

# Pediatric Readiness in Hospitals

## Considerations for Trauma Programs



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**MICHIGAN**  
EMSC State Partnership Program



# Michigan Emergency Department Improvement Collaborative (MEDIC) CQI

**2015** year MEDIC was established

**50+** participating sites

**ALL** major pediatric\* EDs in MI

**10 million+** ED visits in our data registry over all time

*\*the first & one of the only CQIs to include **pediatric** quality initiatives*

**3** main areas of QI work including:

ED Imaging Use



Admission Decisions



Harm Reduction



**2024** new pilot initiatives: **Pediatric Readiness & HIV/STI Screening**

# Why Pediatric Readiness?

Research has shown high pediatric readiness in EDs – scoring **>87 points** on the National Pediatric Readiness Project Assessment – improves outcomes for children.

## High pediatric readiness in EDs is associated with:

**76%**

lower mortality rate in ill children<sup>1,2</sup>

**60%**

lower mortality rate in injured children<sup>2</sup>

**AT LEAST 1,400**

children's lives saved across the US each year<sup>2</sup>

1. "Emergency Department Pediatric Readiness and Mortality in Critically Ill Children"  
*Pediatrics*, 2019, Ames et al.

2. "Emergency Department Pediatric Readiness and Short-term and Long-term Mortality Among Children Receiving Emergency Care"  
*JAMA Network Open*, 2023, Newgard et al.

JAMA  
Network | **Open**

Original Investigation | Emergency Medicine

## Emergency Department Pediatric Readiness and Short-term and Long-term Mortality Among Children Receiving Emergency Care

Craig D. Newgard, MD, MPH; Amber Lin, MS; Susan Malveau, MS; Jennifer N. B. Cook, GCPH; McKenna Smith, MPH; Nathan Kuppermann, MD, MPH; Katherine E. Remick, MD; Marianne Gausche-Hill, MD; Jeremy Goldhaber-Fiebert, PhD; Randall S. Burd, MD, PhD; Hilary A. Hewes, MD; Apoorva Salvi, MS; Haichang Xin, PhD; Stefanie G. Ames, MD, MS; Peter C. Jenkins, MD, MSc; Jennifer Marin, MD, MS; Matthew Hansen, MD, MCR; Nina E. Glass, MD; Avery B. Nathens, MD, PhD; K. John McConnell, PhD; Mengtao Dai, MS; Brendan Carr, MD, MS; Rachel Ford, MPH; Davis Yanez, PhD; Sean R. Babcock, MS; Benjamin Lang, MD; N. Clay Mann, PhD, MS; for the Pediatric Readiness Study Group

JAMA Surgery | **Original Investigation**

## Association of Emergency Department Pediatric Readiness With Mortality to 1 Year Among Injured Children Treated at Trauma Centers

Craig D. Newgard, MD, MPH; Amber Lin, MS; Jeremy D. Goldhaber-Fiebert, PhD; Jennifer R. Marin, MD, MSc; McKenna Smith, MPH; Jennifer N. B. Cook, GCPH; Nicholas M. Mohr, MD, MS; Mark R. Zonfrillo, MD, MSCE; Devin Puapong, MD; Linda Papa, MD, MSc; Robert L. Cloutier, MD, MCR; Randall S. Burd, MD, PhD; for the Pediatric Readiness Study Group



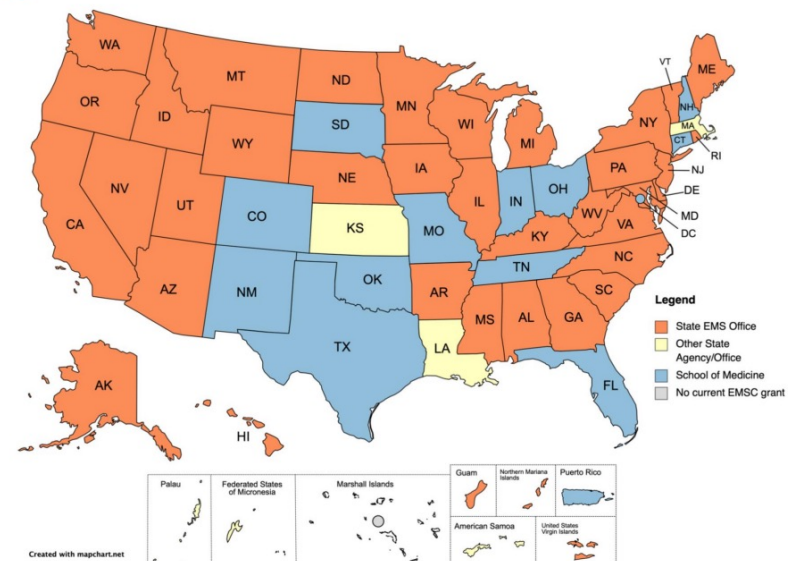
# EMSC – Emergency Medical Services for Children

- State Partnership
- Mission: Reduce child and youth mortality and morbidity resulting from severe illness or trauma
- Pillars of Pediatric Readiness
  1. Pre-Hospital Systems
  2. Hospitals & EDs
  3. Disaster Readiness
  4. Family Partnership

*GOAL: Improved Pediatric Readiness  
across the continuum of care*



EMSC State Partnership Program Location





## **Pediatric Readiness**

The day-to-day ability to meet the immediate needs of an ill or injured child

# Most children in the United States receive initial trauma care at non-pediatric centers

“The goal of pediatric readiness is not to transform every ED into a pediatric trauma center...

Rather, the goal is to help EDs optimize the initial care for pediatric trauma patients.”



## 5.10 Pediatric Readiness-Type II



### Applicable Levels

LI, LII, LIII, PTCI, PTCII

### Definition Requirements

In all trauma centers, the emergency department must evaluate is 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

### Measures of Compliance

Gap analysis with plan to address deficiencies in pediatric readiness

### Resources

Pediatric readiness assessment:  
<https://emscimprovement.center/domains/pediatric-readiness-project/assessment/>

Other resources to address deficiencies:  
<https://emscimprovement.center/domains/pediatric-readiness-project/readiness-toolkit/>

# Trauma Designation:

## I & II – Trauma Designated by ACS

- Standards: Resources of Optimal Care of the Injured Patient (2022)
- “Gray Book”

## III – Trauma Designated by ACS or State of Michigan (SOM)

## IV – Trauma Designated by SOM

- Standards: Resources of Optimal Care of the Injured Patient (2014)
- “Orange Book”



Resources for Optimal Care  
of the Injured Patient

2022 Standards | Released March 2022  
Revised December 2022

[facs.org/vrc](https://facs.org/vrc)

# National Pediatric Readiness Project (NPRP)

Empowers emergency departments (EDs)  
to improve their capability to provide  
high-quality care for children, also known  
as being

*“pediatric ready.”*

Supported by:



**EMSC**  
Emergency Medical  
Services for Children

**ENA**  
EMERGENCY NURSES  
ASSOCIATION

American Academy of Pediatrics  
DEDICATED TO THE HEALTH OF ALL CHILDREN®



 American College of  
Emergency Physicians®

**ACS** / AMERICAN COLLEGE  
OF SURGEONS

# NPRP Assessment – a tool for pediatric readiness

## Peds Ready Assessment



QI phase now



Questions are from  
2021 assessment



Receive gap report  
immediately  
Be sure to save it!



Accepted for ACS  
Trauma Center  
Verification



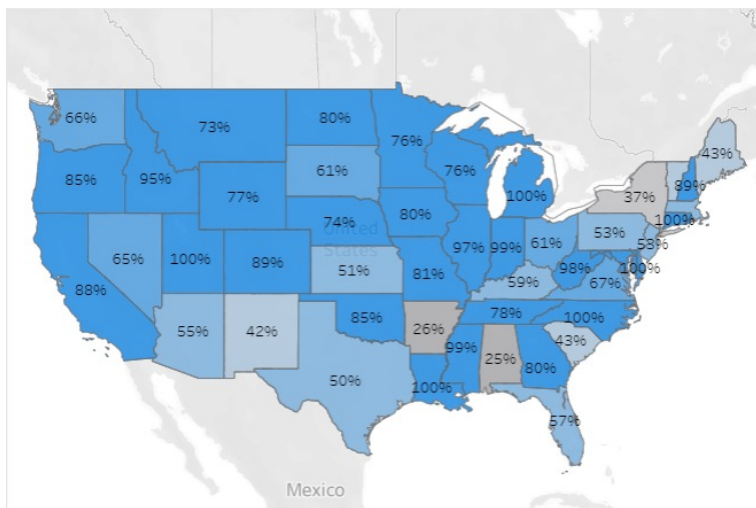
Repeat as often as  
desired

[www.PedsReady.org](http://www.PedsReady.org)



# Peds Ready Assessment Michigan 2021

**100 %** of Michigan Emergency Departments participated



Michigan



## Michigan 2021 National Pediatric Readiness State Summary

### 2021 Pediatric Readiness Response Rate

Numerator: **138**  
Denominator: **138**  
Response Rate: **100%**

### 2013-14 Pediatric Readiness Response Rate

Numerator: **136**  
Denominator: **136**  
Response Rate: **100%**

### 2021 Average State Score

**71**

State AVERAGE Hospital  
Score out of 100  
(n=133)

### 2021 Median State Score

**69**

State MEDIAN Hospital  
Score out of 100  
(n=133)

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.

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.

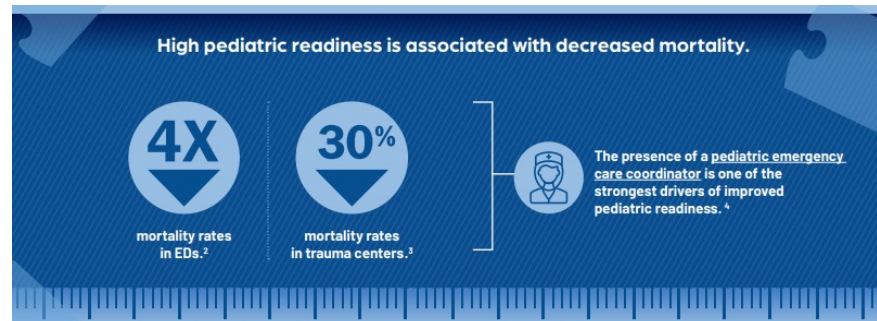
Filter chart below by urbanicity:  
All

What do we  
know now?

## PECC – Pediatric Emergency Care Coordinator AKA a Pediatric Champion

### Having a PECC

- ✓ Increases pediatric readiness scores significantly
- ✓ 2 x likely to have important pediatric policies
- ✓ 4 x likely to have QI plan including needs of children





# Pediatric Readiness is Collaborative

Across the Continuum of Care

# Building a Pediatric Readiness Team

1. ED Nurse Manager
2. ED PECCs
3. Trauma Program Manager
4. QI Hospital Personnel
5. Emergency Management
6. Nurse Educator







# Future Possibilities & Opportunities

Set the stage for  
Pediatric Readiness Recognition

# MEDIC Pediatric Readiness Project 2024



A pilot program led by MEDIC  
in collaboration MDHHS/Michigan EMSC & MTQIP

Aim is to ensure all EDs are equipped with the essential resources & are sufficiently prepared to deliver high-quality emergency care to sick & injured children, ultimately elevating the standard of pediatric care in emergency departments (EDs) across Michigan.





# MEDIC Pediatric Readiness Project 2024



## Key Benefits

- Support healthcare professionals in delivering high quality pediatric emergency care
- Enhanced reputation as community leaders in pediatric emergency preparedness
- **Support new requirements for American College of Surgeons (ACS) trauma verification**



## Site Expectations

- Identify key pediatric readiness contacts
- Complete baseline NPRP Pediatric Readiness Survey with support from MEDIC Implement QI initiatives to close gaps in pediatric care based on gap analysis
- Complete follow-up NPRP Pediatric Readiness Survey



# Interested in Participating or Learning More?



- Scan the QR code for a copy of the MEDIC Pediatric Readiness Pilot Program One-Pager
- Contact Catie Guarnaccia ([szedlaca@med.umich.edu](mailto:szedlaca@med.umich.edu)) by Friday, May 31<sup>st</sup> to:
  - Ask additional questions/learn more
  - Get connected with MEDIC folks at your site
  - Express interest in participating



M•TQIP



# Pediatric Readiness Resources

# Michigan EMSC Connections for support

**Sam Mishra, DO, MPH**

EMS for Children Program  
Coordinator

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517 896 8061



**Aubree Verlinde**

Region 5 Systems of Care  
Coordinator

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517 897 3334



# Pediatric Readiness Resources & Support

- [EIIC](#) – EMSC Innovation and Improvement Center
  - [Pediatric Readiness Website](#) (BEPESoC)
  - PECC Office Hours
  - PECC Updates
- ✓ Hospital
  - ✓ EMS

Bureau of Emergency Preparedness, EMS, and Systems of Care

Home > Safety & Injury Prevention > Public Safety > Bureau of Emergency Preparedness, EMS, and Systems of Care

The Michigan Bureau of Emergency Preparedness, EMS, and Systems of Care (BEPESoC), formerly BETH, combines the former Office of Public Health Preparedness with the EMS and Systems of Care (Trauma, Stroke, STEMI) service sections. Together, the Bureau serves to better protect the health and well-being of Michigan citizens through the administration and continuous improvement of emergency medical services, systems of care for time sensitive emergencies, as well as all hazards preparedness planning and response. The Bureau is composed of two divisions: the Division of EMS and Systems of Care, and the Division of Emergency Preparedness and Response. Learn more about both divisions' specific responsibilities and programs by exploring the links below.

**The Division of Emergency Preparedness and Response**

The Division of Emergency Preparedness and Response (DEPR) is the emergency preparedness and response arm of the Michigan Department of Health and Human Services. The division serves to protect the health of Michigan citizens before, during and after an emergency through the integration of public health and medical preparedness initiatives and by leveraging diverse partnerships. DEPR maintains a dual role in both preparedness planning and in emergency response. These activities encompass all hazards, including natural and man-made disasters, acts of bioterrorism, infectious disease outbreaks and other emergencies that impact the health of the public.

[Emergency Preparedness and Response Website](#)

**The Division of EMS and Systems of Care**

The Division of EMS and Systems of Care (DESOC) serves to protect and improve the health and well-being of Michigan citizens who require emergency medical services, through the administration of licensure requirements for EMS personnel, operations, and vehicles, the oversight of local medical control authorities and the development of regulatory policies and procedures which promote efficient program administration and safe care, treatment and transportation of the sick and injured.

[EMS Section Website](#)

Time sensitive emergencies such as a traumatic injury, heart attack or stroke require patients get to the right place at the right time. Michigan is committed to implementing a systems approach for these time sensitive events that will support patients receiving timely, appropriate, quality care that can improve outcomes with the goal of a return to productive life.

[Systems of Care Section Website](#)

**Pediatric Readiness - Across the Continuum of Care**

The care of an ill or injured child is considered a low frequency, high-impact encounter to many pre-hospital and hospital providers. By supporting pediatric readiness efforts across the continuum of care, access to quality pediatric emergency care is enhanced, no matter where a child lives, plays, goes to school or travels or how they encounter emergency medical services.

[Pediatric Readiness Website](#)

# Hospital-Based Pediatric Readiness Support

Pediatric Readiness updates  
Resources  
Opportunities



<https://forms.office.com/g/ZyXj3zCxyF>



# Pre-Hospital Pediatric Readiness Support



<https://forms.office.com/g/BPC8v8fz8K>

# PECC Office Hours



Last Tuesday of every month  
at 2:00 pm

- Pediatric Readiness
- Disaster considerations peds
- Pediatric Emergencies
- Pediatric Trauma
- Mother – Baby considerations
- Transport

# Pediatric Readiness

[Home](#) > [Safety & Injury Prevention](#) > [Public Safety](#) > [Bureau of Emergency Preparedness, EMS, and Systems of Care](#) > [Pediatric Readiness 1](#)



## Welcome to the pediatric readiness page

This newly developed main page for all pediatric readiness resources is still being built! Be sure to come back often to locate new resources, updates, education opportunities that meet your needs!



**EMS for Children Program**



**Pediatric Disaster Readiness**



**Pre-Hospital Pediatric Readiness**



**Hospital Pediatric Readiness**



**Pediatric Readiness Resources**



**Pediatric Education and Training**

## What is pediatric readiness?

Pediatric Readiness is the ability to meet the immediate needs of an ill or injured child – no matter where they live (emergency medical service continuum, they receive care.

## Why does pediatric readiness matter?

Pediatric encounters comprise a smaller portion of EMS calls and community ED visits in most areas of the State. It is considered a low-frequency, high-impact encounter to many pre-hospital and hospital providers. Improving pediatric readiness across the continuum of care is critical. A special focus on supporting and bolstering those agencies, departments and providers who have lower pediatric volumes, and overall pediatric readiness is especially impactful. Robust efforts are made to promote and support pediatric readiness, especially in rural areas of the State, as pediatric encounters become even more infrequent, exacerbating an already low-frequency, high-impact encounter for providers with limited resources. By supporting pediatric readiness efforts across the continuum of care, access to quality pediatric emergency care is enhanced, no matter where a child lives, plays, goes to school or travels or how they encounter emergency medical services.

## What is a Pediatric Champion?

A Pediatric Champion may also be known as a Pediatric Emergency Care Coordinator (PECC). They are an individual(s) who is responsible for coordinating pediatric specific activities. A designated individual(s) who coordinates pediatric emergency care need not be dedicated solely to this role; it can be an individual(s) already in place who assumes this role as part of their existing duties.



# Additional Pediatric Readiness Resources

For All

# EIIC Resources

## Focus Areas

The EMSC Innovation and Improvement Center is organized by key "domains" or focus areas.



Prehospital-Based Care



Hospital-Based Care



Trauma Care



Disaster Preparedness



Research



Advocacy

<https://emscimprovement.center/>



# Pediatric Education & Advocacy Kits



PEAK: Status Epilepticus



PEAK: Suicide



PEAK: Pain



PEAK: Agitation



PEAK: Child Abuse



**PEAK**  
Pediatric Education  
and Advocacy Kits



# EIIC – Pediatric Readiness Resources (hospital)

## National Pediatric Readiness Project:

- [National Pediatric Readiness Project • EIIC \(emscimprovement.center\)](#)
- [Spread the Word – toolkit of materials](#)

## Peds Ready Assessment:

- [Assessment • EIIC \(emscimprovement.center\)](#)
- Assessment Website:
  - [Pediatric Readiness Assessment - Home Page \(pedsready.org\)](#)

## ED Checklist & Toolkit:

- [Checklist & Toolkit • EIIC \(emscimprovement.center\)](#)

Resources: <https://emscimprovement.center/education-and-resources/>

# Additional Resources (Hospital)

NPRQI: <https://sites.utexas.edu/nprqi/>

- Implementation arm of the NPRP
- Dashboards and standardized quality measures with benchmarking

# Additional Resources (for all)

PEAK: <https://emscimprovement.center/education-and-resources/peak/>

Collection of best practice educational resources to empower providers across disciplines.  
Organized by provider types and deliverable type

BEPESoC : <https://www.michigan.gov/mdhhs/safety-injury-prev/publicsafety/betp>

Pediatric Readiness landing page: <https://www.michigan.gov/mdhhs/safety-injury-prev/publicsafety/betp/pediatric-readiness>

Resources and information by areas of focus

Education and training by the Bureau in one place

# EIIC : Pre-Hospital Resources

## National Prehospital Pediatric Readiness Project

- <https://emscimprovement.center/domains/prehospital-care/prehospital-pediatric-readiness/>

## Prehospital Pediatric Readiness Toolkit

- <https://emscimprovement.center/domains/prehospital-care/prehospital-pediatric-readiness/pprp-toolkit/>