

# *Florida EMS-C Advisory Committee Meeting*

## *January 20, 2022*





# Welcome and Call to Order

## **Welcome members, liaisons, visitors and PECCs**

Email confirmation of your attendance with name/org./contact information to [pedready@jax.ufl.edu](mailto:pedready@jax.ufl.edu) or via chat box

- Please mute your phones and do not put on hold; \*6 to mute or unmute
- Congratulations to Dr. Kenneth Scheppke, MD, FAEMS, new Florida Deputy Secretary for Health and to Dr. Angus Jameson, new Florida EMS Medical Director

# EMSC Advisory Committee and Liaisons

- Addition of PICU/critical care liaison
- Travel expenses and prior approval

# Opening Announcements and Key Updates from Committees and Constituency Groups

- Retirement of Melia Jenkins: 24 years of dedicated service to FL EMSC Program
  - EMSC program infrastructure changes
  - Part-time UF EMSC program assistant/educator
  - Retirement of Dr. Robert Lutten
- 
- FAIR EMS Measurement Project
  - Florida Trauma System Advisory Council  
2022 Trauma Center Standards



# FL EMSC and PEDReady Contact Information

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**Group email:**

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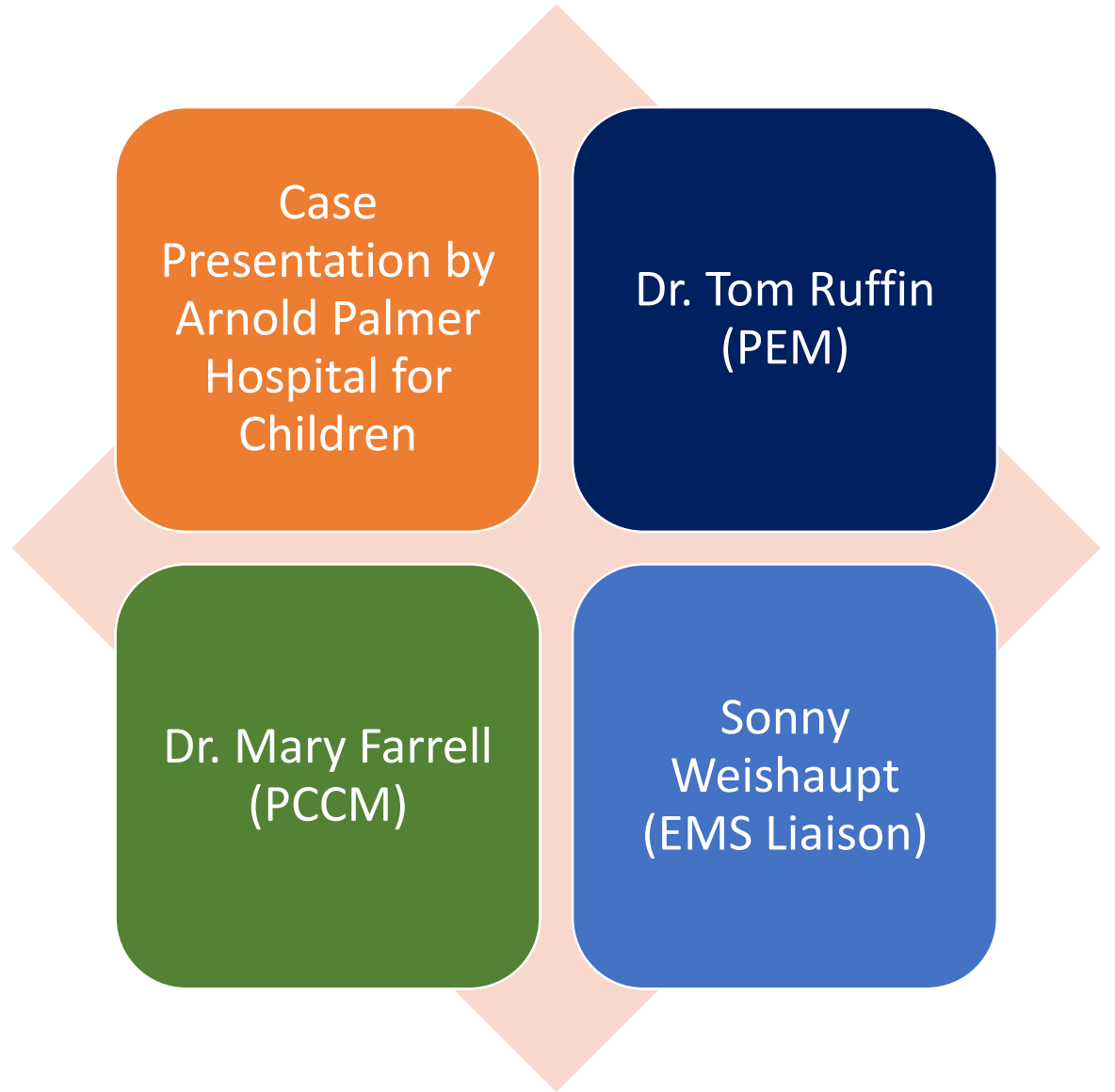
Key Websites:

<https://www.emlrc/flpedready>

<https://emscimprovement.center>

<http://www.floridahealth.gov/provider-and-partner-resources/emsc-program/index.html>

Presentations  
and Special  
Topics: Pediatric  
DKA Case  
Presentation,  
Sample  
Pathways and  
Resources



# Pediatric DKA Sample Pathways, Articles and Resources

Clinical Pathway examples: UF Jax using Nemours Jax Endocrine guidelines, APH Orlando, CHOP  
<https://media.chop.edu/data/files/clinical-pathways/pdf/diabetes-dka-care-map-1.pdf>  
<https://www.chop.edu/clinical-pathway/diabetes-type1-with-dka-clinical-pathway>

PCCFS 3<sup>rd</sup> edition textbook

Managing Diabetic Ketoacidosis in Children. Annals of Emergency Medicine  
(Volume 78, Issue 3, September 2021, Pages 340-345)

<https://www.sciencedirect.com/science/article/pii/S0196064421001608?via%3Dihub>

Podcasts:

CHOP PEM Podcast: DKA with Drs. Glaser and Kuppermann:

<https://podcasts.apple.com/us/podcast/chop-pem-podcast/id1543470608?i=1000547070548>

PEM Playbook: DKA Like a Boss

<https://podcasts.apple.com/us/podcast/pediatric-emergency-playbook/id1035668219?i=1000476405989>

PECARN Pie: DKA and Fluids Part 1- Peds RAP free chapter

[March 2021 - PECARN Pie: DKA and Fluids Part 1 - Kerion Baggage | Peds RAP \(hippoed.com\)](https://hippoed.com/pecarn-pie-dka-and-fluids-part-1-kerion-baggage/)

## References

### Clinical History

Polyuria, polydipsia, weight loss, fatigue, vomiting, confusion/AMS (especially in young patients)

### Clinical Signs

Dehydration, Kussmaul breathing, smell of ketones, vomiting, lethargy/AMS, opportunistic infections

### Cerebral Edema Risk Factors

Age < 3 years; prior history of DKA; pH < 7.0; failure of corrected Na to fall to normal range during treatment; administration of bicarbonate therapy; low initial PaCO<sub>2</sub> levels (11.3 ± 6.5 mm Hg); administration of insulin in first hour of fluid treatment; initial glucose > 1000 mg/dL

### Fluid Resuscitation

Initial fluid bolus of 10 ml/kg IV over 1 hour (if not in shock)

Following initial bolus, begin 1.5 times maintenance with NS

To calculate maintenance mL/hr, use patient's weight in kg:

- 4 mL/kg for the first 10 kg
- +2 mL/kg for the next 10 kg
- +1 mL/kg for each kg over 20 kg

**Two-bag system:** NS + D10NS = 1.5x maintenance. Titrate ratio of NS:D10NS based on blood glucose. Start with 100% NS then initiate D10NS when blood glucose < 300mg/dl

### Electrolyte Assessment/Management

**Sodium:**  $Na_{corrected} = Na_{measured} + (1.6 \times [(Glucose - 100) / 100])$

**Potassium:** Replacement based on initial serum K<sup>+</sup>

Serum K <sup>+</sup>	K <sup>+</sup> in Fluids
> 5.5	None
4.0 - 5.5	20 mEq/L K-Acetate + 20mEq/L K-Phos
< 4.0	30 mEq/L K-Acetate + 30mEq/L K-Phos

Perform ECG if serum potassium < 2.5 or > 6.0

### Insulin

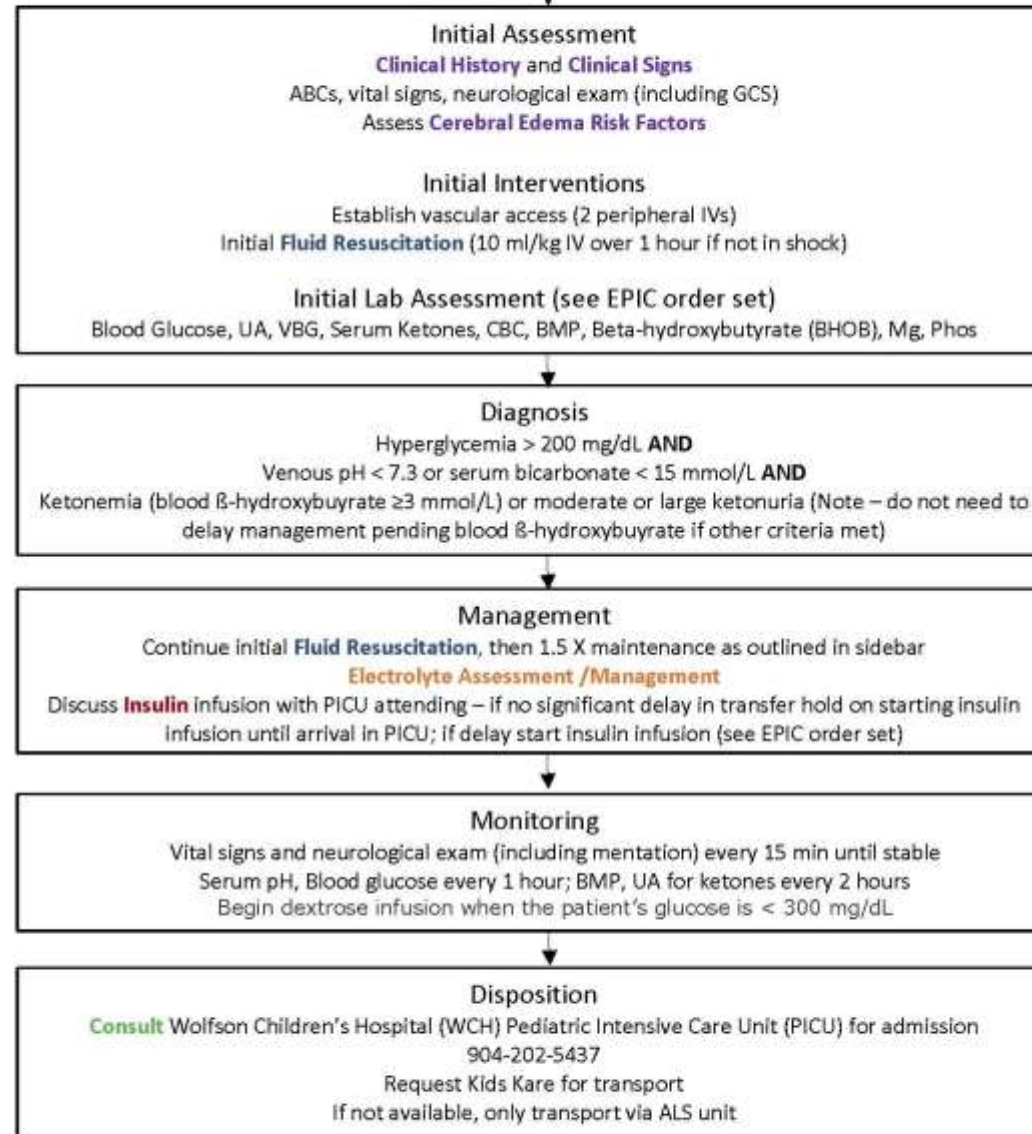
Discuss insulin infusion with PICU attending prior to initiating: if no significant delay in transfer hold on starting insulin infusion until arrival in PICU; if delay start insulin infusion in ED (see EPIC order set).

Initiate regular insulin at rate of 0.1 u/kg/hr one hour AFTER the start of the fluid resuscitation.

Do not use insulin bolus (increases risk of cerebral edema).

Goal is to lower glucose by no more than 50 - 100 mg/dL every hour

## PED Diabetic Ketoacidosis (DKA) Clinical Pathway



## APH Diabetic Ketoacidosis Management Protocol - Emergency Department

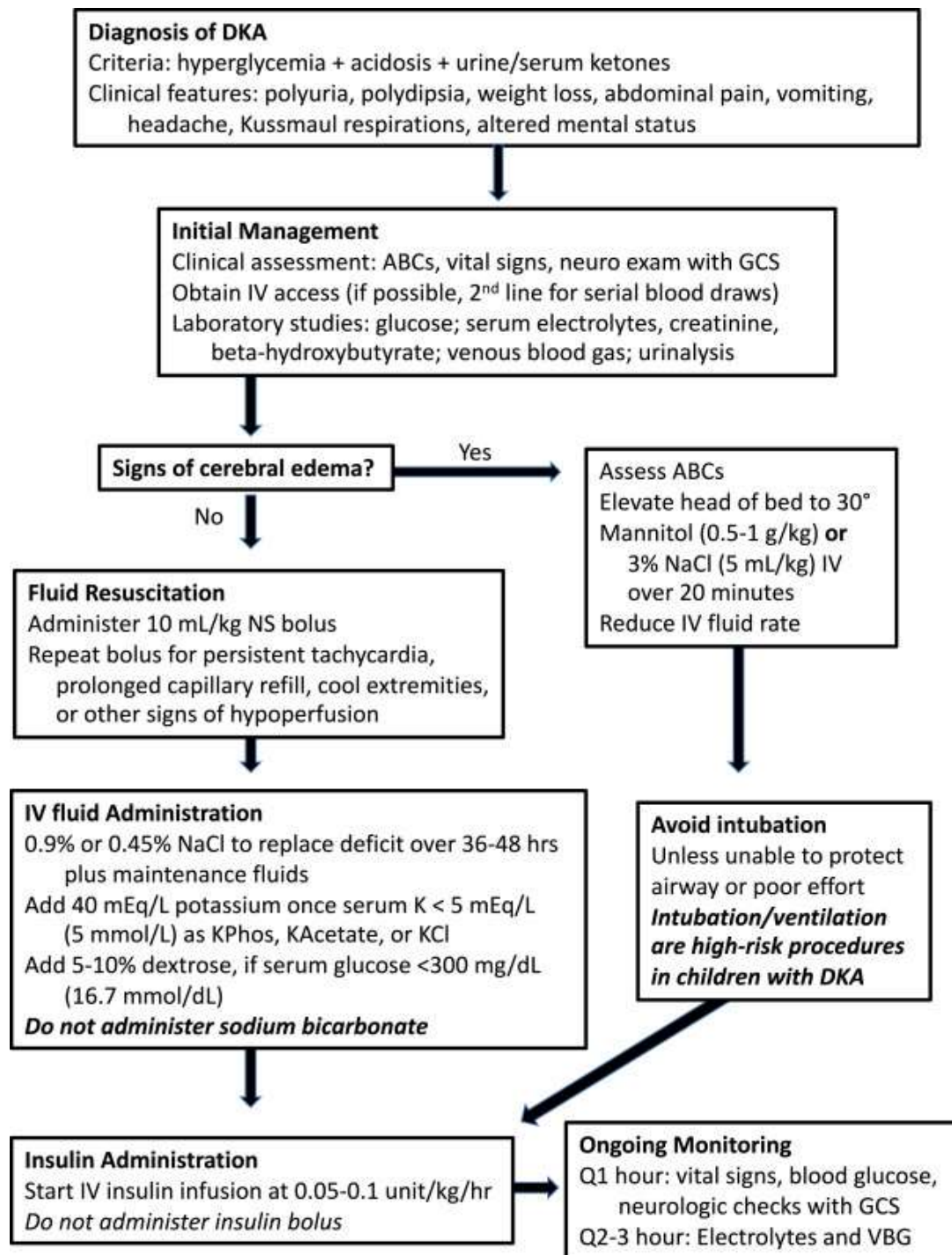
- Eligible Patients
  - Diagnosis of diabetic ketoacidosis
  - Needs admission to PICU or PSCU
- Initial management: no bicarbonate bolus, no insulin bolus, patient should have at least 2 PIVs or a CVL
  - Administer 10 cc/kg 0.9 % NS bolus (give over 1<sup>st</sup> hour of resuscitation)
    - Repeat 10 cc/kg 0.9% NS bolus over 2<sup>nd</sup> hour prn inadequate organ perfusion
  - LABS in ER (ON ARRIVAL):
    - Whole blood (AND Q1h while in the ER)
    - CBC
    - Beta-hydroxybutyrate
    - BMP
    - UA
- Insulin
  - Insulin gtt at 0.1 units/kg/hr
- Intravenous fluids
  - IVF rate in ml/hr = **2x Maintenance Rate**  
(or use actual fluid calculation: (84 ml/kg – bolus given) /23 hr + maintenance rate)
  - Potassium:
    - Default: include potassium if K < 5.5
    - If K ≥ 5.5, use two-bag system without potassium
    - If K < 4, use two-bag system with 60meq/L potassium (30 meq/L Kacetate + 30mmol/L KPhos)
    - If K < 3, hold insulin drip until IVF are started
  - Two-bag system: order both bags simultaneously STAT

	½ NS + 20meq/L K-acetate + 20mmol/L KPhos	D <sub>10</sub> ½ NS + 20meq/L K-acetate + 20mmol/L KPhos
<b>INITIAL BLOOD GLUCOSE &lt;500</b>		
Serum glucose	Percent of IVF	Percent of IVF
>350	100% = _____ mL /hr	0%
250-349	50% = _____ mL /hr	50% = _____ mL /hr
100-249	0%	100% = _____ mL /hr
< 100	Notify physician	
<b>INITIAL BLOOD GLUCOSE ≥ 500</b>		
Serum glucose	Percent of IVF	Percent of IVF
>500	100% = _____ mL/hr	0%
400-499	75% = _____ mL/hr	25% = _____ mL/hr
300-399	50% = _____ mL/hr	50% = _____ mL/hr
200-299	25% = _____ mL/hr	75% = _____ mL/hr
100-199	0%	100% = _____ mL/hr
<100	Notify physician	

\*If blood glucose drops by more than 100 mg/dL in one hour contact physician

- NURSING
  - VS q30min
  - Neuro checks Q30min
  - Notify H.O. for vomiting, confusion, agitation, bradycardia, urinary incontinence, abnormal neurological exam, headache, or if BG drops by more than 100 mg/dL in 1 hr
  - RN and physician to assess adequacy of fluid resuscitation after 1<sup>st</sup> bolus of 10 cc/kg over 1 hr completed

Time	D-stick	POC Ketones	Blood Gas	BMP/MG /Phos	IVF	Insulin	Mental status	I/O
Start _____	✓	✓	✓	✓	20ml/kg bolus	Order ASAP	✓	✓
@ 1 hour _____	✓	✓	Repeat Q2H until pH is > 7		CONTINUE NSS fluids @1.5x maintenance	Insulin infusion should start 45 minutes- 1 hr from bolus start	✓	✓
@ 2 hours _____	✓	✓		✓	Transition to electrolyte containing IVF once BMP has resulted	Initiate D10-NS when D-stick is 200-299	✓	✓
@ 3 hours _____	✓	✓			Adjust IVF rate as needed	DO NOT ADJUST INSULIN RATE	✓	✓
@ 4 hours _____	✓	✓		✓	Adjust IVF rate as needed	TITRATE IVF TO MAINTAIN GLUCOSE READINGS	✓	✓
@ 5 hours _____	✓	✓			Adjust IVF rate as needed		✓	✓
@ 6 hours _____	✓	✓		✓	Adjust IVF rate as needed		✓	✓

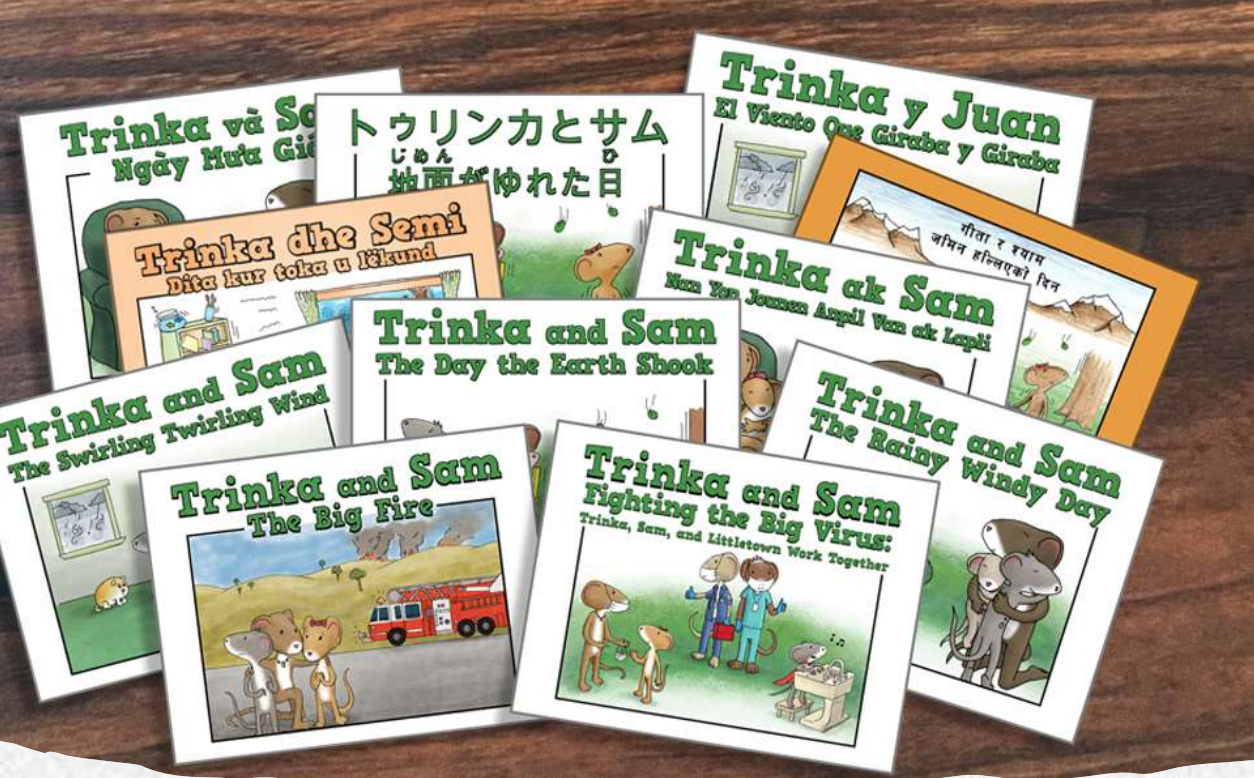


Managing Diabetic Ketoacidosis in Children  
[https://www.annemergmed.com/article/S0196-0644\(21\)00160-8/fulltext](https://www.annemergmed.com/article/S0196-0644(21)00160-8/fulltext)

# Presentations and Special Topics: Safe Transport

See FL PEDReady website under EMS tab





# Pediatric Disaster and Mental Health

# Pediatric Disaster and Mental Health

Trinka and Sam Series, Another Child Friendly Disaster Readiness Resource for Your Community

<https://piploproductions.com/stories/trinka-and-sam/>

Rocket Rules program teaches emergency preparedness, safety awareness and social emotional skills to children PreK to 3rd grade.

<https://rocketrules.org/>

# EIIC PEAK: Suicide

- <https://emscimprovement.center/education-and-resources/peak/pediatric-suicide-screening-mental-health/>
- Management of the agitated patient coming soon



# PEAK

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Pediatric Education  
and Advocacy Kits

# Pediatric Disaster and Mental Health

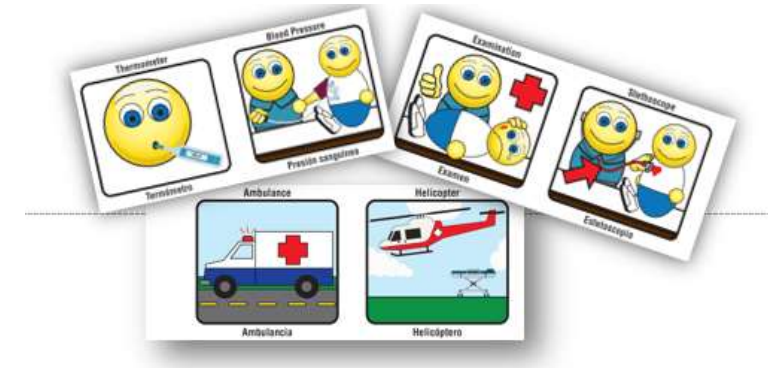
Communication cards for disaster communication during a pediatric decontamination (R Ritola)

EIIC CHECKLIST OF ESSENTIAL PEDIATRIC DOMAINS AND CONSIDERATIONS FOR EVERY HOSPITAL'S DISASTER POLICIES draft (Nasca and Jean-Jacques working group members, reviewed by Chief Downey)

NAEMSP Pediatric Committee project on De-escalation and Prehospital Behavioral Health Emergencies (Dr. Fishe, etc.)

JumpSTART badge buddies

<https://emlrc.org/wp-content/uploads/JumpSTART-badge-buddy-2021-v2.pdf>



# START Modified ADULT

(size, + 2° sex characteristics)

Move the Walking Wounded

MINOR

No Respirations after Head Tilt

EXPECTANT

## CONTROL BLEEDING

Respiratory Distress (> 30/min)

IMMEDIATE

Perfusion (No Radial Pulse)

IMMEDIATE

Mental Status

IMMEDIATE

(Unable to Follow Commands)

Normal RPM, Follows Commands

DELAYED

## CONDUCT SECONDARY TRIAGE IN THE TREATMENT PHASE

### FL MCI LEVELS

MCI Level 1: 5-10 victims

MCI Level 2: 11-20 victims

MCI Level 3: 21-100 victims

MCI Level 4: 100 -1000 victims

MCI Level 5: Over 1000 victims

July 2021

Over 3000  
distributed

On PEDReady  
website

IMMEDIATE	Red
DELAYED	Yellow
MINOR	Green
EXPECTANT	Black

# JumpSTART Modified

(Newborn to Young Adult\*)

Move the Walking Wounded

MINOR

No Respirations and No Peripheral Pulse

EXPECTANT

Respiratory Rate: > 45/min, < 15/min  
or †Work of Breathing, obvious distress

IMMEDIATE

No Respirations with Peripheral Pulse  
Give 5 Ventilations via Barrier Device  
Spontaneous Respirations Resume  
after 5 Ventilations

IMMEDIATE

No Spontaneous Respirations Resume  
after 5 Ventilations

EXPECTANT

## CONTROL BLEEDING

Perfusion (No Palpable Pulse)

IMMEDIATE

Mental Status\*\*

Unresponsive or not localizing pain

IMMEDIATE

Alert, responds to voice, localizes pain

DELAYED

\*Presence of 2° sex characteristics; \*\*Consider developmental level  
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CONDUCT SECONDARY TRIAGE IN THE TREATMENT PHASE

# HRSA-EMSC Programs



Emergency Medical Services for Children

EMSC Innovation and Improvement Center (EIIC)



Emergency Medical Services for Children  
Innovation and Improvement Center

National EMSC Data Analysis Resource Center (NEDARC)



State Partnership Programs



Pediatric Emergency Care Applied Research Network (PECARN)



# National EMSC Related Updates



EIIC Prehospital Pediatric Readiness Toolkit and Checklist:

[https://media.emscimprovement.center/documents/Prehospital\\_Pediatric\\_Readiness\\_Checklist\\_Final.pdf](https://media.emscimprovement.center/documents/Prehospital_Pediatric_Readiness_Checklist_Final.pdf)

EIIC Pediatric Readiness for EDs- checklists **updated 2021**

- [https://media.emscimprovement.center/documents/NPRP\\_Modified\\_Interactive\\_Checklist\\_Final.pdf](https://media.emscimprovement.center/documents/NPRP_Modified_Interactive_Checklist_Final.pdf)
- [https://media.emscimprovement.center/documents/NPRP\\_Checklist\\_Final\\_Apr2021.pdf](https://media.emscimprovement.center/documents/NPRP_Checklist_Final_Apr2021.pdf)



## Pediatric Readiness in the Emergency Department

This checklist is based on the American Academy of Pediatrics (AAP), American College of Emergency Physicians (ACEP), and Emergency Nurses Association (ENA) 2018 joint policy statement "Pediatric Readiness in the Emergency Department," which can be found online at: <https://pediatrics.aappublications.org/content/pediatrics/142/3/e20182459.full.pdf>. Use this tool to check if your hospital emergency department (ED) has the most critical components listed in this joint policy statement.

### Administration and Coordination of the ED for the Care of Children

- Physician Coordinator for Pediatric Emergency Care (PECC)\*
  - Board certified/eligible in EM or PEM (preferred but not required for resource limited hospitals)
  - The Physician PECC is not board certified in EM or PEM but meets the qualifications for credentialing by the hospital as an emergency clinician specialist with special training and experience in the evaluation and management of the critically ill child.
- Nurse Coordinator for Pediatric Emergency Care (PECC)\*
  - CPEN/CEN (preferred)
  - Other credentials (e.g. CPN, CCRN)

\*An Advanced Practice Provider may serve in either of these roles. Please see the guidelines' toolkit for further definition of the roles(s).

### Physicians, Advanced Practice Providers (APPs), Nurses, and Other ED Healthcare Providers

- Healthcare providers who staff the ED have periodic pediatric-specific competency evaluations for children of all ages. Areas of pediatric competencies include any/all of the following:
  - Assessment and treatment (e.g. triage)
  - Medication administration
  - Device/equipment safety
  - Critical procedures
  - Resuscitation
  - Trauma resuscitation and stabilization
  - Disaster drills that include children
  - Patient and family-centered care
  - Team training and effective communication

### Guidelines for QI/PI in the ED

- The QI/PI plan includes pediatric-specific indicators
  - Data are collected and analyzed
  - System changes are implemented based on performance

### ED Policies, Procedures, and Protocols

- Policies, procedures, and protocols for the emergency care of children. (These policies may be integrated into overall ED policies as long as pediatric-specific issues are addressed)
- Illness and injury triage
  - Pediatric patient assessment and reassessment
  - Identification and notification of the responsible provider of abnormal pediatric vital signs
  - Immunization assessment and management of the under-immunized patient
  - Sedation and analgesia, for procedures including medical imaging
  - Consent, including when parent or legal guardian is not immediately available
  - Social and behavioral health issues
  - Physical or chemical restraint of patients
  - Child maltreatment reporting and assessment
  - Death of the child in the ED
  - Do not resuscitate (DNR) orders
  - Children with special health care needs
  - Family and guardian presence during all aspects of emergency care, including resuscitation
  - Patient, family, guardian, and caregiver education
  - Discharge planning and instruction
  - Bereavement counseling
  - Communication with the patient's medical home or primary care provider as needed.
  - Telehealth and telecommunications

### All-Hazard Disaster Preparedness

- The written all-hazard disaster-preparedness plan addresses pediatric-specific needs within the core domains including:
- Medications, vaccines, equipment, supplies and trained providers for children in disasters
  - Pediatric surge capacity for injured and non-injured children
  - Decontamination, isolation, and quarantine of families and children of all ages
  - Minimization of parent-child separation
  - Tracking and reunification for children and families

- Evidence-based clinical pathways, order sets or decision support available to providers in real time

### Inter-facility Transfers

- Written pediatric inter-facility transfer agreements
- Written pediatric inter-facility transfer guidelines. These may include:
  - Criteria for transfers (e.g. specialty services)
  - Criteria for selection of appropriate transport service
  - Process for initiation of transfer
  - Plan for transfer of patient information
  - Integration of family-centered care
  - Integration of telehealth/telecommunications

### Guidelines for Improving Pediatric Patient Safety

- Pediatric patient and medication safety needs are addressed in the following ways:
- Children are weighed in kilograms only
  - Weights are recorded in kilograms only
  - For children who require emergency stabilization, a standard method for estimating weight in kilograms is used (e.g., a length-based system)
  - Infants and children have a full set of vital signs recorded
    - A full set of vital signs includes temperature, heart rate, respiratory rate, pulse oximetry, blood pressure, pain, and mental status when indicated in the medical record.
  - CO2 monitoring for children of all ages
  - Process for safe medication delivery that includes:
    - Prescribing
    - Administration
    - Disposal
  - Pre-calculated drug dosing and formulation guides
  - 24/7 access to interpreter services in the ED
  - Timely tracking and reporting of patient safety events

### Guidelines for ED Support Services

- Medical imaging capabilities and protocols address age- or weight-appropriate dose reductions for children.
- All efforts made to transfer completed images when a patient is transferred from one facility to another.
- Collaboration with radiology, laboratory and other ED support services to ensure the needs of children in the

Pediatric equipment, supplies, and medications are appropriate for children of all ages and sizes (see list below), and are easily accessible, clearly labeled, and logically organized.

- ED staff is educated on the location of all items.
- Daily method in place to verify the proper location and function of pediatric equipment and supplies
- Medication chart, length-based tape, medical software, or other systems is readily available to ensure proper sizing of resuscitation equipment and proper dosing of medications.
- Standardized chart or tool used to estimate weight in kilograms if resuscitation precludes the use of a weight scale (eg. length-based tape)

### Medications

- Analgesics (oral, intranasal, and parenteral)
- Anesthetics (eutectic mixture of local anesthetics; lidocaine 2.5% and prilocaine 2.5%; lidocaine, epinephrine, and tetracaine; and LMX 4 [4% lidocaine])
- Anticonvulsants (benzodiazepines, levetiracetam, valproate, carbamazepine, fosphenytoin, and phenobarbital)
- Antidotes (common antidotes should be accessible to the ED e.g. naloxone)
- Antipyretics (acetaminophen and ibuprofen)
- Antiemetics (ondansetron and prochlorperazine)
- Antihypertensives (labetalol, nicardipine, and sodium nitroprusside)
- Antimicrobials (parenteral and oral)
- Antipsychotics (olanzapine and haloperidol)
- Benzodiazepines (midazolam and lorazepam)
- Bronchodilators
- Calcium chloride and/or calcium gluconate
- Corticosteroids (dexamethasone, methylprednisolone, and hydrocortisone)
- Cardiac medications (adenosine, amiodarone, atropine, procainamide, and lidocaine)
- Hypoglycemic interventions (dextrose, oral glucose)
- Diphenhydramine
- Epinephrine (1mg/mL [1M] and 0.1 mg/mL [IV] solutions)
- Furosemide
- Glucagon
- Insulin
- Magnesium sulfate
- Intracranial hypertension medications (mannitol, 3% hypertonic saline)
- Neuromuscular blockers (rocuronium and succinylcholine)
- Sucrose solutions for pain control in infants
- Sedation medications (midazolam, etomidate and ketamine)
- Sodium bicarbonate (4.2%)
- Vasopressor agents (dopamine, epinephrine and



# Prehospital Pediatric Readiness EMS AGENCY CHECKLIST



This checklist is based on the 2020 joint policy statement "Pediatric Readiness in Emergency Medical Services Systems", co-authored by the Academy of Pediatrics (AAP), American College of Emergency Physicians (ACEP), Emergency Nurses Association (ENA), National Association of EMS Physicians (NAEMSP), and National Association of EMTs (NAEMT). Additional details can be found in the AAP Technical Report "Pediatric Readiness in Emergency Medical Services Systems".

Use this tool to check if your EMS agency is ready to care for children as recommended in the Policy Statement.

Consider using resources compiled by the Health Resources & Services Administration's Emergency Medical Services for Children (EMSC) Program when implementing the recommendations noted here, to include the [Prehospital Pediatric Readiness Toolkit](#).



## EDUCATION & COMPETENCIES FOR PROVIDERS

- Process(es) for ongoing pediatric specific education using one or more of the following modalities:
  - Classroom/in-person didactic sessions
  - Online/distributive education
  - Skills stations with practice using pediatric equipment, medication and protocols
  - Simulated events

Process for evaluating pediatric-specific competencies for the following types of skills:

- Psychomotor skills, such as, but not limited to:
  - Airway management
  - Fluid therapy
  - Medication administration
  - Vital signs assessment
  - Weight assessment for medication dosing and equipment sizing
  - Specialized medical equipment
- Cognitive skills, such as, but not limited to:
  - Patient growth and development
  - Scene assessment
  - Pediatric Assessment Triangle (PAT) to perform assessment
  - Recognition of physical findings in children associated with serious illness
- Behavioral skills, such as, but not limited to:
  - Communication with children of various ages and with special health care needs
  - Patient and family centered care
  - Cultural awareness
  - Health care disparities
  - Team communication

## EQUIPMENT AND SUPPLIES

- Utilize national consensus recommendations to guide availability of equipment and supplies to treat all ages
- Process for determining competency on available equipment and supplies

## PATIENT AND MEDICATION SAFETY

- Utilization of tools to reduce pediatric medication dosing and administration errors, such as, but not limited to:
  - Length based tape
  - Volumetric dosing guide
- Policy for the safe transport of children
- Equipment necessary for the safe transport of children

## PATIENT- AND FAMILY-CENTERED CARE IN EMS

Partner with families to integrate elements of patient- and family-centered care in policies, protocols, and training, including:

- Using lay terms to communicate with patients and families
- Having methods for accessing language services to communicate with non-English speaking / non-verbal patients and family members
- Narrating actions, and alerting patients and caregivers before interventions are performed

Policies and procedures that facilitate:

- Family presence during resuscitation
- The practice of cultural or religious customs
- A family member or guardian to accompany a pediatric patient during transport

## POLICIES, PROCEDURES, AND PROTOCOLS (TO INCLUDE MEDICAL OVERSIGHT)

- Prearrival instructions identified in EMS dispatch protocols include pediatric considerations, when relevant, such as, but not limited to:
  - Respiratory distress
  - Cardiac arrest
  - Choking
  - Seizure
  - Altered consciousness
- Policies, procedures, and protocols include pediatric considerations, such as, but not limited to:
  - Policy on pediatric refusals
  - Pediatric assessment
  - Consent and treatment of minors
  - Recognition and reporting of child maltreatment
  - Trauma triage
  - Children with special health care needs
- Direct medical oversight integrates pediatric-specific knowledge
- Protocols (indirect medical oversight) include pediatric evidence when available
- Destination policy that integrates pediatric-specific resources

## QUALITY IMPROVEMENT (QI)/ PERFORMANCE IMPROVEMENT (PI)

- PI process includes pediatric encounters
- Pediatric-specific measures are included in the PI process
- Submission of EMS agency data to the state's prehospital patient care database
- Submitted data is compliant with the current version of NEMESIS (version 3.x or higher)
- Process to track pediatric patient centered outcomes across the continuum of care, such as, but not limited to:
  - Transport destination
  - Secondary transport destination
  - ED and hospital disposition
  - ED and hospital diagnoses
  - Survival to hospital admission
  - Survival to hospital discharge

## INTERACTION WITH SYSTEMS OF CARE

Policies, procedures, protocols, and performance improvement initiatives involve ongoing collaboration with:

- Pediatric emergency care
- Public health
- Family advocates

Plans and exercises for disasters or mass casualty incidents include:

- Care of pediatric patients, such as, but not limited to:
  - Pediatric mental health first aid
  - Pediatric disaster triage
  - Pediatric dosing of medications used as antidotes
  - Pediatric mass transport
- Tracking of unaccompanied children
- Family reunification
- Collaborate with external personnel or have internal staff focused on enhancing pediatric care, such as, but not limited to:
  - Pediatric emergency care coordinator (PECC)
  - Regional PECC
  - Pediatric advisory council(s)
  - Medical director with pediatric knowledge and experience

- Understand pediatric capabilities at local and/or regional emergency departments for children with the following types of conditions:
  - Medical emergency
  - Traumatic injury
  - Behavioral health emergency
- Policies and/or procedures for transfer of responsibility of patient care at destination

Revised May 20, 2021

To provide feedback on this checklist, please email [pprp@emscimprovement-center](mailto:pprp@emscimprovement-center)

For additional information on the Prehospital Pediatric Readiness Project (PPRP), visit: <https://emscimprovement-center/domains/prehospital-care/prehospital-pediatric-readiness>



## Emergency Medical Services for Children Performance Measures

EMSC measure	Description
EMSC 01	Submission of NEMESIS compliant (Version 3.x-Data)
EMSC 02	Pediatric emergency care coordinator
EMSC 03	Use of pediatric-specific equipment
EMSC 04	Hospital recognition for pediatric emergencies
EMSC 05	Hospital recognition for pediatric trauma
EMSC 06	Inter-facility transfer guidelines
EMSC 07	Inter-facility transfer agreements
EMSC 08	Permanence of EMSC
EMSC 09	Integration of EMSC priorities into statutes or regulations

*Abbreviations: EMSC, Emergency Medical Services for Children; NEMESIS, National Emergency Medical Services Information System.*

# National EMSC Related Updates



NEDARC EMSC 2022 EMS Agency Survey in progress

- Closes March 31, 2022
- Focus on PM 2 and 3 (PECC and pediatric equipment)
- <https://www.emscsurveys.org/>  
Search for FL, then agency
- <https://www.emscsurveys.org/docs/EMS%20for%20Children%20Assessment.pdf>
- <https://nedarc.org/performanceMeasures/documents/2021NationalReportforEMSAgencies-final.pdf>

Frequency Report from the 2021 National Pediatric Readiness Assessment:  
Data Collected May 1 – August 31, 2021

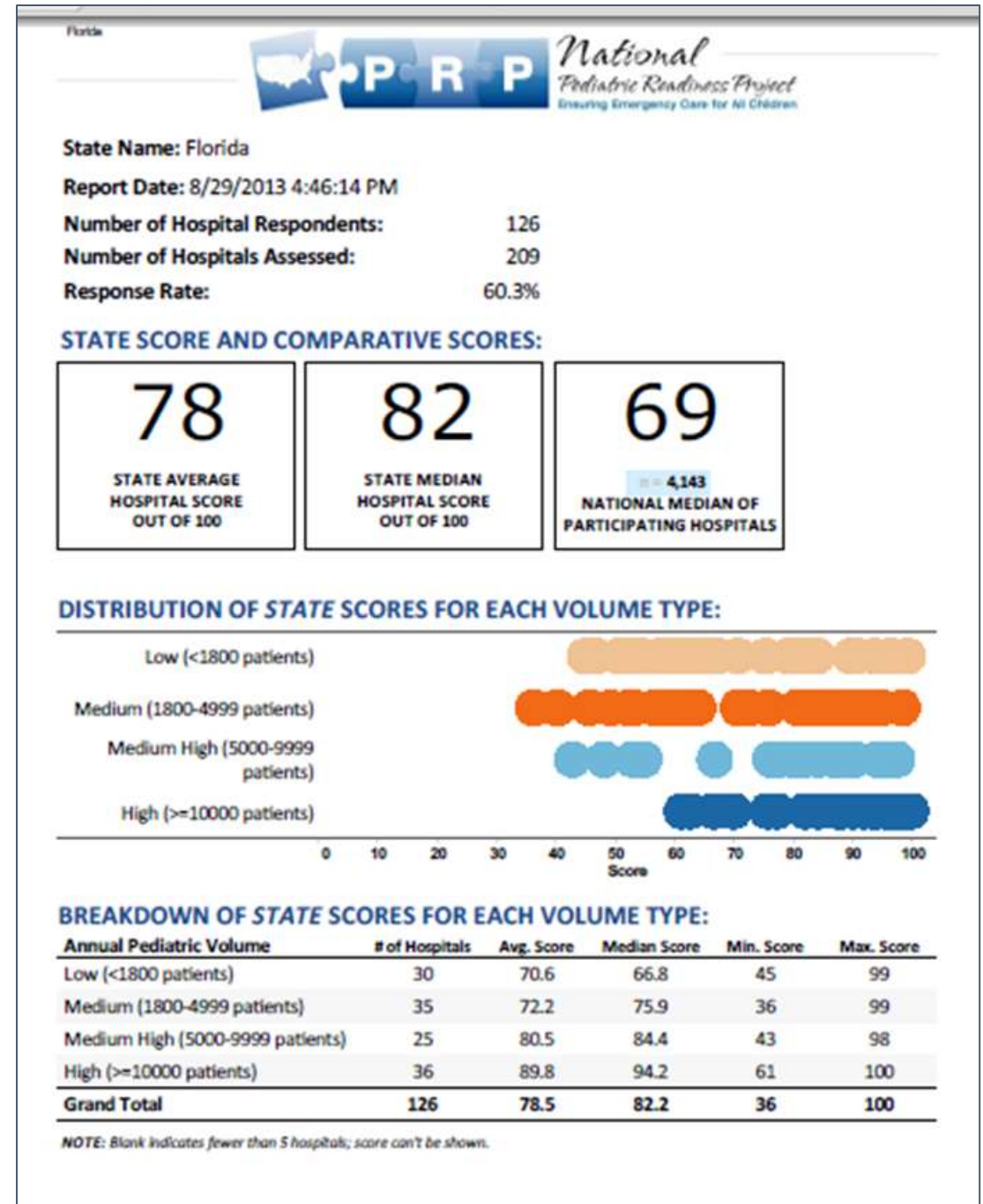
	Overall Numbers > Numbers by Pediatric Volume in the Last Year				
	Overall (N = 170)	Low (N = 63)	Medium (N = 56)	Medium High (N = 28)	High (N = 23)
<b>Weighted Pediatric Readiness Score</b>					
Mean	74.8	70.1	72.8	77.8	88.9
Median	75.5	87.5	76.4	78.5	90.5

### 2021 NPRP Assessment (ED pediatric readiness)

- FL 58% response rate
- <https://pedsready.org/>
- Overall mean 74.8, median 75.5
- Higher for high volume EDs
- No direct comparison with 2013 survey: different survey tool, COVID, response rate

National  
EMSC  
Related  
Updates

# Florida Pediatric Readiness Score: 2013 Survey



# ACS and EMSC: NPRP

Trauma Improvement Sprint over two half-day sessions on Feb. 23 and March 2, 2022, as part of [the Pediatric Emergency Care Coordinator \(PECC\) Workforce Development Collaborative](#).

Sprint will help trauma teams prepare for [new pediatric standards that will soon be required for verification of all trauma centers, both adult and pediatric](#). Standards were recently announced during American College of Surgeons Trauma Quality Improvement Program (TQIP) annual conference.

One of the standards is specifically about pediatric readiness and will require all trauma centers to participate in EMSC's National Pediatric Readiness Project assessment and to develop a plan to address any gaps.

## **EMSC 06:**

### **Interfacility Transfer Guidelines with all 8 Components of Transfer**

**(a) EMSC 06 Numerator: 123**

**(b) EMSC 06 Denominator: 170**

**(c) EMSC 06 Percentage: 72%**

## **EMSC 07:**

### **Interfacility Transfer Agreements**

**(a) EMSC 07 Numerator: 130**

**(b) EMSC 07 Denominator: 170**

**(c) EMSC 07 Percentage: 76%**

# National EMSC Related Updates

- PECC workforce collaborative  
<https://emscimprovement.center/collaboratives/pwdc/>
- EMSC Pulse monthly newsletter: main means of national communication  
<https://emscimprovement.center/news/>
- National Association of EMS Physicians Compendium of Airway Management Position Statements and Resource Documents: Volume 26, 2022 supplement  
Matthew Harris, John W. Lyng, Maria Mandt, Brian Moore, Toni Gross, Marianne Gausche-Hill & J. Joelle Donofrio-Odmann (2022) *Prehospital Pediatric Respiratory Distress and Airway Management Interventions: An NAEMSP Position Statement and Resource Document*, *Prehospital Emergency Care*, 26:sup1, 118-128, DOI: 10.1080/10903127.2021.1994675.  
<https://pubmed.ncbi.nlm.nih.gov/35001823/>
- Pediatric Pad Defibrillator Compatibility and material shortages  
States report difficulty obtaining pediatric defibrillator pads for AEDs or monitor/defibrillators since July 2021

New Hampshire BoEMS sent out a memo to our state's agencies early in 2020 I think? I'm happy to share that. Just need to do a little digging. Attached is an excerpt from the manual of the Lifepak 12/15/20 series. Also is a letter from Physio that went out to all customers essentially saying that their monitors in AED mode will not deliver a pediatric dose but that AHA approved adult dosing.

Physio-Control, Inc. | Lifesaving starts here.™

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GENERAL  
425 867 4000  
TOLL-FREE  
800 442 1142

[www.physio-control.com](http://www.physio-control.com)

December 2015

Dear Valued Customer,

Thank you for your inquiry regarding the LIFEPAK® 20/20e, LIFEPAK 15 and LIFEPAK 12 defibrillator/monitors when used to defibrillate pediatric patients. The LIFEPAK 20/20e, 15 and 12 devices can be operated in manual or automated external defibrillator (AED) mode to provide defibrillation therapy.

Manual defibrillation can be performed with pediatric or adult electrodes and pediatric or adult energy levels in accordance with local protocols. The 2015 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science (2015 AHA Guidelines) recommend for children 1 year of age to puberty to use an initial dose of 2 to 4 J/kg. For refractory VF, it is reasonable to increase the dose to 4 J/kg. For subsequent energy levels, a dose of 4 J/kg may be reasonable and higher energy levels may be considered, though not to exceed 10 J/kg or the maximum adult dose<sup>1</sup>. The Guidelines go on to say when a shockable rhythm is identified by a trained healthcare provider, a manual defibrillator is preferred for infants<sup>2</sup>.

The Shock Advisory Algorithm used in the AED mode in the LIFEPAK 20/20e, 15 and 12 devices was tested with a large, diverse and challenging database of infant and child heart rhythms gathered under actual clinical conditions<sup>3</sup>. Sensitivity and specificity exceeded AAMI requirements and AHA recommendations.

With respect to pediatric defibrillation using an AED, the Guidelines indicate an AED with a pediatric attenuator is preferred for children <8 years of age. If this is not available, an AED without a dose attenuator may be used<sup>2</sup>. According to the 2015 Consensus on Science, the degree of myocardial damage using an AED in children without an attenuator was not associated with any difference in four or seventy-two hour survival<sup>4</sup>.

Physicians and medical directors may define protocols, consistent with the 2015 AHA Guidelines, to defibrillate patients older than infants with the LIFEPAK 20/20e, 15 and 12 devices in AED mode with adult electrodes and adult energy levels and to defibrillate infant patients in manual mode with the pediatric or adult electrodes or paddles, as appropriate, for the patient.

Accordingly, some physicians and medical directors define protocols to standardize use of adult electrodes and adult energy levels when operating the LIFEPAK 20/20e, LIFEPAK 15 and LIFEPAK 12 defibrillator/monitors in AED mode.

You are a valued customer. Thank you for your inquiry and feel free to contact me with any questions at 425.867.4644.

Sincerely,

PHYSIO-CONTROL, INC.



Paula Lank  
Vice President of Clinical and Regulatory Affairs

GDR 3312713\_C

THERAPY | 5

## Automated External Defibrillation (AED)

### Intended Use

When used in AED mode, the LIFEPAK 15 monitor/defibrillator is a semiautomatic defibrillator that provides a prompted treatment protocol and ECG analysis using a patented Shock Advisory System™ (SAS). This software algorithm analyzes the patient's electrocardiographic (ECG) rhythm and indicates whether or not a shockable rhythm is detected. AED mode requires operator interaction in order to defibrillate the patient.

AED mode is intended for use by personnel who are authorized by a physician or medical director and have, at a minimum, the following skills and training:

- CPR training
- AED training equivalent to that recommended by the American Heart Association (AHA) or the European Resuscitation Council (ERC).
- Training in the use of the LIFEPAK 15 monitor/defibrillator in AED mode

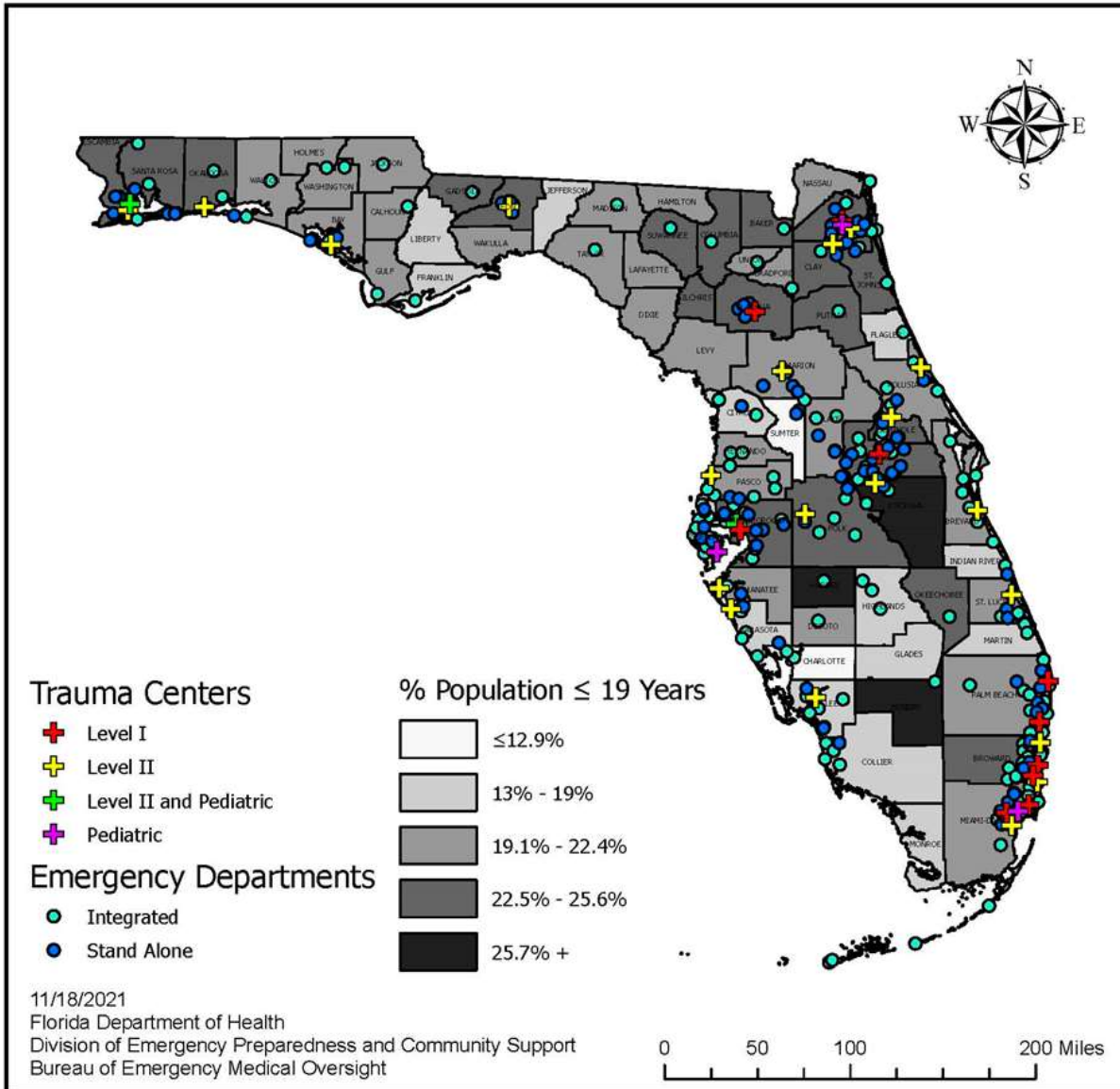
### Indications

AED mode is to be used only on patients in cardiopulmonary arrest. The patient must be unconscious, pulseless, and not breathing normally before using the defibrillator to analyze the patient's ECG rhythm. (In AED mode, the LIFEPAK 15 monitor/defibrillator is not intended for use on pediatric patients less than eight years old.)

### Contraindications

None known.

# November 2021



*Percent of Population  
 Ages ≤ 19 In  
 Relation to Trauma  
 Centers and  
 Emergency Departments*

**>300 EDs: 215 Integrated  
 ED's, 87 Off-Site EDs as  
 of 02/01/2021**

**~303 EMS agencies  
 (250 ALS)**

**17 Children's Hospitals**

**15 TC w/ peds**

**4 Burn Centers  
 w/pediatric capability**

Disclaimer: This thematic map is for reference purposes. Any reliance on the information contained herein is at the user's own risk. The Florida Department of Health and its agents assume no responsibility for any use of the information contained herein or any loss resulting there from.



# Florida EMSC/PEDReady Updates

PEDReady website updated with meeting materials, disaster badge buddies, new ED and EMS checklists: <https://emlrc.org/flpedready/>

Transport of minors and documentation of parental consent in the ED:  
Parents' Bill of Rights

- <https://www.myfloridahouse.gov/Sections/Bills/billsdetail.aspx?BillId=70313>
- Law enumerates parental rights with respect to his or her minor child for education, health care, and criminal justice procedures. The bill prohibits a governmental entity from infringing upon the fundamental right of a parent to direct the upbringing, education, health care, and mental health of his or her minor child. Though more the 75% of the bill relates to the education system, the bill further requires a parent's permission before a health care practitioner may provide services, prescribe medicine to the child, or perform a medical procedure, unless otherwise provided by law. The bill provides a misdemeanor penalty for a health care practitioner or similar person who violates the health care provisions and subjects these persons to disciplinary actions.

## *Parental Consent for Medical Treatment*

Parents generally have the right to be informed about, and give consent for, proposed medical procedures on their children. However, the state also has an obligation to ensure that children receive reasonable medical treatment that is necessary for the preservation of life.<sup>39</sup> The state's interest diminishes as the severity of an affliction and the likelihood of death increase:<sup>40</sup>

There is a substantial distinction in the State's insistence that human life be saved where the affliction is curable, as opposed to the State interest where . . . the issue is not whether, but when, for how long and at what cost to the individual . . . life may be briefly extended.

A parent may reject medical treatment for a child and the state may not interfere with such decision if the evidence is not sufficiently compelling to establish the primacy of the state's interest, or that the child's own welfare would be best served by such treatment.<sup>41</sup>

## *Medical Treatment without Parental Consent*

Current Florida law does not expressly provide that medical care of a minor requires parental consent. Instead, it provides exceptions for circumstances in which someone other than a parent may consent for medical care of a minor or provide medical care without parental consent.

Section 743.064, F.S., allows physicians, paramedics, emergency medical technicians, or other emergency medical services personnel to provide emergency medical care or treatment to a minor without parental consent when a child has been injured in an accident or is suffering from an acute illness, disease, or condition and delaying treatment would endanger the health or physical well-being of the minor. Even in emergency situations, medical treatment can only be provided without parental consent if:<sup>42</sup>

- The child's condition has rendered him or her unable to reveal the identity of his or her parents, guardian, or legal custodian, and such information is unknown to any person who accompanied the child to the hospital.

- The parents, guardian, or legal custodian cannot be immediately located by telephone at their place of residence or business.

The hospital must notify the parent or legal guardian as soon as possible after the emergency medical care or treatment is administered and document in the hospital records the reason parental consent was not initially obtained. This must include a statement from the attending physician that immediate emergency medical care or treatment was necessary for the child's health or physical well-being.<sup>43</sup>

Section 743.0645, F.S., establishes a list of people, by priority, who may consent to the medical care or treatment of a minor in instances where the treatment provider is unable to contact the parent or legal guardian and the provider has not been given contrary instructions. Specifically, the following people may consent, in this order:

- A health care surrogate or a person with power of attorney to provide medical consent for the minor;<sup>44</sup>
- The stepparent;
- The grandparent of the minor;
- An adult brother or sister of the minor; or
- An adult aunt or uncle of the minor.

# Florida EMSC/PEDReady Updates: Injury Prevention



Target Zero Initiative (FDOT) to reduce number of transportation-related injuries and deaths across Florida to ZERO. Focuses on identifying behaviors that contribute to crashes, understanding who makes up the target audience, and creating impactful messages to influence specific behaviors.

# TARGET ZERO

## FLORIDA'S TRANSPORTATION SYSTEM SAFETY INITIATIVE

### NATIONALLY...

94%

of crashes involve driver **behavior** as a contributing factor

Source: NHTSA

### ON FLORIDA'S ROADS...



Daily Fatalities



Daily Serious Injuries

...BUT EVEN ONE LIFE LOST IS TOO MANY

Source: FDOT

### WHAT IS TARGET ZERO?

Target Zero is a statewide initiative to reduce the number of transportation-related serious injuries and deaths across Florida to ZERO.

### HOW WE GET TO ZERO.

Target Zero is taking evolutionary steps to improve how Florida connects, interacts, plans, designs, operates, and maintains its transportation system.

Target Zero education and awareness efforts focus on influencing dangerous driver behaviors before serious and fatal crashes occur by:

- Identifying behaviors contributing to crashes
- Understanding who exhibits these behaviors and what causes their behaviors (focused audiences and challenges)
- Identifying best practices and lessons learned from previous campaigns
- Creating meaningful content that resonates with and reaches the target audiences to influence behavior
- Evaluating effectiveness of influencing behavior to continually improve messaging



This "human factor" approach to the safety campaign is aimed at influencing **safe travel** behavior to achieve **Florida's Target Zero** vision described in the **Strategic Highway Safety Plan**. FDOT's Vital Few safety focus areas include **lane departure, pedestrian/bicyclist, and intersection crashes**, which represent 9 out of 10 fatal crashes and 3 out of 4 injury crashes in **Florida**.



TargetZeroFL.com



# PARTNERSHIPS

The Target Zero initiative **leverages the work of our partners** in the 4Es and 4Is of safety. Collectively, these efforts are helping Florida **maximize the effectiveness** of our efforts to reach Target Zero.

Target Zero was developed in partnership with FDOT's Executive Leadership, Vital Few Safety Team, [State Safety Office](#), State Communications Office, [Safety Coalitions](#), District Offices, Community Traffic Safety Team, Federal Highway Administration ([FHWA](#)), and industry stakeholders: National Highway Traffic Safety Administration ([NHTSA](#)), Department of Highway Safety and Motor Vehicles ([FLHSMV](#)), Florida Highway Patrol ([FHP](#)), and additional law enforcement agencies.

### 4 Es OF SAFETY

- Engineering
- Education
- Enforcement
- Emergency Response

### 4 Is OF SAFETY

- Innovation
- Insight
- Investments
- Intelligence

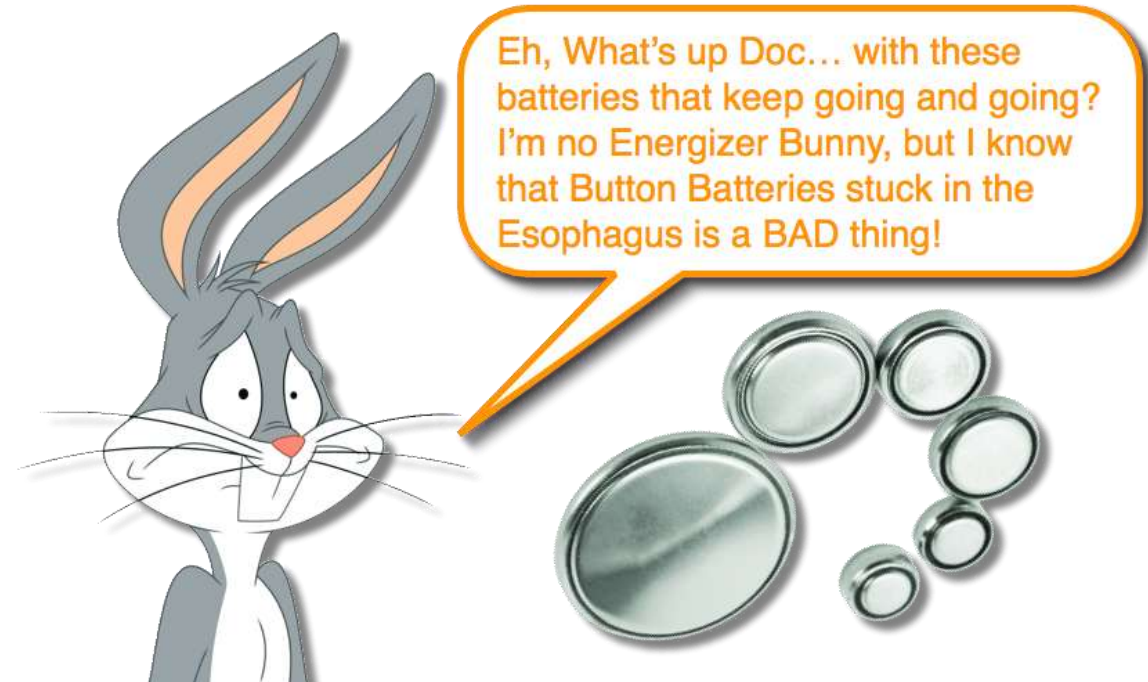
SCHEDULE	2021				2022							
	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JULY	→
Analyze Existing Safety Campaigns and Scan Successful Behavior Campaigns	✓											
Analyze Existing Crash Records and Conduct Root Cause Analysis	✓											
Identify Effective Audience Segmentation Techniques	✓											
Methods of Behavior Change Evaluation of Effectiveness	✓											
Identify Audiences for Campaigns	✓											
Conduct Research with Focus Groups and Audiences	✓											
Conduct Target Zero Statewide Awareness Campaign Testing												
Implement Target Zero Statewide Awareness Campaigns												
Conduct Target Zero Behavioral Campaign Testing												
Implement Target Zero Behavioral Campaigns												
Evaluate Effectiveness of Campaigns												

Questions? FDOT State Safety Engineer, Brenda Young (Brenda.Young@dot.state.fl.us), FDOT Communications Director, Beth Frady (Beth.Frady@dot.state.fl.us), or FDOT Traffic Safety Marketing Coordinator, Trena McPherson (Trena.McPherson@dot.state.fl.us)

# Florida EMSC/PEDReady Updates: Injury Prevention

Button Battery ingestion prevention campaign and legislation

- Warning labels
- Packaging
- Education
- Triage



# Florida EMSC/PEDReady Updates

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## Monique Burr Foundation Child Safety

**Matters Program:** prevention programs for four types of child abuse (physical, emotional, sexual, and neglect), exploitation, bullying, cyberbullying, human trafficking, digital abuse, and other digital dangers.

<https://www.mbfpreventioneducation.org/resources/>

- **“Be an upstander, not a bystander”**
- Future presentation



Know What's Up



Spot Red Flags



Make a Move



Talk It Up



No Blame | No Shame

# Children with Special Healthcare Needs: STAR questions

## Sensory, Tactile, Auditory, Rockstar (Advent Health)

In 2021, CDC reported 1 in 44 children in the U.S. is diagnosed with an autism spectrum disorder (ASD), according to 2018 data

### Are there any safety concerns/behaviors to be aware of?

- Hurts/harms self (comment)  Hurts/harms other (comment)  Throws objects  Biting
- Grabbing  Head butting  Kicking  Pinching  Pulling hair  Swatting  Scratching
- Elopement

### How does the patient communicate best?

#### Verbal

- Making sounds  Single word utterance  Short phrases  Echolalia (repeats others)
- Conversational  Other (comment)

#### Non-Verbal

- American Sign Language (ASL)  Tablet/Assistive communication device
- Typed/Written words  Pictures/Symbols  Facial Expressions
- Physical Motion (rocking, flapping, squeezing hands, etc.)  Pointing/Gesturing
- Guiding/Leading by the hand

Unknown (free text comment)

# Children with Special Healthcare Needs: STAR questions

## Sensory, Tactile, Auditory, Rockstar (Advent Health)

**What experiences may be upsetting to the patient?**

- N/A
- Loud or unexpected noises  Bright lights  Touch to a specific part of body (free text)  Specific words or phrases (free text)  Unfamiliar people  Waiting areas/waiting
- Family/Caregiver Departure  Crowded or full rooms/ too many people in personal space  Smells
- Food aversions  Sound of crying babies  Pain  Textures/Fabrics  Denying patient's requests
- Changes in routine  Transitions  NPO status  Movement restriction  Boredom  Lack of attention  Other (comment)

# Children with Special Healthcare Needs: STAR questions

## Sensory, Tactile, Auditory, Rockstar (Advent Health)

### What procedures or healthcare experiences may be upsetting to the patient?

- Prolonged, lengthy visits
- Anesthesia or oxygen mask
- Stethoscope
- Blood Pressure Cuff
- Venipunctures/Needles
- Tourniquet
- Tape/Adhesive
- Exams to specific body parts (free text)
- Lying down
- Other (comment)

### Best ways to calm the patient?

- Walking or exploring environment
- Decrease stimulation/number of people in the room
- Teether/Chewable item
- Low lighting/sunglasses
- Light up toys
- Headphones to decrease noise
- Soothing music
- Heavy mat/blanket
- Videos/movie
- Vibration toys
- Aromatherapy scents
- Comfort item (free text)
- Counting
- Talking
- Limited talking
- Showers
- Deep breathing
- Pressure
- Preferred caregiver
- Food
- Book/tablet
- Other (comment)

# Florida EMSC/PEDReady Updates

CARES and Biospatial update

FL Resuscitation Academy with pediatric components (PEDReady sponsorship)

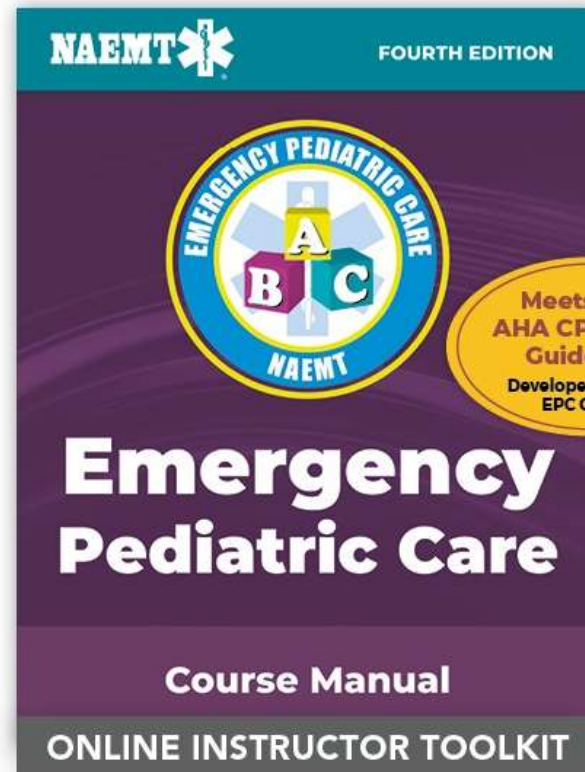
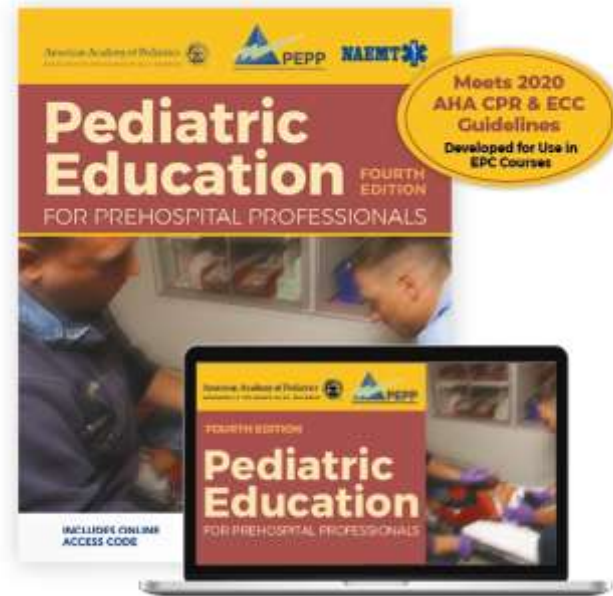
-Monday *June 13th pre-conference* at First There First Care conference

-25th Anniversary First There First Care Conference & Gathering of Eagles: June 13th – June 17th, 2022

-<http://firsttherefirstcare.com/wp/>



# Florida EMSC/PEDReady Updates



## Pediatric Hands-on Training Options

- a. New NAEMT Emergency Pediatric Care 4<sup>th</sup> edition/PEPP 4<sup>th</sup> edition
- b. Courses by Pediatric Emergency Standards and Emergency Medical Consultants

# Florida EMSC/PEDReady Updates



- Rural update (Bedford): Funding for pediatric certification training programs
- Florida FAN Report (Nasca)
  - EIC Eastern Great Lakes- looking for CSHCN discharge planning and disaster checklist examples
- Pediatric COVID: “Flurona”, increased pediatric hospitalizations, Immunizations

# Florida EMSC/PEDReady Updates



Handtevy statewide systems:

<https://www.vdh.virginia.gov/blog/2022/01/05/virginia-to-outfit-all-ems-agencies-in-the-commonwealth-with-nationally-renowned-handtevy-system/>

State of length/weight/age/color-based systems



**Our Mission**

Advancing Patient Safety by Training Clinicians to Use Existing Devices, Procedures, and Drugs Better via Simulation and Re-Designing Devices, Procedures, and Drug Delivery.



Taking the "Trauma" out of Florida Pediatric Trauma Preparedness and Management: A Multidisciplinary Educational State Initiative

Florida **PED**Trauma**Ready**



FLORIDA  
**PED**Ready



# New Business

- FL PEDReady Facebook page or Instagram
- 2022 EMSC Day plans: EMS week May 16 - 22, 2021 - EMSC Day is May 19
- Annual FL EMS-C conference??
- Issues in transport of children to CHs and TCs from free-standing and community EDs

# Community ED? Not!



# Thank You PEDReady Rockstars!



- Questions
- Announcements
- Send your photos, resources, stories!

