

From Readiness to Pediatric Readiness Centers (PRC): a natural fit for trauma centers

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Day of Trauma
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Objectives



To review the National Pediatric Readiness Project?

To identify pediatric readiness gaps in trauma centers in Georgia?

To discuss the pediatric facility recognition program and the path to development of Pediatric Readiness Centers (PRC) in Georgia

To identify next steps to designation

National Pediatric Readiness Project



2001: original guidelines Emergency Care of Children

2003: Guidelines for care of children were unrecognized and many hospitals were unprepared

2009: new guidelines developed by ENA, AAP and ACEP

2012: guidelines tested in California noting survey results of a readiness score of 71/100 points

2012: National Pediatric Readiness Project Launches



Who is involved?



EMSC, AAP, ACEP and ENA, Joint Commission, and Healthcare Corporation of America

2013 survey noted gaps for certain types of institutions

- Trauma Centers
- Rural community hospitals

2013 survey gave immediate feedback to institutions through a score and gap analysis report based on six topics in the guidelines

- Benchmarking among similar sized hospitals
- Immediate access to QI resources to help address identified needs



This checklist is based on the American Aca Physicians (ACEP), and Emergency Nurses Readiness in the Emergency Department," https://pediatrics.aappublications.org/conten						X	PROGR	(AM
Administration and Coordination of the ED for the Care of Children	ED Policies, Procedures, and Protocols	ler sets or decision	Guidelines for Medication, Equipment and Supplies Pediatric equipment, supplies, and medications are appropriate	-				
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	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	r agreements	for children of all ages and sizes (see list below), and are easily accessible, clearly labeled, and logically organized. D 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	Equipment/Supplies: Respi	ratory			
special training and experience in the evaluation and management of the critically ill child. Nurse Coordinator for Pediatric Emergency Care (PECC)* • CPEN/CEN (preferred)	Immunization assessment and management of the under- immunized patient Sedation and analgement of procedures including medical imaging Consent, including when parent or legal guardian is not	ty services) te transport service	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 (e.g., length-based tape)	uncuffed 3.0 mm cuffed or uncuffed 3.5 mm	Stylets for endotracheal tubes pediatric infant Suction Catheters			
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 role(s). Physicians, Advanced Practice Providers (APPs),	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	ation e nunications ic Patient Safety	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,	cuffed or uncuffed 4.0 mm cuffed or uncuffed 4.5 mm cuffed or uncuffed 5.0 mm cuffed or uncuffed 5.5 mm cuffed of uncuffed 5.5 mm cuffed 6.0 mm Feeding Tubes	infant (6-8F) child (10-12F) Rigid Suction Device pediatric Bag-mask device, self-inflating	me EDs (>10,000 Pediat Noninvasive ven continuous cannula	•	
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	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. Telchealth and telecommunications	needs are addressed in only only y stabilization, a ight in kilograms is used of vital signs recorded	carbamazepine, fosphenytoin, and phenobarbital) Antidotes (common antidotes should be accessible to the ED, e.g., nalkoxne) Antipyretics (acetaminophen and ibuprofen) Antipyretics (acetaminophen and prochlorperazine) Antibypertensives (labetalol, nicardipine, and sodium nitroprusside) Antitroprusside) Antimyrobials (parenteral and oral)	SF SF Structure	infant (250 ml) child (450-500 ml) Non-rebreather masks infant child Clear Oxygen masks infant child	Self-inflating bar pediatric Tube thoraco: Tracheostomy tu size 0 size 1	stomy tray	
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	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	imperature, heart rate, lood pressure, pain, and ie medical record iges y that includes: nulation guides	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)	Magill Forceps pediatric Masopharyngeal Airways infant child Oropharyngeal Airways size 0 size 1	Masks to fit bag-mask device adaptor neonatal infant child Nasal cannula infant i	size 3 size 4 size 5 size 6 Umbilical vein c 3.5F 5.0F		
□ The QIPI plan includes pediatric-specific indicators • Data are collected and analyzed • System changes are implemented based on performance • System performance is monitored over time Please see the guidelines/toolkit for additional details.	Decontamination, isolation, and quarantine of families and children of all ages Minimization of parent-child separation Tracking and reunification for children and families Access to specific behavioral health therapies and social services for children Disaster frills include a pediatric mass casualty incident at least every two years Care of children with special health care needs	n the ED ttient safety events es ocols address age- for children I images when a patient her.	□ Hypoglycemic interventions (dextrose, oral glucose) □ Diphenhydramine □ Epinephrine (Img/mL [1M] and 0.1 mg/mL [IV] solutions) □ Furosemide □ Glucagon □ Insulin □ Magnesium sulfate	size 2 size 3 Equipment/Supplies: Speci	Gastric tubes infant (8F) child (10F)	ENA and the EMSC Innova erican College of regency Physicians*	ation and Improvement (Center Emergency Medical Services for C
	support services to ensure the needs community are met Please see the guidelines/toolkit for ad	ory and other ED of children in the	□ 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 norepinephrine) □ Vaccines (tetanus) □ Internation □ child □ Doppler ultrasonography devices □ ECG monitor and/or defibrillator with pediatric and adult capabilities, including pediatric-sized pads and/or paddles □ Pulse oximeter with pediatric and adult probes	Difficult airway supplies and/or k Contents to be based on pediatric may include some or all of the fol. supraglottic airways of all is needle cricothyrotomy suppl surgical cricothyrotomy suppl surgical cricothyrotomy kit video laryngoscopy Newborn delivery kit (including e) f a newborn infant) umbilical clamp scissors bulb syringe towel Urinary catheterization kits and u infant child	patients served at the hospital and lowing: zees lies equipment for initial resuscitation	PERGENCY CONE	ASSOCIATION	



Lack of pediatric inclusion in pediatric disaster plans

Lack of a physician or nurse coordinator

Lack of pediatric care review processes and pediatric quality indicators

Pediatric Disaster Preparedness Quality Collaborative (PDPQC)



July - December 2020

Pediatric Emergency Care Coordinator Workforce Development Collaborative (PWDC)



September 1, 2021 - June 30, 2022

Pediatric Readiness
Quality Collaborative
(PRQC)

National

Pediatric Readiness Quality Collaborative
Ensuring Emergency Care for All Children

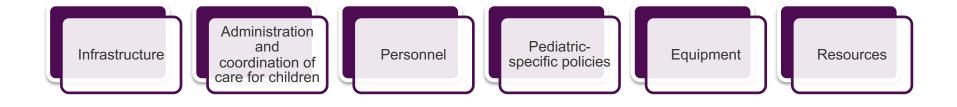
April 2018 - June 2020

https://emscimprovement.center/

Collaborative through EMSC Innovation and Improvement Center (EIIC)

Essential Elements Evaluated in the Pediatric Readiness Survey





2021 Results



Georgia





Georgia 2021 National Pediatric Readiness State Summary

2021 Pediatric Readiness Response Rate

Numerator: 109 Denominator: 136 Response Rate: 80%

> 2021 Average State Score

> > 66

State AVERAGE Hospital Score out of 100 (n=104) 2021 Median State Score

63

State MEDIAN Hospital Score out of 100 (n=104)

NOTE: There are 5 records in this dataset that did not have answers to all the scored questions and are not included in the scores shown above.

2013-14 Pediatric Readiness Response Rate

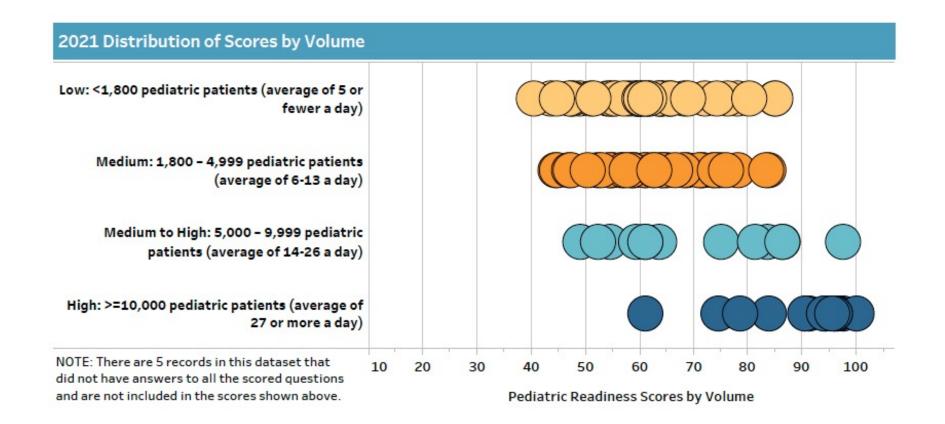
Numerator: 111 Denominator: 141 Response Rate: 79%

The overall 2021 National Pediatric Readiness scores (based on the 2018 Joint Policy Guidelines) are not directly comparable with the 2013-14 state scores (based on the 2009 Joint Policy Guidelines). These were two unique assessments based on two different published sets of guidelines. Questions were added/removed and point values changed based on the new guidelines. Although the overall scores are not comparable, several individual questions remained the same and these components can be compared over time.

Filter chart below by urbanicity:

2021 Results





2021 Results



Breakdown of Scores by Trauma Designation

	# of Hospitals	Avg. Score						Annual All	Pediatric	Volume:	Traum All	a Desig	nation:	
Designated	29	76								α				
No Trauma Designation	75	63					OC	M		DI		\mathfrak{D}		
			10	20	30	40	5	50	60	70	80	9	0 10	00

NOTE: There are 5 records in this dataset that did not have answers to all the scored questions and are not included in the scores shown above.

Readiness: Trauma Centers



Adult Trauma Centers by Volume and Level	Avg. Score
Level I Low	64
Level I High	98
Level II Low	60
Level II Medium	87
Level II Medium- High	52
Level II High	79
Level III Low	81
Level III Medium	53
Level III Medium- High	84
Level III High	75
Level IV Low	64
Level IV Medium	60



Pediatric Readiness: Administrative Components

Item	2021 Percent	Level I%	Level II%	Level	Level IV%
Physician coordinator	25.70%	60%	38%	57%	0%
Nurse coordinator	21.10%	60%	13%	71%	0%
Physician competency evaluations	69.70%	80%	75%	43%	100%
Nurse competency evaluations	93.60%	100%	100%	57%	100%
Patient care review process	37.60%	40%	50%	14%	25%
Identification of quality indicators for children	26.60%	40%	50%	14%	0%
Re-evaluation of performance using outcomes- based measures	27.80%	40%	38%	29%	0%



Pediatric Readiness: Pediatric Patient Safety

ltem	2021 Percent	Level I%	Level II%	Level III%	Level IV%
Children seen in the ED weighed in KG	77.10%	100%	88%	100%	100%
Temp, heart rate, and respiratory rate recorded	100%	100%	100%	100%	100%
End tidal CO2 monitoring available	86.20%	80%	100%	100%	100%
Process in place for notification of physicians when VS are abnormal	99.10%	100%	100%	100%	100%
Process in place for the use of precalculated drug dosing in all children	79.80%	80%	100%	89%	100%
Level of Consciousness assessed in all children	89%	100%	100%	89%	100%
Level of Pain assessed in all children	99.10%	100%	100%	100%	100%



Pediatric Readiness: Pediatric Patient Policies

Item	2021 Percent	Level I%	Level II%	Level III%	Level IV%
Triage policy that specifically addresses ill and injured children	60.60%	80%	75%	71%	25%
Policy for pediatric patient assessment and reassessment	74.30%	60%	100%	71%	25%
Policy for death of child in the ED	65.10%	100%	88%	89%	50%
Policy for behavioral health issues for children of all ages	70.60%	100%	75%	57%	50%
Involving families and caregivers in patient care decisions	53.20%	80%	50%	43%	50%
Family/ guardian presence during all aspects of emergency care, including resuscitation	49.50%	80%	50%	57%	50%
Policy for family education of treatment plan	52.30%	80%	38%	57%	50%



Pediatric Readiness: Pediatric Disaster Plans

Item	2021 Percent	Level I%	Level II%	Level	Level IV%
Disaster plan includes decontamination, isolation and quarantine of families and children	37%	60%	38%	29%	50%
Disaster plan includes minimization of parent-child separation	35.20%	60%	38%	29%	50%
All disaster drills include pediatric patients	25%	60%	25%	14%	50%
Pediatric surge capacity for both injured and non injured children	29.60%	60%	38%	14%	50%
Disaster plan includes care of children with special health care needs	30.60%	60%	25%	14%	50%

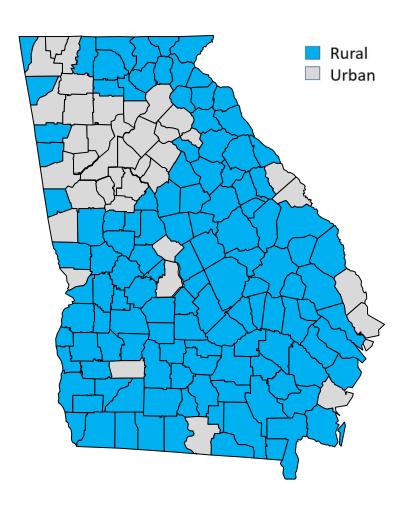


Pediatric Readiness: Interfacility Transfer Guidelines

ltem	2021 Percent	Level I%	Level II%	Level	Level IV%
Written interfacility transfer guidelines	55%	100%	50%	57%	100%
All staff trained on the location of all pediatric equipment and medications	97.20%	80%	100%	86%	75%
Standardized tool to estimate weight if resuscitation precludes weighing	99.10%	100%	100%	100%	100%
Infant blood pressure cuff	97.20%	100%	100%	100%	100%
Child blood pressure cuff	100%	100%	100%	100%	100%

Rural Counties vs Non-rural Counties





Readiness Survey 2021

Urbanicity	Avg. Score
Urban	68
Suburban	64
Rural	60
Remote	61

Summary Points



Volume and urbanicity impact readiness

Trauma Center Readiness

- Support champion positions (with some exceptions)
- Strength in safety measures for children
- Level designation equates to presence of pediatric specific policies
- All trauma centers can enhance disaster planning
- Transfer guidelines are still missing for some





Georgia EMS for Children (EMSC)

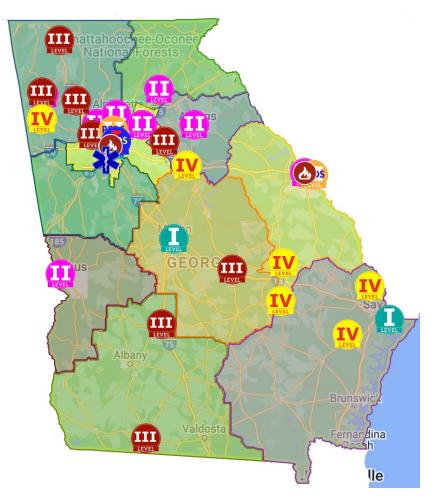


A federal grant from HHS HRSA

- Goal: Reduce infant, child, and youth mortality and morbidity due to illness and injury
- 9 Performance Measures
 - 3 Hospital Focused
 - 3 Pre-hospital Focused
 - 3 Permanence of Program Focused

Georgia Trauma System





EMSC-03

Georgia EMS for Children (EMSC)



EMSC 04
Performance
Measure Hospital
Recognition for
Pediatric Medical
Emergencies

The percent of hospitals with an Emergency Department (ED) recognized through a statewide, territorial or regional standardized program that are able to stabilize and/or manage pediatric medical emergencies.

By 2022, 25 percent of hospitals are recognized as part of a statewide, territorial, or regional standardized program that are able to stabilize and/or manage pediatric medical emergencies.



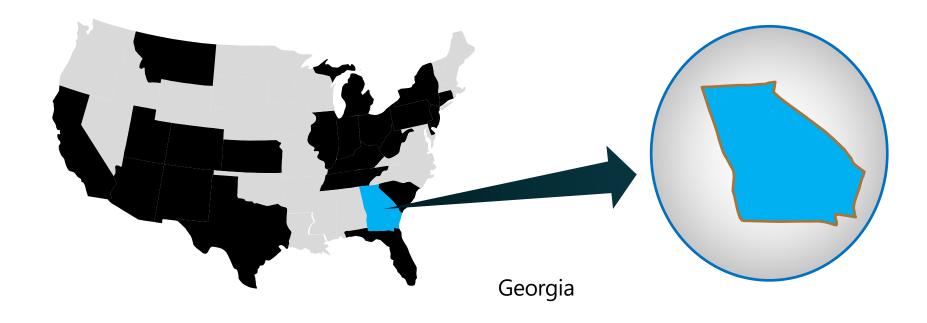
Why Peds Ready Centers?

- "90% of all pediatric patients seen in ED's are seen at a General ED"
- "All EDs must be continually prepared to receive; accurately assess; and, at a minimum, stabilize and safely transfer children who are acutely ill or injured. This is necessary even for hospitals located in communities with readily accessible pediatric tertiary-care centers and regionalized systems for pediatric trauma and critical care."
- •"The vast majority of children requiring emergency services in the United States receive this care in a non-children's hospital ED, with 69% of EDs providing care for fewer than 15 children per day."

Pediatrics. 2018 Nov;142(5):e20182459

Pediatric Facility Medical Recognition Programs in the USA





In those states with medical recognition programs- 15% reduction in pediatric mortality

Pediatric Facility Medical Recognition Committee





























Peds Ready Centers (PRC) Overview



- Strategic Planning Fall 2019 Identified Gap
- February 2020 Began Research and Planning
 - Partnered by SORH
 - Involved key stakeholders
 - Workgroups established (criteria, marketing, data, permanence)
 - » PRC Level I, II, and III
 - » Readiness Elements
 - Personnel in a Peds CHAMP role (Physician and Nurse advocate)
 - Education for pediatrics
 - > Policies for care for children
 - Quality Improvement
 - Disaster Planning
 - > Equipment for children

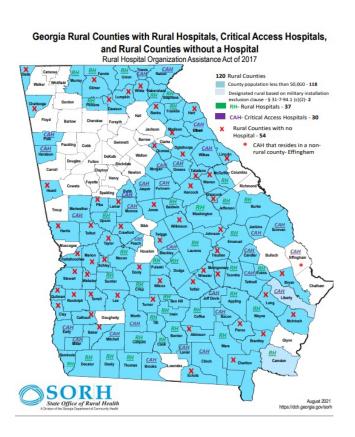
Georgia's "Peds Ready Center" Recognition Progress





1st Stop for Emergency May Be Rural ED





- 159 counties
- 120 counties defined as "rural"
 - County population less than 50,000
- 67 small rural and critical access hospitals in Georgia
 - 37 rural hospitals
 - 30 critical access hospitals
- 54 rural counties with no hospital
- Multiple clusters of "no hospital" counties in southern half of state

SORH Support for Peds Ready Center Designation Process



- Continuing Education/Credentialing Requirements
- Designation process requires % of ED staff to have specific credentials

- Required con-ed classes are often difficult to find/attend
- –Most often offered in urban settings

- Maintaining credentials often difficult for same reasons
- Lack of training sites/credentialed instructors in rural areas
- Update: SORH grant to identify organizations willing to provide education for this project

SORH Support for Peds Ready Center Designation Process



Peds data will be collected and presented to facilitate data driven decisions (Georgia Southern University)

Reports will include community level

- Resources/gaps/needs
- Medical equipment needs
- Education and equipment needs
- Hospital and EMS Data
 - Update: August 2022 reports from Effingham County, Candler, Colquitt, Emanuel Ben Hill, Coffee, Crisp, and Irwin Counties

Next Steps



- Finalizing PRC criteria elements
- Continue to identify gaps through SORH affiliation to help implement marketing initiatives
- Submit a final description of the program and process to the OEMST for approval
- Identify pilot sites to evaluate the designation criteria and processes
 - ➤ If needed and as the system develops, return for a focused visit on additional criteria with a specified time determined by DPH
- Add/update DPH Rules to reflect the designation
- Statewide implementation
- Administered out of OEMST Systems of Care Office

A natural fit for trauma centers





5.10 Pediatric Readiness—Type II

Applicable Levels

LI, LII, LIII, PTCI, PTCII

Definition and Requirements

In all trauma centers, the emergency department must evaluate its pediatric readiness and have a plan to address any deficiencies.

Additional Information

"Pediatric readiness" refers to infrastructure, administration and coordination of care, personnel, pediatric-specific policies, equipment, and other resources that ensure the center is prepared to provide care to an injured child. The components that define readiness are available in the Resources section below.

A natural fit for trauma centers



- What to do now
- -Find your Pediatric Readiness Assessment
 - Identify your gaps
- Begin to alert your institution to the potential for Pediatric Readiness
 Center Designation
 - Voluntary, but linked to criteria for trauma center designation
- –Designate a pediatric champion(s)

A natural fit for trauma centers



- What to do now
- -Reach out to the OEMST if you would like to be considered in the pilot
- Access and become familiar with the Emergency Medical Services Innovation and Improvement Center (EIIC)
 https://emscimprovement.center/
- –Access the Interfacility Transfer Toolkit https://emscimprovement.center/education-and-resources/toolkits/interfacility-transfer-toolbox/
- -Plan to participate in the Fall 2022 statewide pediatric tabletop drill

Questions?



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