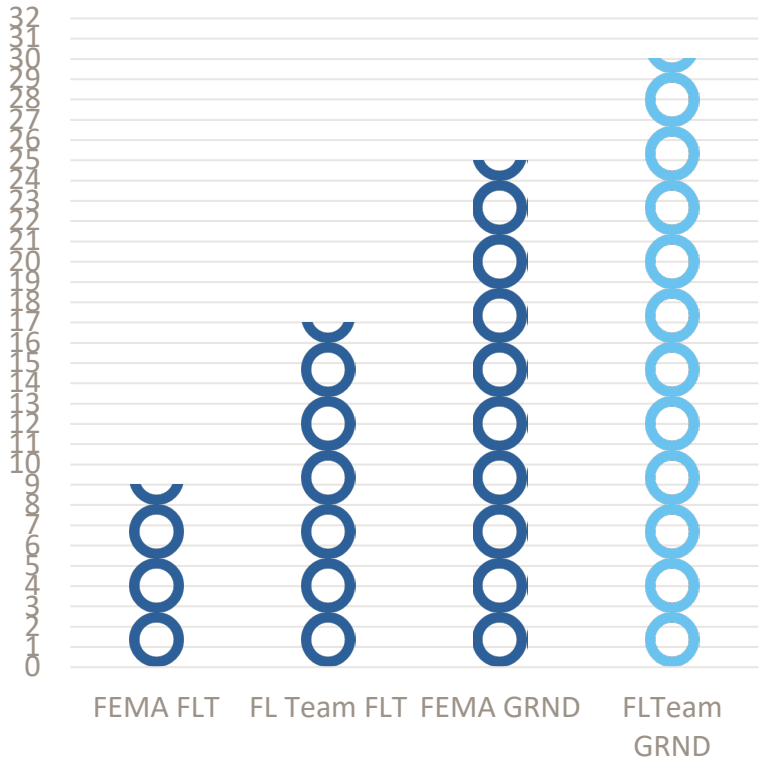


SAFETY

- ✓ No safety or adverse events
- ✓ All patients arrived to expected facility


15 Facilities
Across
The State
AL
GEORGIA
ATLANTIC OCEAN
Gulf of Mexico
Crestview
Marianna
Valparaiso
De Funiak Springs
Pensacola
Fort Walton Beach
Santa Rosa I
Panama City
Tallahassee
Madison
Live Oak
Lake City
Perry
Port St Joe
Apalachicola
Dog I
Cape San Blas
St George I
Apalachee Bay
Apalachicola R
Suwannee R
Fernandina Beach
JAX
Jacksonville
Jacksonville Beach
Starke
St Augustine
Gainesville
Palatka
Palm Coast
Ormond Beach
Daytona Beach
Ocala
Cedar Keys
Waccasassa Bay
St Johns River
De Land
New Smyrna Beach
Deltona
Eustis
Leesburg
Sanford
Titusville
Brooksville
Spring Hill
Dade City
MCO
Kissimmee
Cape Canaveral
Merritt Island
Melbourne
Palm Bay
Clearwater
Largo
St Petersburg
Lakeland
Winter Haven
Bartow
Lake Wales
Vero Beach
Avon Park
Bradenton
Sebring
Fort Pierce
Sarasota
Okeechobee
Port St Lucie
Arcadia
Port Charlotte
Punta Gorda
Moore Haven
Lake Okeechobee
Pahokee
Jupiter
West Palm Beach
Belle Glade
Cape Coral
Fort Myers
RSW
Sanibel I
Bonita Springs
Coral Springs
Delray Beach
Boca Raton
Pompano Beach
Naples
Fort Lauderdale
Hollywood
Big Cypress Swamp
Cape Romano
Everglades City
Hialeah
Miami
Miami Beach
Kendall
The Everglades
Biscayne Bay
Homestead
Cape Sable
Key Largo
N
0 20 40 60 80 100 150 km
0 20 40 60 80 100 mi
Albers equal area projection

DATA


32
31
30
29
28
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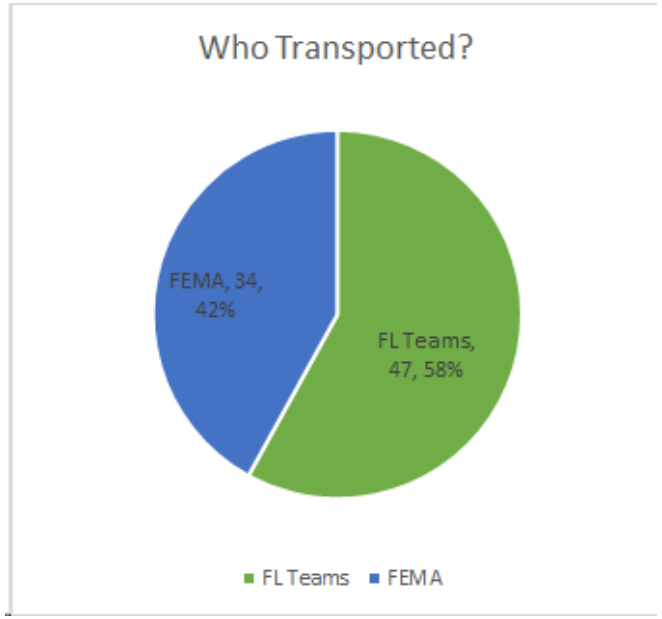
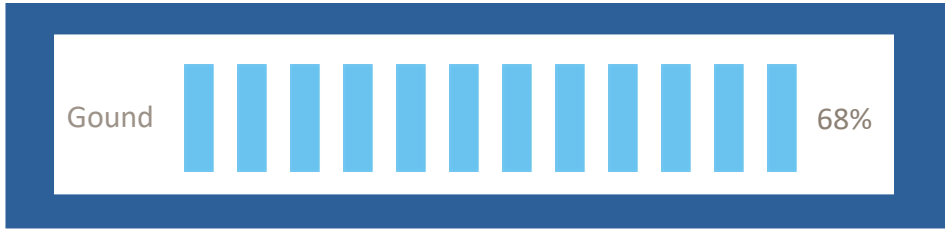
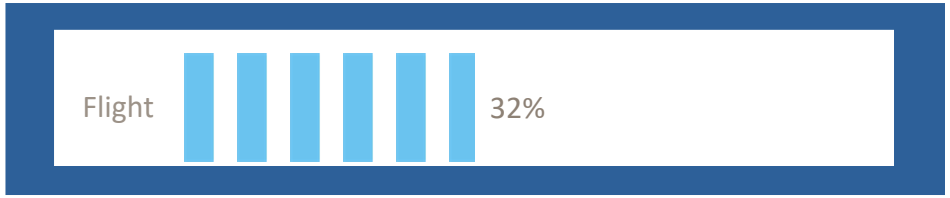
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
FEMA FLT
FL Team FLT
FEMA GRND
FLTeam GRND


Who Transported?
FEMA, 34, 42%
FL Teams, 47, 58%
FL Teams
FEMA


Gound
68%


Flight
32%

TIMELINE

01

SEPT 28, 2022 3:05pm

Hurricane Ian made landfall.

02

SEPT 29 & 30, 2022

Patients evacuated

03

SEPT 30-OCT 6, 2022

Evacuation of 11 more patients

- 2 NICU
- 9 PEDS/PICU
- 1 pediatric patient and 1 NICU patient were transported to a higher level of care

04

OCT 7, 2022

Plan developed for repatriation

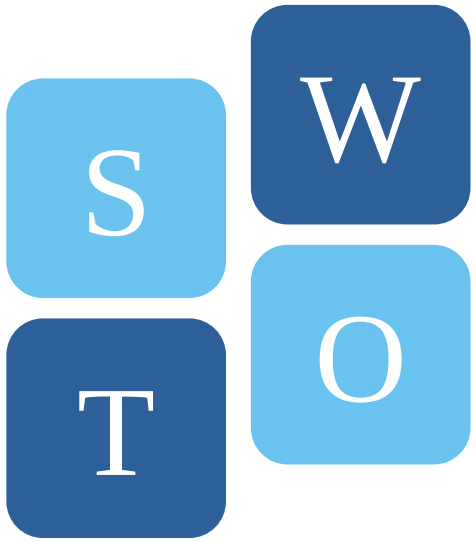
SWOT ANALYSIS

STRENGTHS

Early Communication
Back-up Plan
No Middle Man
Used to Interfacility Mentality
Golisano teams went on transport –Mentally?
Repatriation – One
Neonatologist taking calls
Relationships
HICS forms used
Had all the equipment needed

THREATS

Statewide weather
Route I-75 flooding



WEAKNESSES

Paperwork needs (perceived)
Bed placement – Internal vs FHA
Too many cooks in the kitchen with bed placement
Ambulance tracking – ETAs
Unknown Fuel Depot
Cell phone towers

OPPORTUNITIES

Streamline paperwork (transfer vs evacuation)
Isolette Team
Redistribute team to help
Repatriation
Special Needs placement from the hospital
Plans for families at receiving facilities

Years Later…

What has been done?

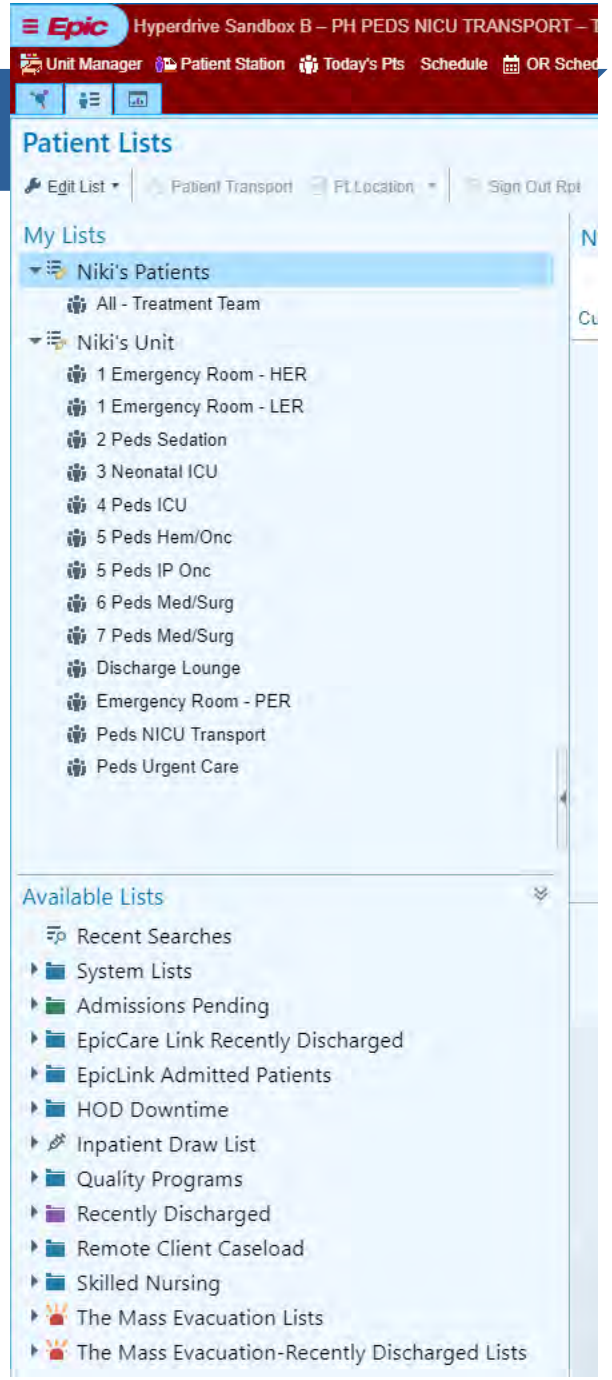
System:
Well on order
Disaster navigator i
Further discussion a
What does it look li
To-go bags in our N
Evacuation Folders

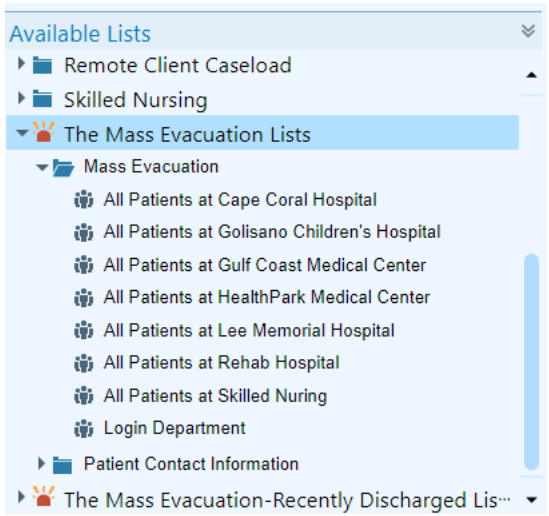
FNPTNA:
Updated the plan
Further education across the state
C-Suite leadership letter

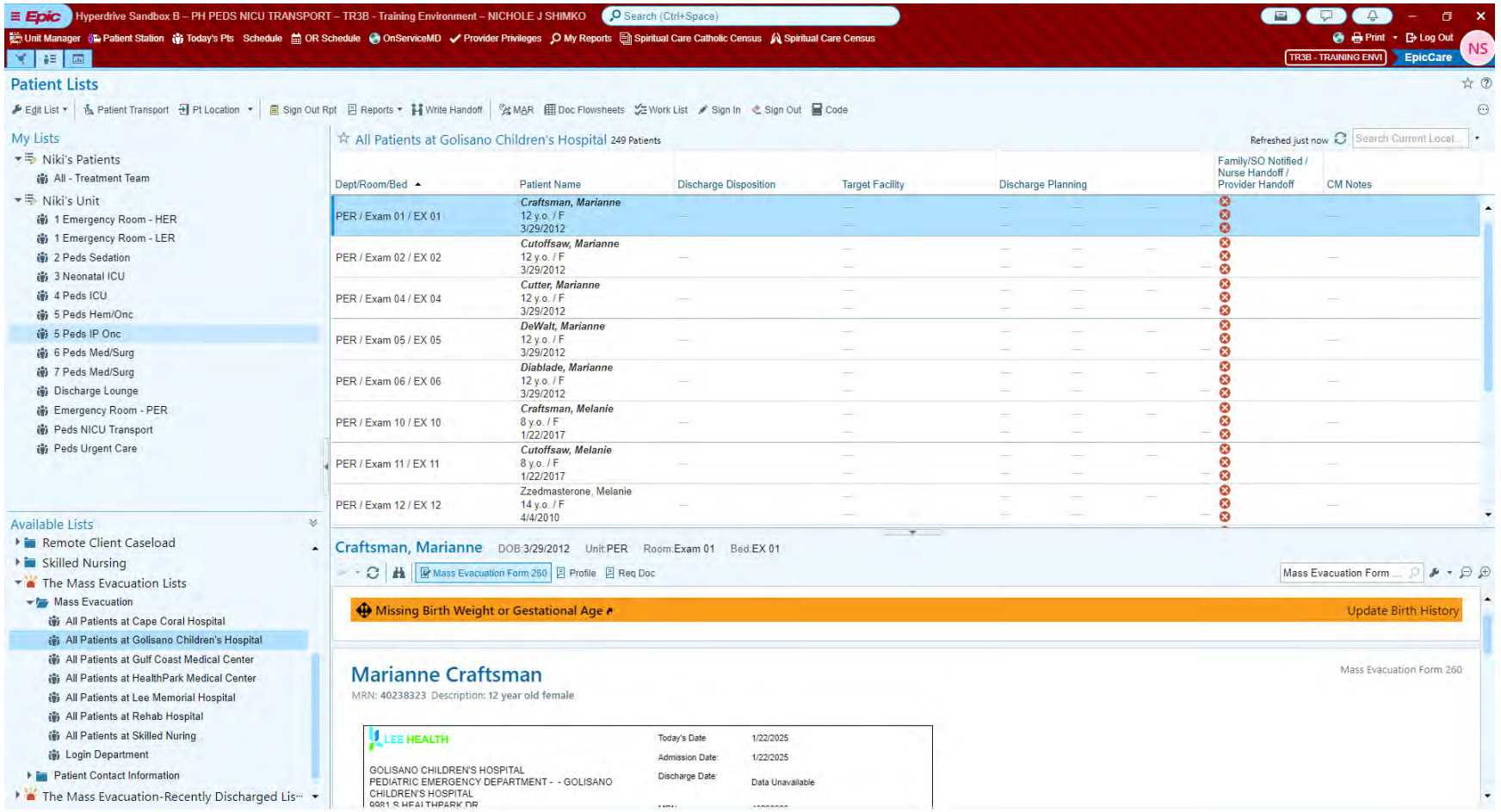
State:
Patient tracking
Updated deployment plan

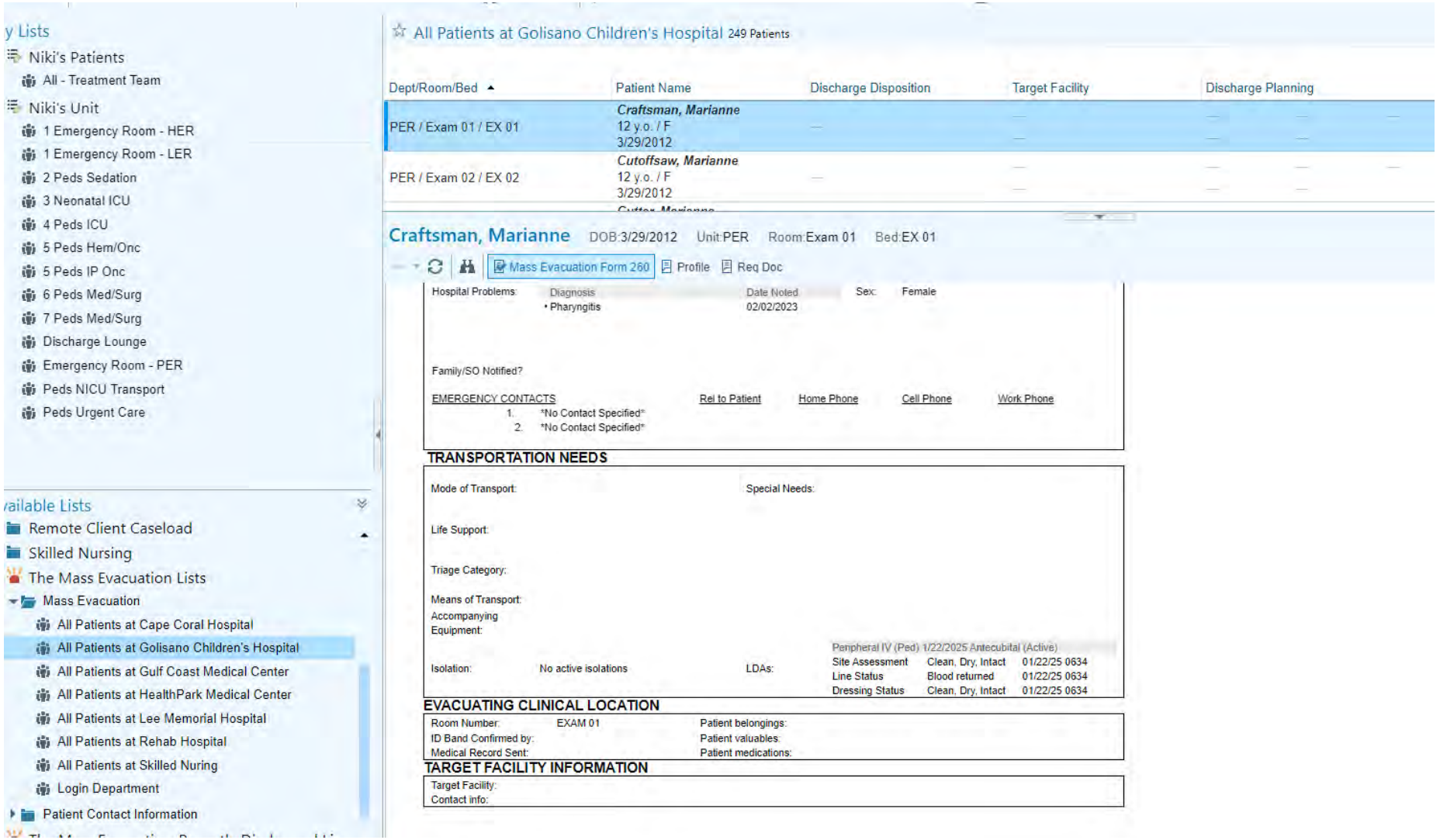
Awareness and Preparedness

Over 14 times giving this talk nationally

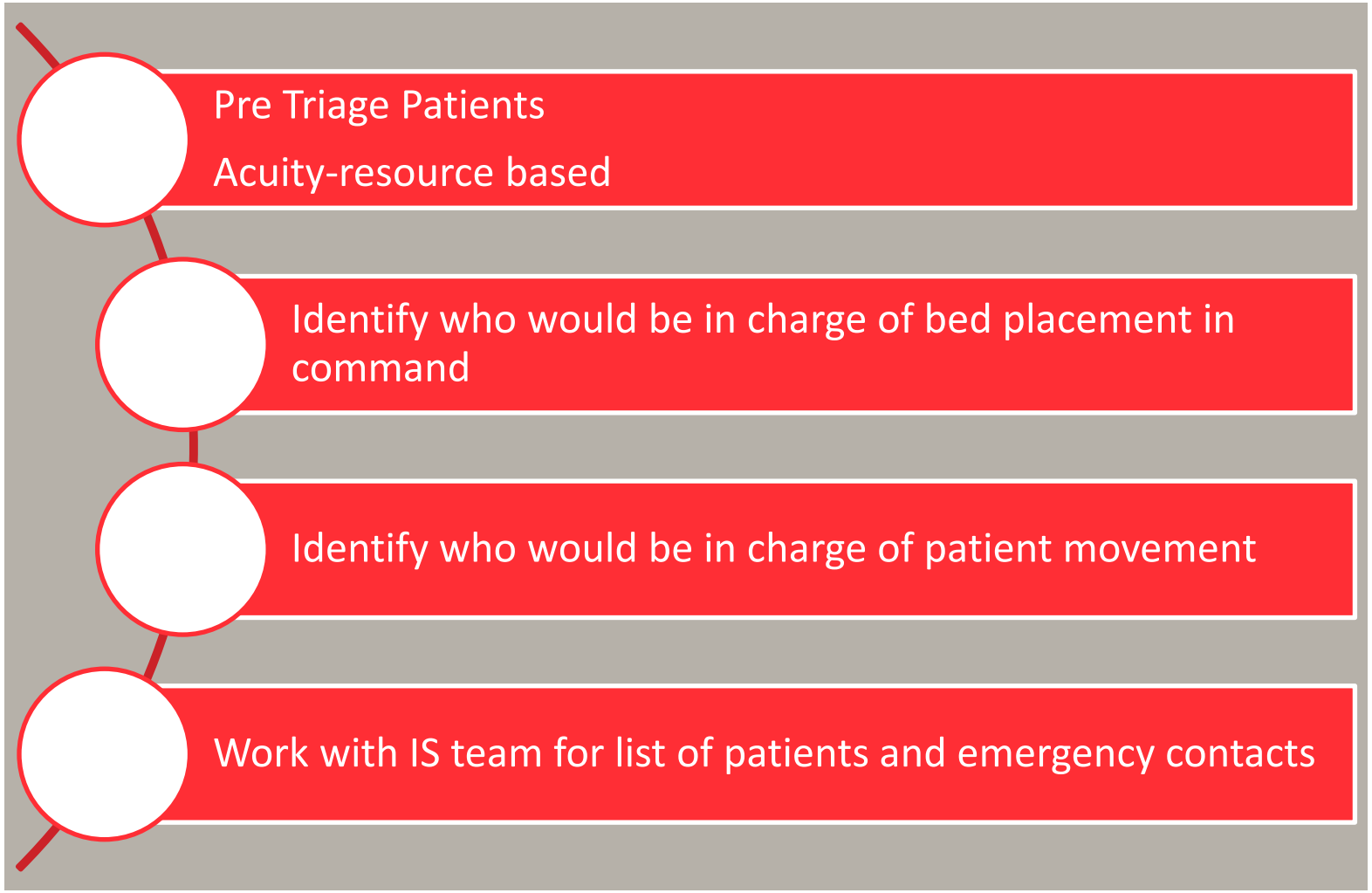

Epic
Hyperdrive Sandbox B – PH PEDS NICU TRANSPORT – T
Unit Manager
Patient Station
Today's Pts
Schedule
OR Sched
Patient Lists
Edit List
Patient Transport
Pt Location
Sign Out Rpt
My Lists
Niki's Patients
All - Treatment Team
Niki's Unit
1 Emergency Room - HER
1 Emergency Room - LER
2 Peds Sedation
3 Neonatal ICU
4 Peds ICU
5 Peds Hem/Onc
5 Peds IP Onc
6 Peds Med/Surg
7 Peds Med/Surg
Discharge Lounge
Emergency Room - PER
Peds NICU Transport
Peds Urgent Care
Available Lists
Recent Searches
System Lists
Admissions Pending
EpicCare Link Recently Discharged
EpicLink Admitted Patients
HOD Downtime
Inpatient Draw List
Quality Programs
Recently Discharged
Remote Client Caseload
Skilled Nursing
The Mass Evacuation Lists
The Mass Evacuation-Recently Discharged Lists


Available Lists
Remote Client Caseload
Skilled Nursing
The Mass Evacuation Lists
Mass Evacuation
All Patients at Cape Coral Hospital
All Patients at Golisano Children's Hospital
All Patients at Gulf Coast Medical Center
All Patients at HealthPark Medical Center
All Patients at Lee Memorial Hospital
All Patients at Rehab Hospital
All Patients at Skilled Nuring
Login Department
Patient Contact Information
The Mass Evacuation-Recently Discharged Lis…


Hyperdrive Sandbox B – PH PEDS NICU TRANSPORT – TR3B - Training Environment – NICHOLE J SHIMKO
Search (Ctrl+Space)
Unit Manager
Patient Station
Today's Pts
Schedule
OR Schedule
OnServiceMD
Provider Privileges
My Reports
Spiritual Care Catholic Census
Spiritual Care Census
Print
Log Out
TR3B - TRAINING ENVI
EpicCare
NS
Patient Lists
Edit List
Patient Transport
Pt Location
Sign Out Rpt
Reports
Write Handoff
MAR
Doc Flowsheets
Work List
Sign In
Sign Out
Code
My Lists
Niki's Patients
All - Treatment Team
Niki's Unit
1 Emergency Room - HER
1 Emergency Room - LER
2 Peds Sedation
3 Neonatal ICU
4 Peds ICU
5 Peds Hem/Onc
5 Peds IP Onc
6 Peds Med/Surg
7 Peds Med/Surg
Discharge Lounge
Emergency Room - PER
Peds NICU Transport
Peds Urgent Care
Available Lists
Remote Client Caseload
Skilled Nursing
The Mass Evacuation Lists
Mass Evacuation
All Patients at Cape Coral Hospital
All Patients at Golisano Children's Hospital
All Patients at Gulf Coast Medical Center
All Patients at HealthPark Medical Center
All Patients at Lee Memorial Hospital
All Patients at Rehab Hospital
All Patients at Skilled Nuring
Login Department
Patient Contact Information
The Mass Evacuation-Recently Discharged Lis
All Patients at Golisano Children's Hospital 249 Patients
Refreshed just now
Search Current Locat...
Dept/Room/Bed
Patient Name
Discharge Disposition
Target Facility
Discharge Planning
Family/SO Notified / Nurse Handoff / Provider Handoff
CM Notes
PER / Exam 01 / EX 01
Craftsman, Marianne
12 y.o. / F
3/29/2012
PER / Exam 02 / EX 02
Cutoffsaw, Marianne
12 y.o. / F
3/29/2012
PER / Exam 04 / EX 04
Cutter, Marianne
12 y.o. / F
3/29/2012
PER / Exam 05 / EX 05
DeWalt, Marianne
12 y.o. / F
3/29/2012
PER / Exam 06 / EX 06
Diablade, Marianne
12 y.o. / F
3/29/2012
PER / Exam 10 / EX 10
Craftsman, Melanie
8 y.o. / F
1/22/2017
PER / Exam 11 / EX 11
Cutoffsaw, Melanie
8 y.o. / F
1/22/2017
PER / Exam 12 / EX 12
Zzedmasterone, Melanie
14 y.o. / F
4/4/2010
Craftsman, Marianne
DOB:3/29/2012
Unit:PER
Room:Exam 01
Bed:EX 01
Mass Evacuation Form 260
Profile
Req Doc
Mass Evacuation Form ...
Missing Birth Weight or Gestational Age
Update Birth History
Marianne Craftsman
MRN: 40238323 Description: 12 year old female
Mass Evacuation Form 260
LEE HEALTH
GOLISANO CHILDREN'S HOSPITAL
PEDIATRIC EMERGENCY DEPARTMENT - - GOLISANO CHILDREN'S HOSPITAL
Today's Date
1/22/2025
Admission Date:
1/22/2025
Discharge Date:
Data Unavailable


y Lists
Niki's Patients
All - Treatment Team
Niki's Unit
1 Emergency Room - HER
1 Emergency Room - LER
2 Peds Sedation
3 Neonatal ICU
4 Peds ICU
5 Peds Hem/Onc
5 Peds IP Onc
6 Peds Med/Surg
7 Peds Med/Surg
Discharge Lounge
Emergency Room - PER
Peds NICU Transport
Peds Urgent Care
vailable Lists
Remote Client Caseload
Skilled Nursing
The Mass Evacuation Lists
Mass Evacuation
All Patients at Cape Coral Hospital
All Patients at Golisano Children's Hospital
All Patients at Gulf Coast Medical Center
All Patients at HealthPark Medical Center
All Patients at Lee Memorial Hospital
All Patients at Rehab Hospital
All Patients at Skilled Nuring
Login Department
Patient Contact Information
All Patients at Golisano Children's Hospital 249 Patients
Dept/Room/Bed
Patient Name
Discharge Disposition
Target Facility
Discharge Planning
PER / Exam 01 / EX 01
Craftsman, Marianne
12 y.o. / F
3/29/2012
PER / Exam 02 / EX 02
Cutoffsaw, Marianne
12 y.o. / F
3/29/2012
Craftsman, Marianne DOB:3/29/2012 Unit:PER Room:Exam 01 Bed:EX 01
Mass Evacuation Form 260
Profile
Req Doc
Hospital Problems:
Diagnosis
Date Noted
• Pharyngitis
02/02/2023
Sex: Female
Family/SO Notified?
EMERGENCY CONTACTS
Rel to Patient
Home Phone
Cell Phone
Work Phone
1. *No Contact Specified*
2. *No Contact Specified*
TRANSPORTATION NEEDS
Mode of Transport:
Special Needs:
Life Support:
Triage Category:
Means of Transport:
Accompanying Equipment:
Isolation:
No active isolations
LDAs:
Peripheral IV (Ped) 1/22/2025 Antecubital (Active)
Site Assessment Clean, Dry, Intact 01/22/25 0634
Line Status Blood returned 01/22/25 0634
Dressing Status Clean, Dry, Intact 01/22/25 0634
EVACUATING CLINICAL LOCATION
Room Number: EXAM 01
ID Band Confirmed by:
Medical Record Sent:
Patient belongings:
Patient valuables:
Patient medications:
TARGET FACILITY INFORMATION
Target Facility:
Contact info:

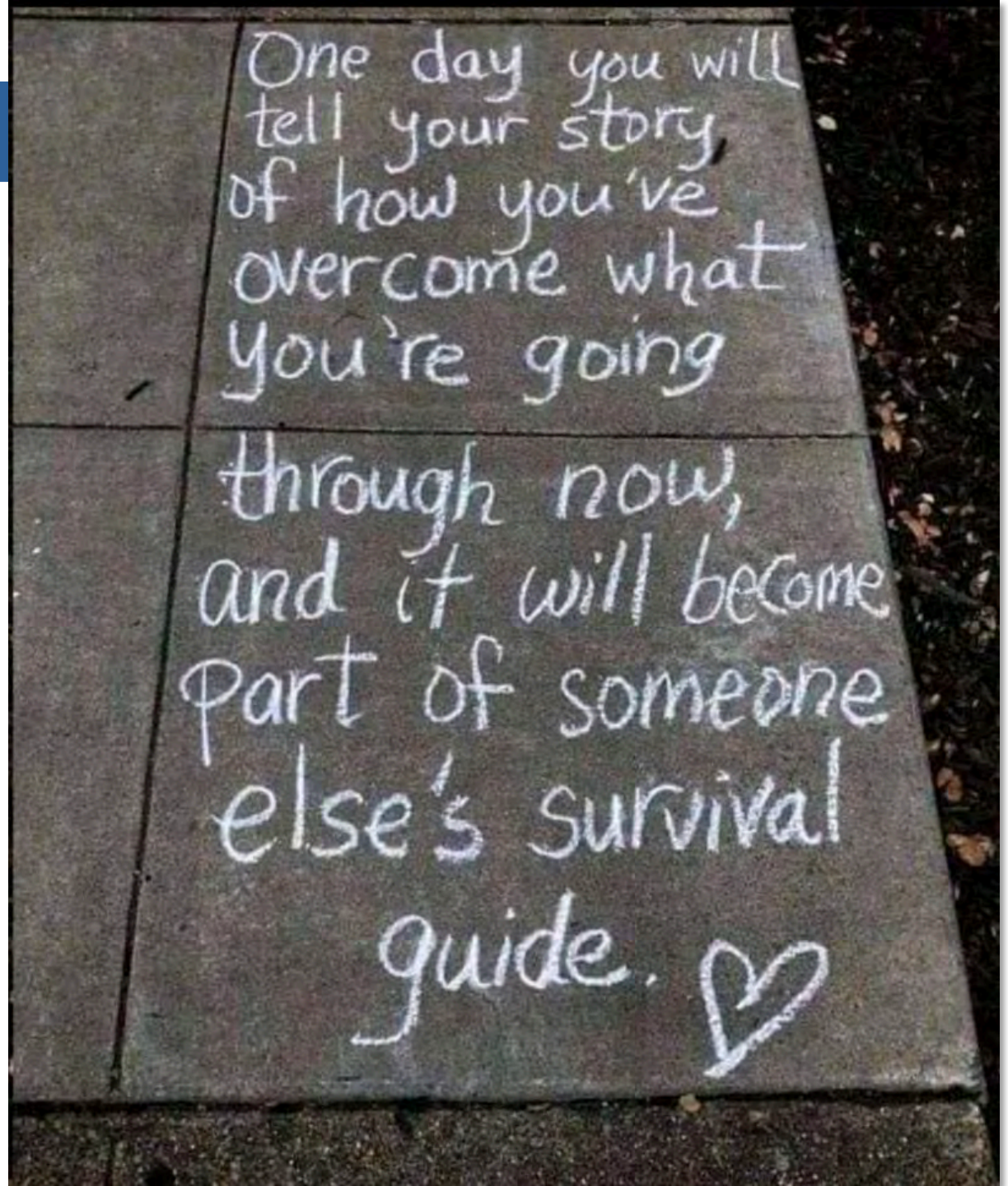
If you called today… for tips for tomorrow



THANK YOU to all the teams

- LifeLine- John's Hopkins All Children's
- Joe DiMaggio Children's
- Life Flight – Nicklaus Children's
- Air Care – Orlando Health
- St. Joseph's Children's
- Winnie Palmer
- Med Trans
- Tampa General Aeromed
- Advent Health
- ShandsCair
- Sarasota Memorial

Golisano Children's Hospital
LEE HEALTH


One day you will
tell your story
of how you've
overcome what
you're going
through now,
and it will become
part of someone
else's survival
guide.

RESOURCES

https://asprtracie.hhs.gov/technical-resources/resource/1875/preplanning-disaster-triage-for-pediatric-hospitals-train-toolkit

https://www.stanfordchildrens.org/en/research-innovation/train

TEEX Pediatric Disaster Response and Emergency Preparedness **MGT439**

THANK YOU