National PRQC

Pediatric Readiness Quality Collaborative

Ensuring Emergency Care for All Children

Welcome Session

EMSC Quality Improvement Collaboratives

slido

Where are you joining us from?

ⓘ Start presenting to display the poll results on this slide.

Acknowledgments

The EMS for Children Innovation and Improvement Center is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award (U07MC37471) totaling $3M with 0 percent financed with nongovernmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government. For more information, please visit HRSA.gov.

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National PRQC Pediatric Readiness Quality Collaborative
Ensuring Emergency Care for All Children

Today's Talking Points

PRQC TEAM

WHY ARE WE HERE?

WHAT IS THE PRQC?

HOW WILL YOU BE SUPPORTED?

WHAT IS THERE TO GAIN?

WHAT IS NEXT?

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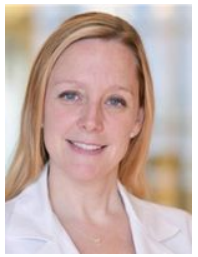
PRQC Team

EMSC Quality Improvement Collaboratives

Kate Remick, MD,
FAAP, FACEP, FAEMS

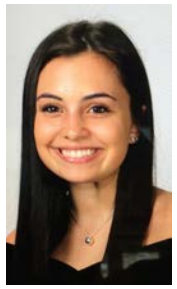


Corrie Chumpitazi, MD,
MS, FAAP, FACEP

Moh Saidinejad, MD,
MBA, FAAP, FACEP

Kasey Petika,
MBA, MPH, CPH

Liza Hinojosa, BS



Eleni Balourdos, MPH

Sheryl Yanger,
MD, FAAP

Amy Myers

Robin Goodman,
MSN, RN,CPEN

Alejandra “Hanna” De Hoyos, MS

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Marianne Gausche-Hill, MD, FACEP, FAAP, FAEMS

Madeline Joseph, MD

Vera Feuer, MD

Michael Goldman, MD MHS-MEd

Tim Staed, MD, FAAP

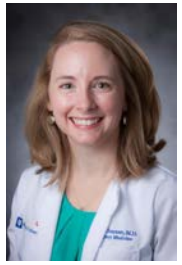
Christine Aspiotes, DO, MS

Aubri Carman, MD

Sanyukta (Sanya) Desai, MD, MSc

Angela Nguyen, LCSW-S

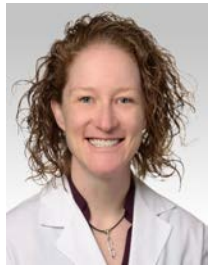
Carolyn Landis, PhD, DBSM



Emily Sterrett, MD, MS

Krystle Bartley, MA

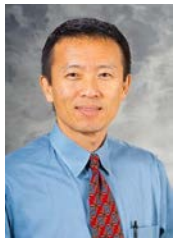
Sue Cadwell, MSN, RN, NE-BC



Emily Roben, MD, MS

Joyce Li, MD, MPH

Laura Garcia, RN



Michael Kim, MD

Heidi Ruff, RN

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Why Are We Here?

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PEDIATRIC READINESS SAVES LIVES

Pediatric readiness is ensuring that every emergency department (ED) is ready to provide the unique care required by acutely ill and injured children.

~80%

of children seek emergency care in general EDs, most of which see less than 15 pediatric patients a day.[1]

2012

was when the National Pediatric Readiness Project (NPRP) was established to measure and advance systems-level improvements to pediatric emergency care.

FOUR

organizations support the project:

- **Emergency Medical Services for Children**
- **American Academy of Pediatrics**
- **American College of Emergency Physicians**
- **Emergency Nurses Association**

1. https://pubmed.ncbi.nlm.nih.gov/23498882/

Emergency Medical Services for Children Family of Programs

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EIIC

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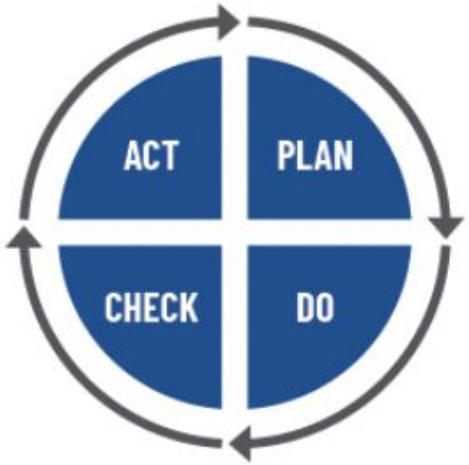
Analytics

Knowledge Management



Quality Improvement

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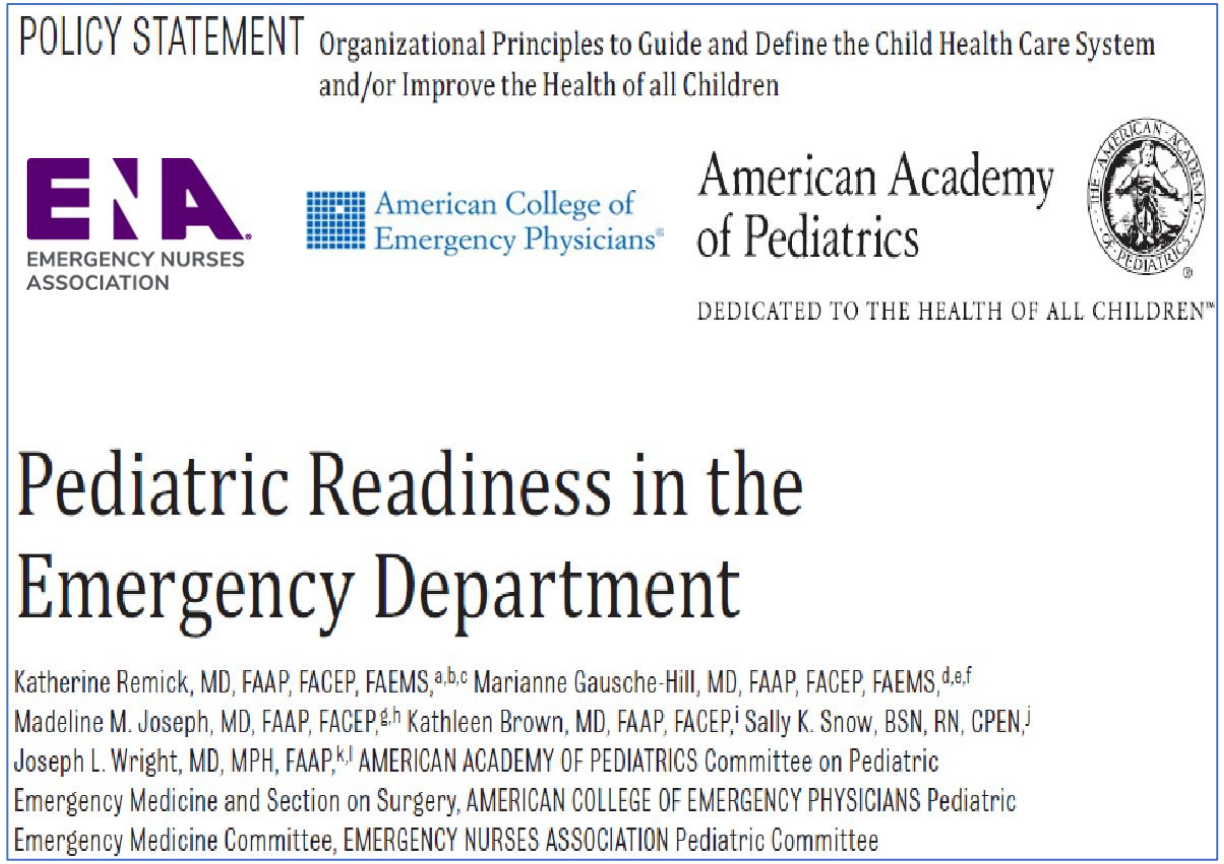
https://emscimprovement.center

2018: Pediatric Readiness in the Emergency Department



POLICY STATEMENT Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of all Children

EMERGENCY NURSES ASSOCIATION

American College of Emergency Physicians

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

Pediatric Readiness in the Emergency Department

Katherine Remick, MD, FAAP, FACEP, FAEMS,[a,b,c] Marianne Gausche-Hill, MD, FAAP, FACEP, FAEMS,[d,e,f] Madeline M. Joseph, MD, FAAP, FACEP,[g,h] Kathleen Brown, MD, FAAP, FACEP,[i] Sally K. Snow, BSN, RN, CPEN,[j] Joseph L. Wright, MD, MPH, FAAP,[k,l] AMERICAN ACADEMY OF PEDIATRICS Committee on Pediatric Emergency Medicine and Section on Surgery, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS Pediatric Emergency Medicine Committee, EMERGENCY NURSES ASSOCIATION Pediatric Committee

- Administration and Coordination
- Physicians, Nurses, and Other Healthcare Providers
- Quality Improvement
- Policies, Procedures, and Protocols
- Patient and Medication Safety
- Support Services
- Equipment, Supplies, and Medications

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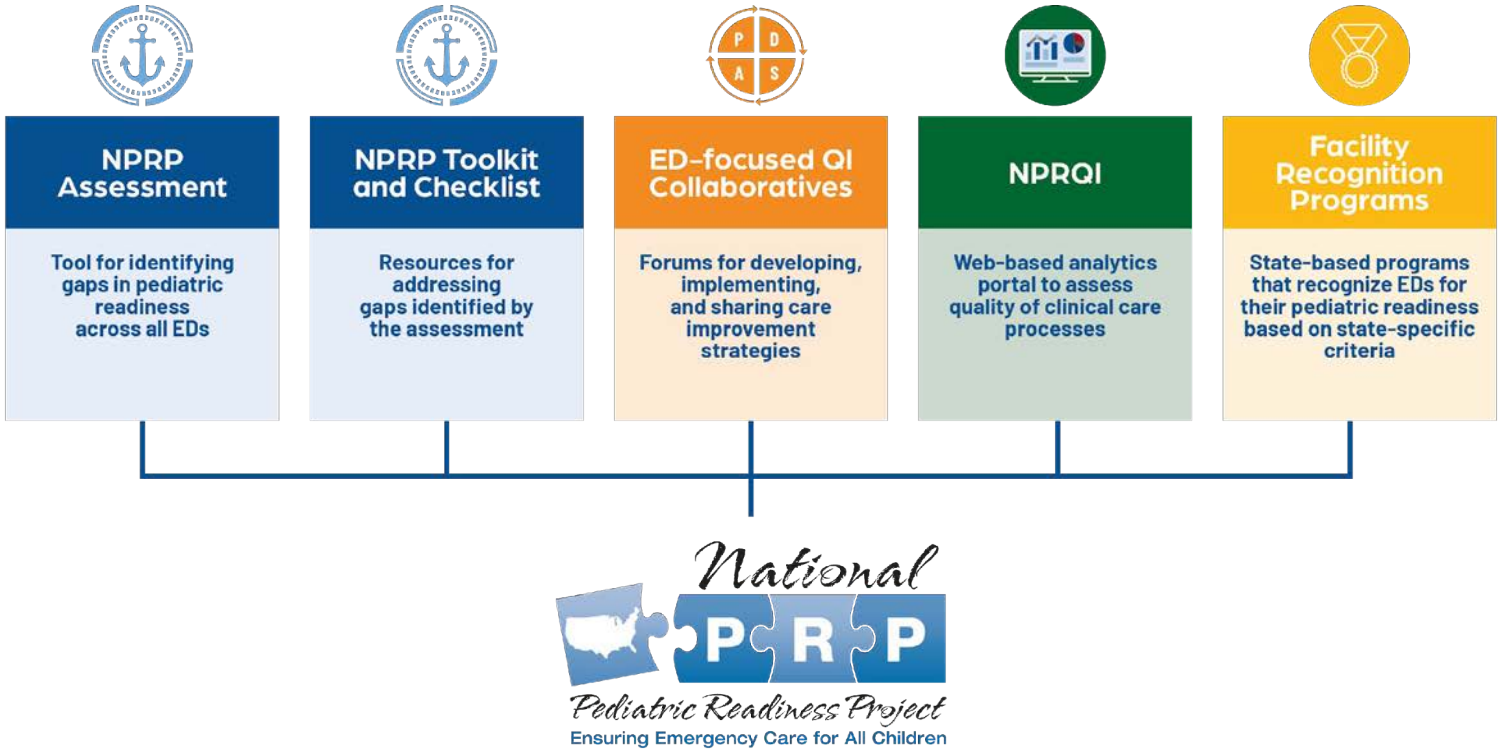
National Pediatric Readiness Project



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Measuring readiness is the first step to improvement.

National assessments took place in 2003, 2013, and 2021.

3,647

EDs participated in the 2021 assessment, which included 81 questions.[5]

Scores are on a scale of 0–100, with 100 being the highest score.

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High pediatric readiness is associated with decreased mortality.

4X

mortality rates in EDs.[2]

30%

mortality rates in trauma centers.[3]

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2. https://publications.aap.org/pediatrics/article/144/3/e20190568/76984/Emergency-Department-Pediatric-Readiness-and?autologincheck=redirected
3. https://jamanetwork.com/journals/jamasurgery/article-abstract/2788568

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

MEDICAL: 76% lower odds of death

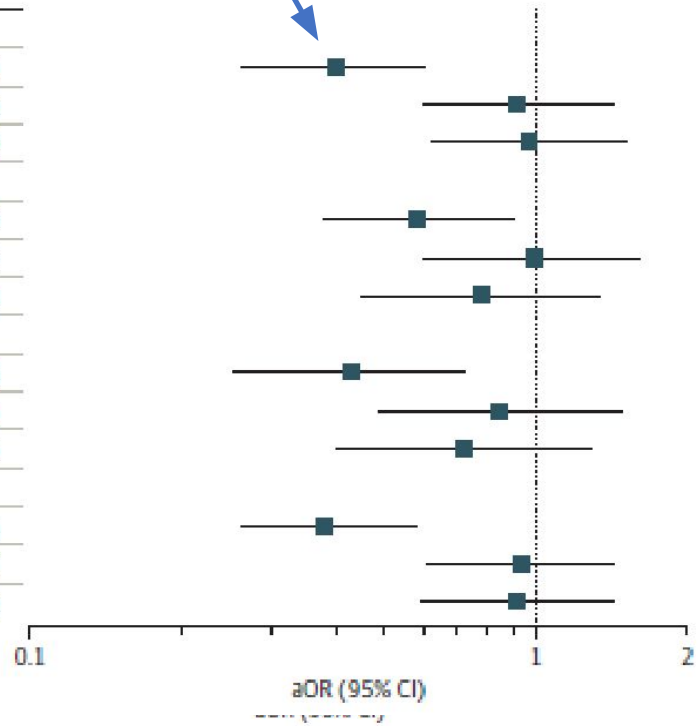
TRAUMA: 60% lower odds of death

1,442 lives saved over 6 years if all 983 EDs were pediatric ready

Figure 1. Adjusted Odds Ratios (aORs) for In-Hospital Mortality Among Children With Injuries and Medical Conditions Across Quartiles of Emergency Department (ED) Pediatric Readiness, Including Subgroups

A Injured

Subgroup and ED readiness	aOR (95% CI)
Injured patients (n = 90 963)	
Fourth quartile	0.40 (0.26-0.60)
Third quartile	0.92 (0.60-1.43)
Second quartile	0.97 (0.62-1.51)
ISS ≥16 (n = 6577)	
Fourth quartile	0.58 (0.38-0.91)
Third quartile	0.99 (0.60-1.61)
Second quartile	0.78 (0.45-1.33)
Head AIS ≥3 (n = 12 959)	
Fourth quartile	0.43 (0.25-0.72)
Third quartile	0.85 (0.49-1.48)
Second quartile	0.72 (0.40-1.29)
Severity score ≥4 (n = 46 262)	
Fourth quartile	0.38 (0.26-0.58)
Third quartile	0.94 (0.61-1.45)
Second quartile	0.92 (0.59-1.43)



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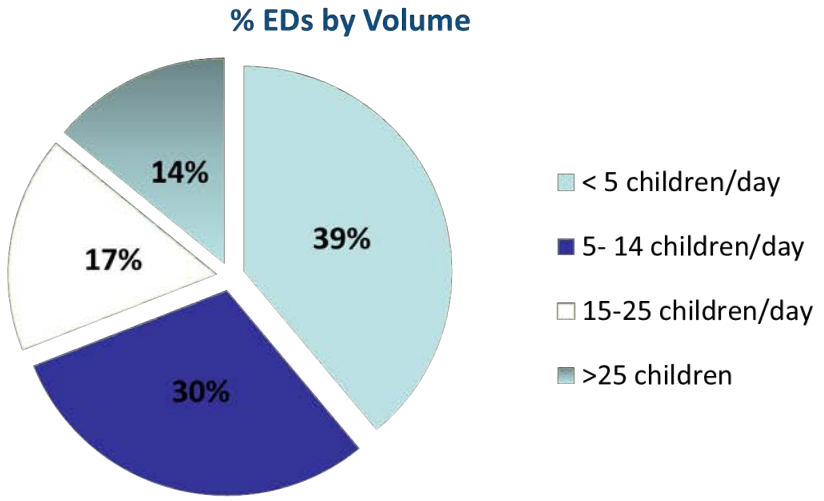
National Pediatric Readiness Project
2013 Assessment of Emergency Departments

	All Hospitals	Low	Medium	Medium High	High
WPRS Median (IQR)	68.9 (56.1, 83.6)	61.4 (49.5, 73.6)	69.3 (57.9, 81.8)	74.6 (60.9, 87.9)	89.8 (74.7, 97.2)

p<0.0001

- **Low** pediatric volume (<1800 pediatric visits)
- **Medium** volume (1800-4999 visits)
- **Medium high** volume (5000-9999 visits)
- **High** volume (10,000+ visits)



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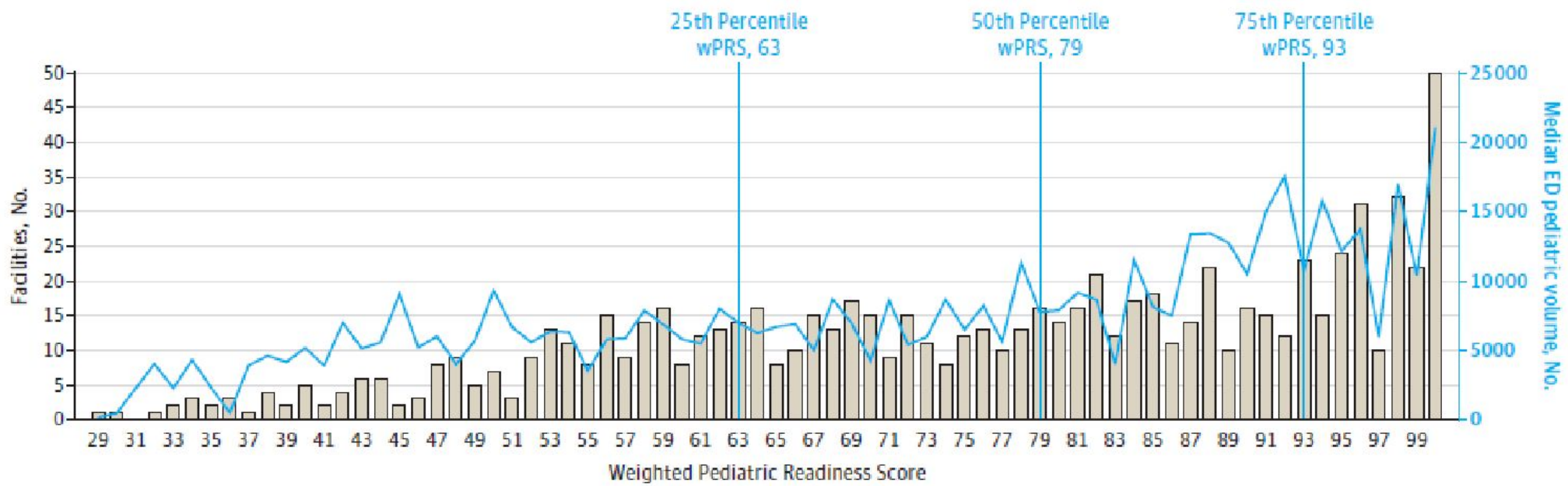
National PRP Pediatric Readiness Project Ensuring Emergency Care for All Children

JAMA Pediatrics | Original Investigation

Evaluation of Emergency Department Pediatric Readiness and Outcomes Among US Trauma Centers

Craig D. Newgard, MD, MPH; Amber Lin, MS; Lenora M. Olson, PhD; Jennifer N. B. Cook, GCPH; Marianne Gausche-Hill, MD; Nathan Kuppermann, MD, MPH; Jeremy D. Goldhaber-Fiebert, PhD; Susan Malveau, MS; McKenna Smith, BS; Mengtao Dai, MS; Avery B. Nathens, MD, PhD; Nina E. Glass, MD; Peter C. Jenkins, MD, MSc; K. John McConnell, PhD; Katherine E. Remick, MD; Hilary Hewes, MD; N. Clay Mann, PhD, MS; for the Pediatric Readiness Study Group

Figure 1. Emergency Department (ED) Pediatric Readiness and Annual ED Pediatric Volume in 832 Trauma Center EDs



Gray bars indicate the number of EDs at each weighted pediatric readiness score (wPRS) and the blue line indicates the median annual ED volume of children at each wPRS.

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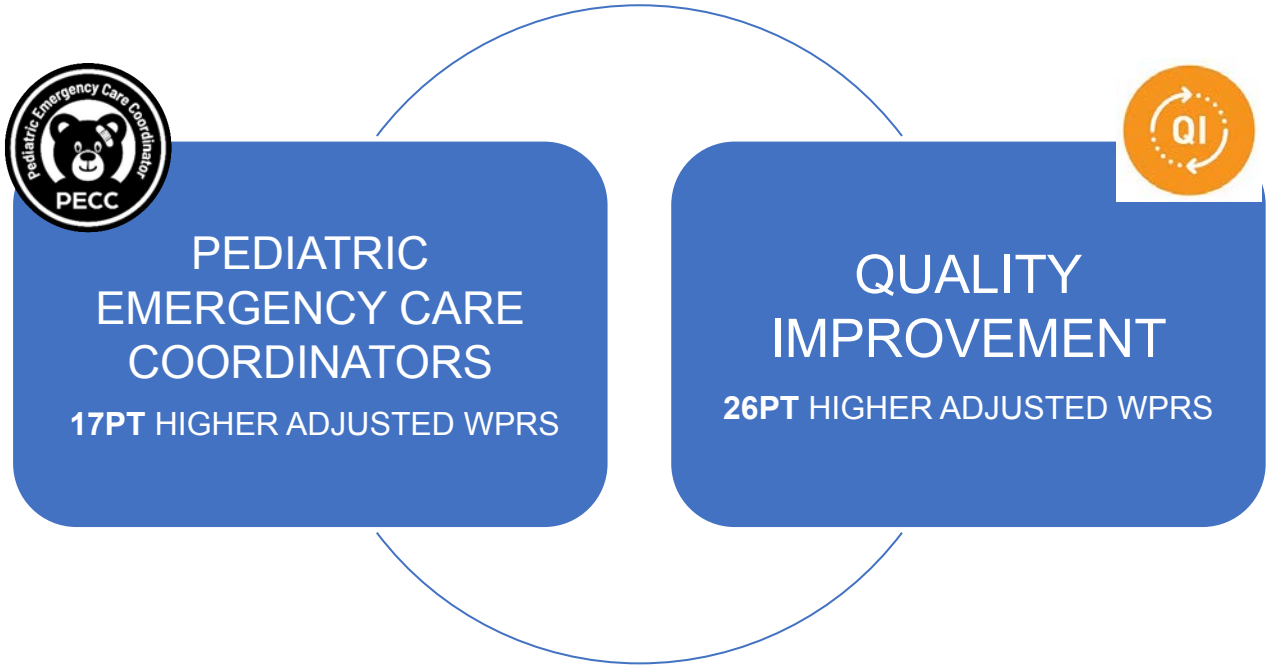
Contextual Factors for Pediatric Readiness

Top Drivers



Barriers

- Lack of QI training and pediatric measures
- Low volume of pediatric patients compared to adults
- Low prioritization of pediatric capabilities and capacity

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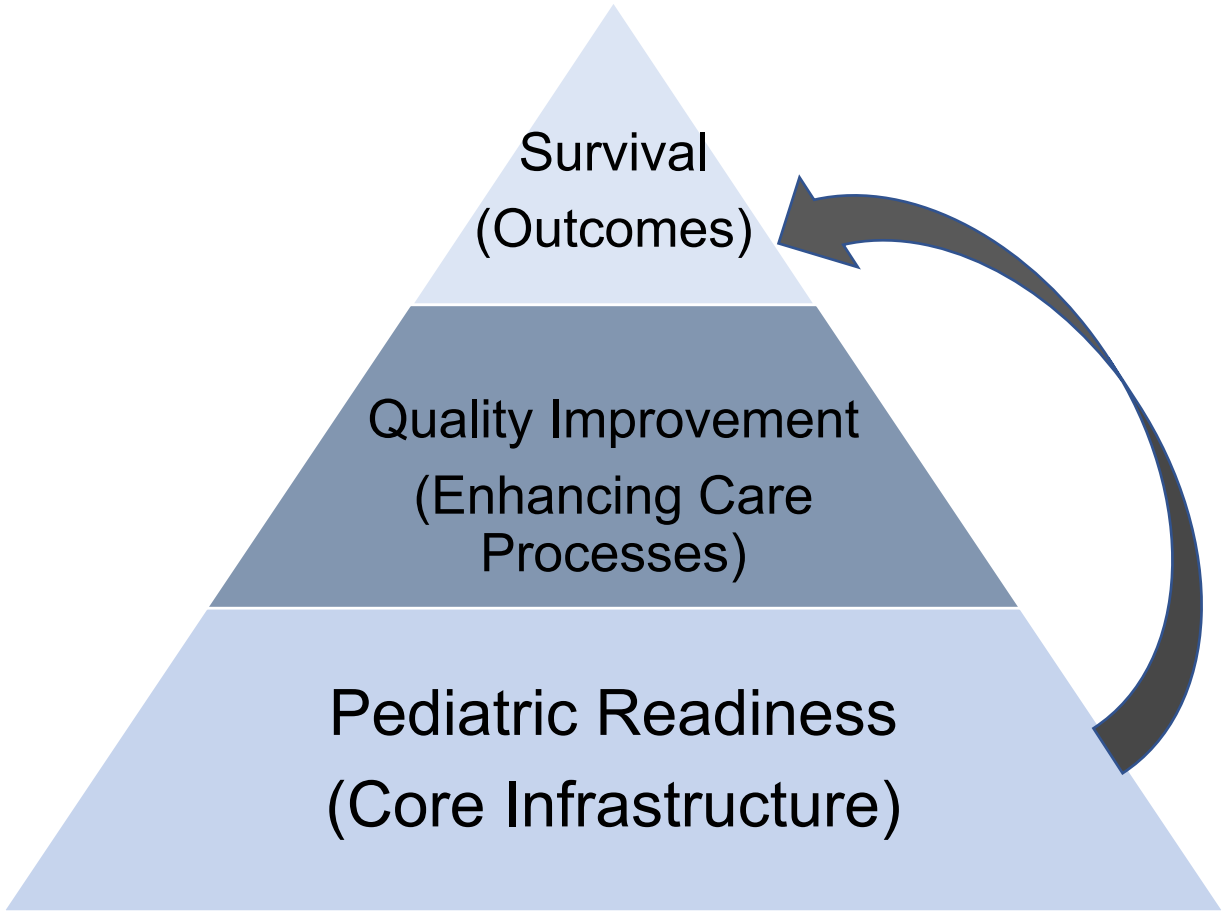
Engaging in Quality Improvement Increases Pediatric Readiness

Community EDs | Rural EDs

~80% of children are seen in general EDs



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Ames, et al. Pediatrics. 2019; Newgard, et al. JAMA Peds. 2021

Focusing QI Efforts to Address Critical Areas

- Pediatric Patient Safety
- Early recognition of abnormal vital signs
- Recognizing and treating pain early
- Optimizing suicide management

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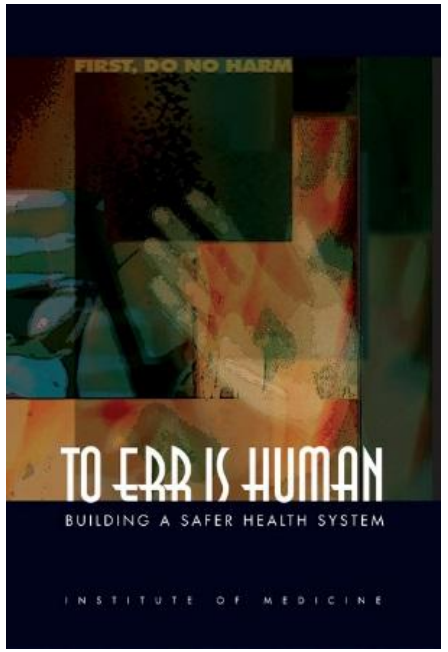
To Err is Human – Building a Safer Health System

Dosing errors comprise over 40% of fatal medication errors

Weight-based dosing increases risk in children

"Building a safer system means designing processes of care to ensure that patients are safe from accidental injury."

75% of EDs have a process to weigh children in kilograms *only*



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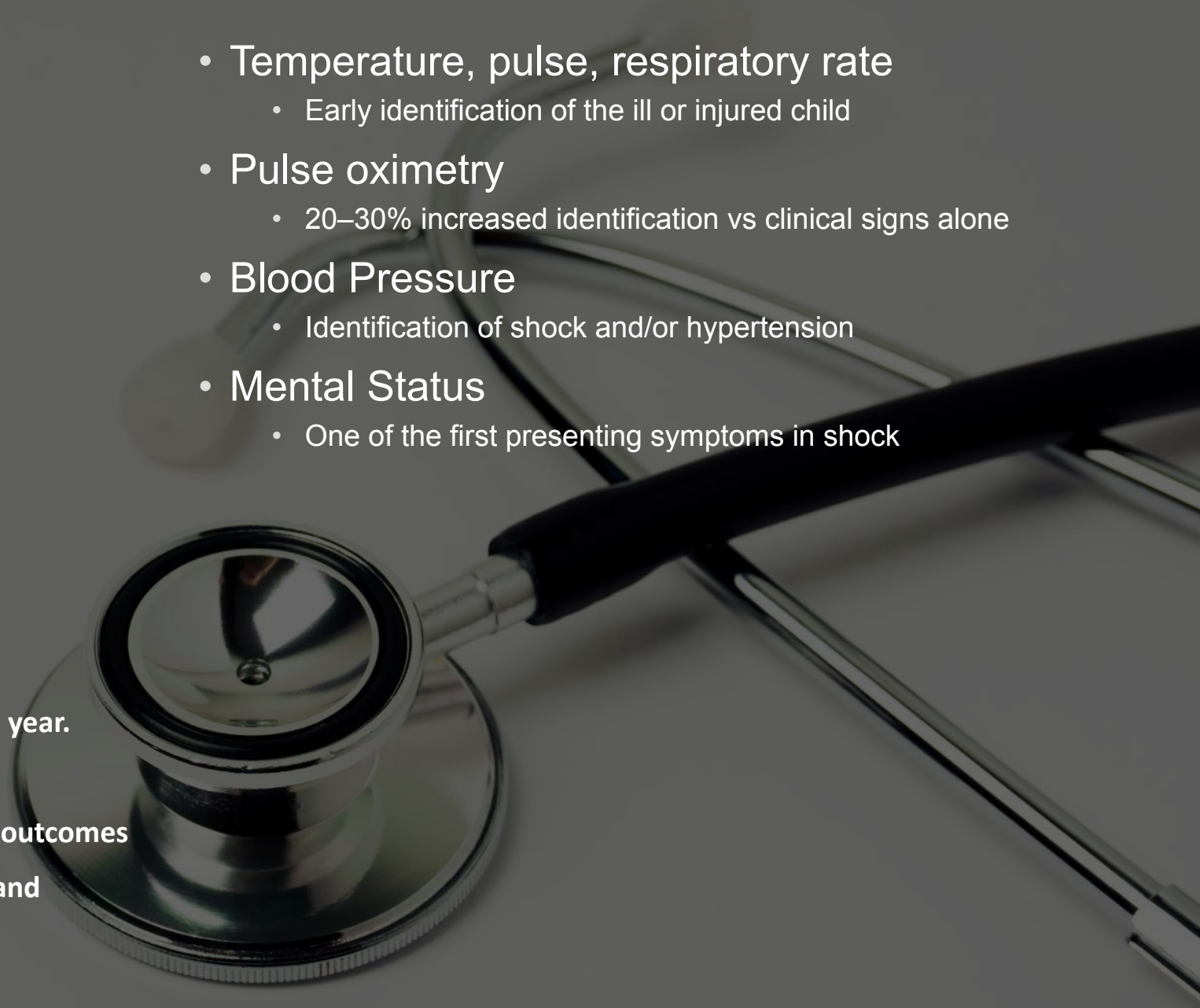
Gausche-Hill et al. JAMA Peds 2015

Phillips, J., et al (2001). Retrospective analysis of mortalities associated with medication errors. *American Journal of Health-System Pharmacy*, *58*(19), 1835–1841.

Pediatric Vital Signs – Defining a Standard Set

- Temperature, pulse, respiratory rate
  - Early identification of the ill or injured child
- Pulse oximetry
  - 20–30% increased identification vs clinical signs alone
- Blood Pressure
  - Identification of shock and/or hypertension
- Mental Status
  - One of the first presenting symptoms in shock



In the U.S., 40,000 children are hospitalized for sepsis each year.

More children die of sepsis (5k) than of childhood cancers

Early recognition and treatment saves lives and functional outcomes

78% of EDs have a policy for pediatric patient assessment and reassessment

Pediatric Readiness in the Emergency Department (2018) Joint Policy Statement

Hanning et al. Fortnightly review: pulse oximetry: a practical review. BMJ 1995;**311**:367.

Addressing Pediatric Pain

- Pain is the most common reason children present to the ED (80%)
- Untreated or inadequate treatment can have short and long-term consequences
- Symptoms are often different than adults, treated less frequently
- Disparities exist – region, age and race
- Failure to assess = failure to treat pain

NY Times. Pain in Children is Often Ignored. For Children of Color, It's Even Worse.

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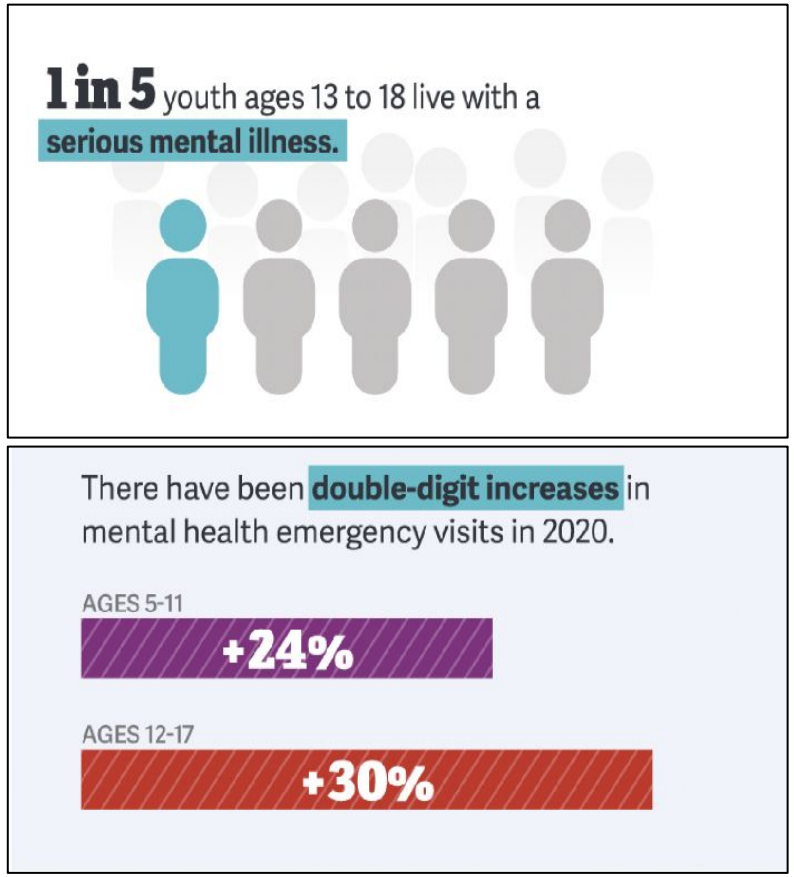
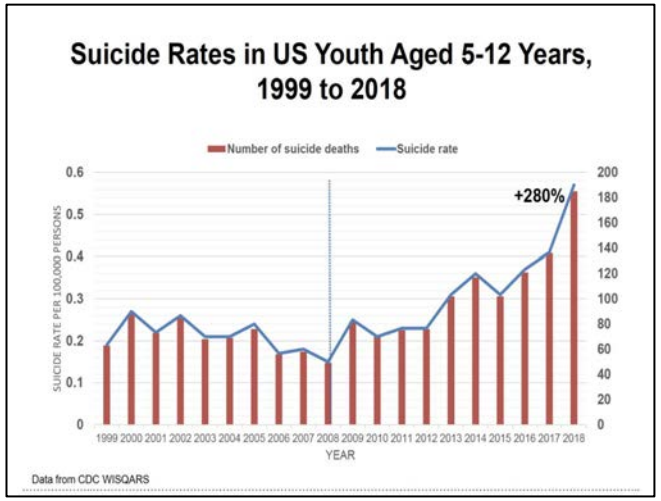
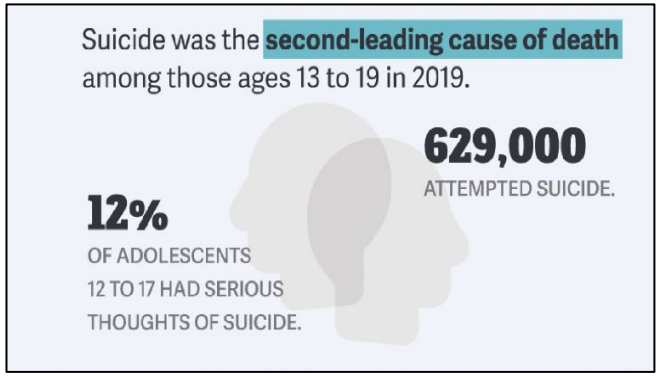
Yackey et al. Ped Emerg Care 2018
Chumpitazi et al. JACEP Open 2022

The Burden of Mental and Behavioral Health in Children and Adolescents







Sources: AAP, AACAP, CHA, NAMI, Modern Healthcare, CDC, SAMHSA, JAMA Pediatrics, JAMA Psychiatry, HHS, and Kaiser Family Foundation.

73% of EDs have a policy to address pediatric mental health

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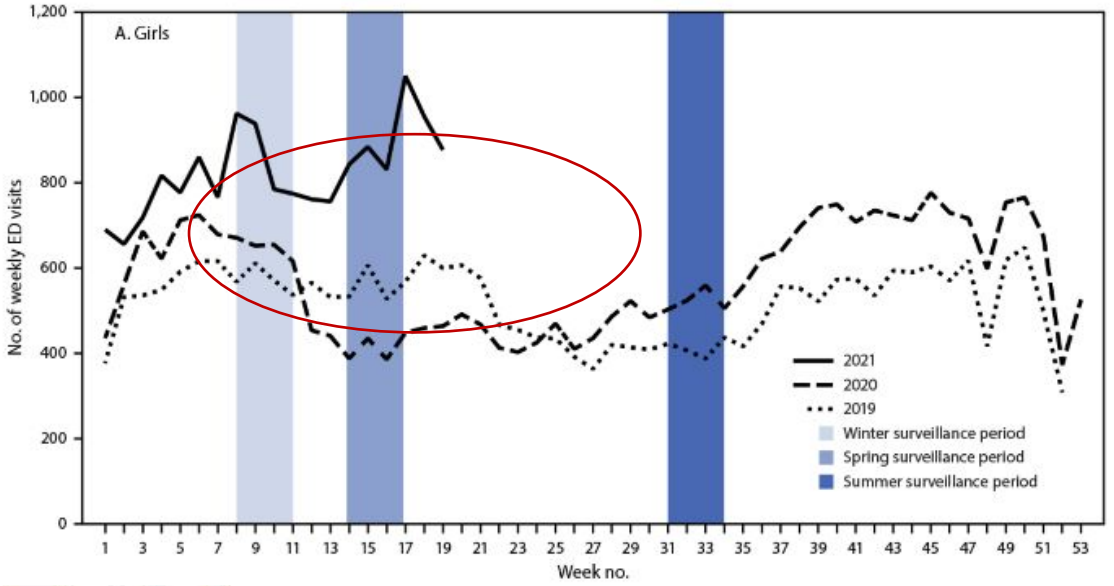
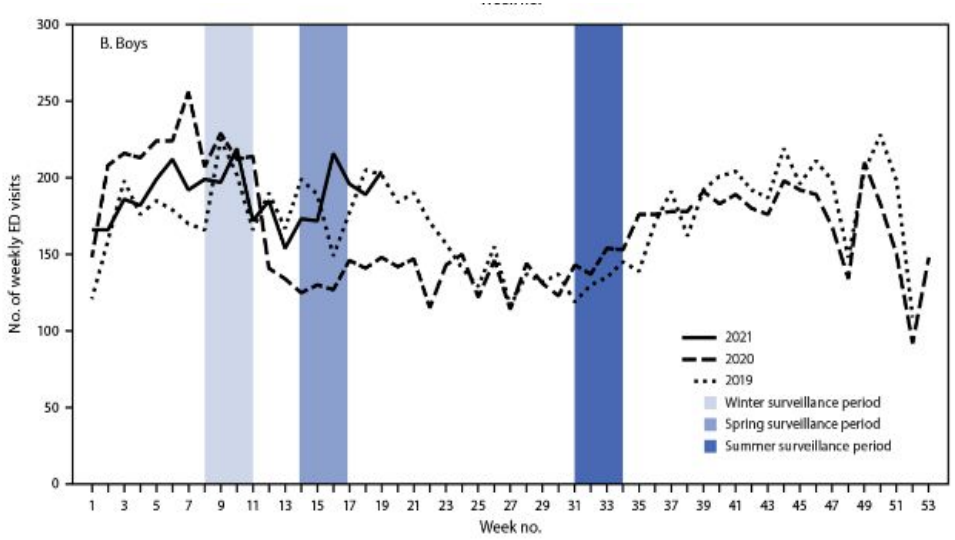
Children in Crises-Barriers to Access Care-EDs as the Safety Net

Emergency Department Visits for Suspected Suicide Attempts Among Persons Aged 12–25 Years Before and During the COVID-19 Pandemic — United States, January 2019–May 2021

Weekly / June 18, 2021 / 70(24);888–894

FIGURE 1. Numbers of weekly emergency department visits* for suspected suicide attempts† among adolescents aged 12–17 years, by sex — National Syndromic Surveillance Program, United States, January 1, 2019–May 15, 2021





Abbreviations: ED = emergency department; NSSP = National Syndromic Surveillance Program.

* ED visits for suspected suicide attempts were identified by querying an NSSP syndrome definition developed by CDC in partnership with state and local health departments (https://stacks.cdc.gov/view/cdc/106694). NSSP ED visit data include approximately 71% of the nation's EDs in 49 states (all except Hawaii) and the District of Columbia.

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https://www.cdc.gov/mmwr/volumes/70/wr/mm7024e1.htm#F2_down

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What is the PRQC?

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Quality Improvement Collaboratives

Where a team from various healthcare departments, hospitals, or organizations join for a fixed period to address a specific aspect of providing care.

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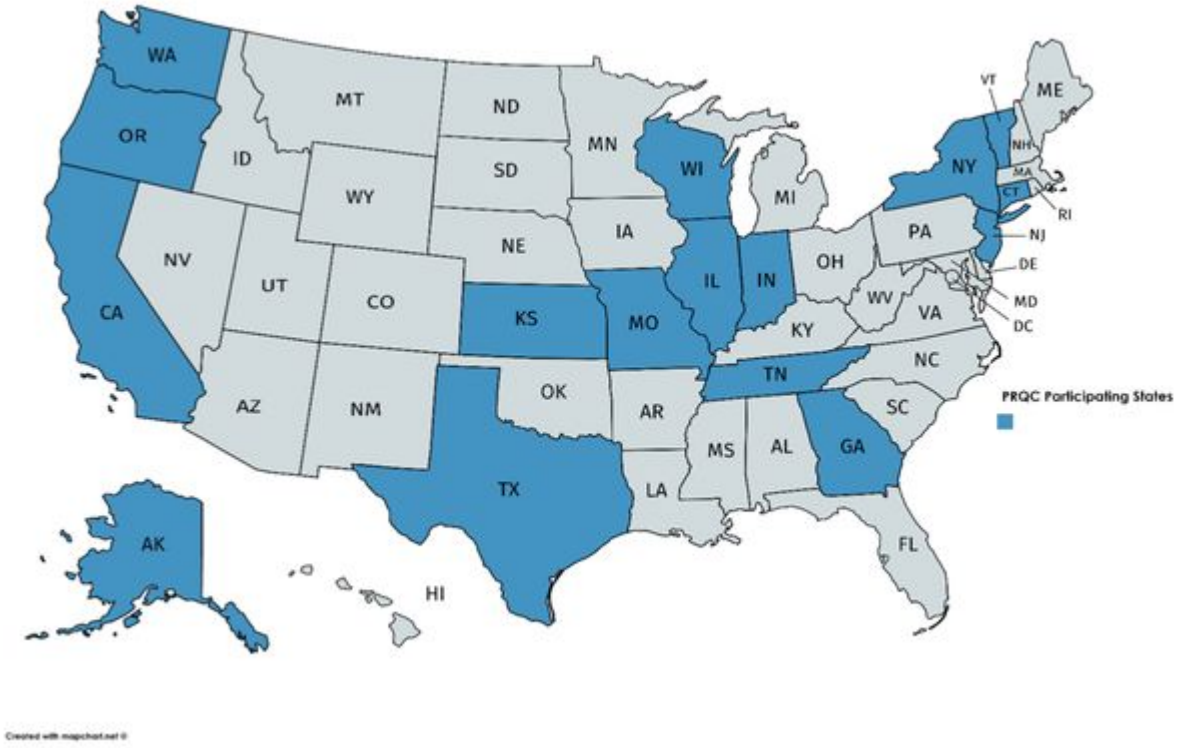
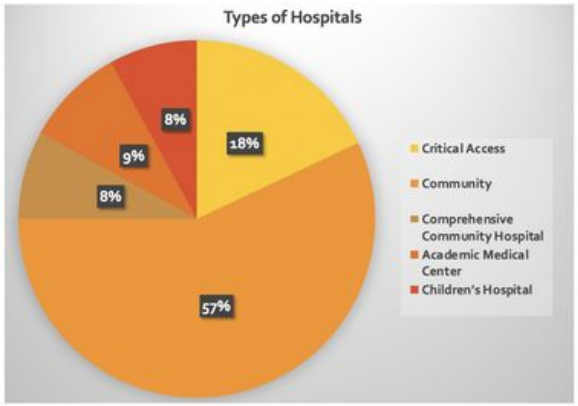
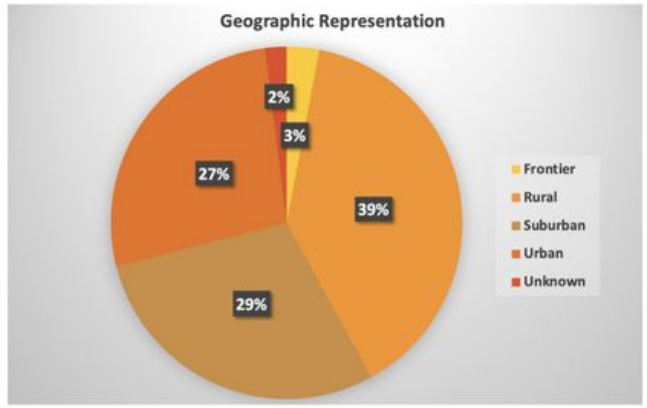
2018 Cohort







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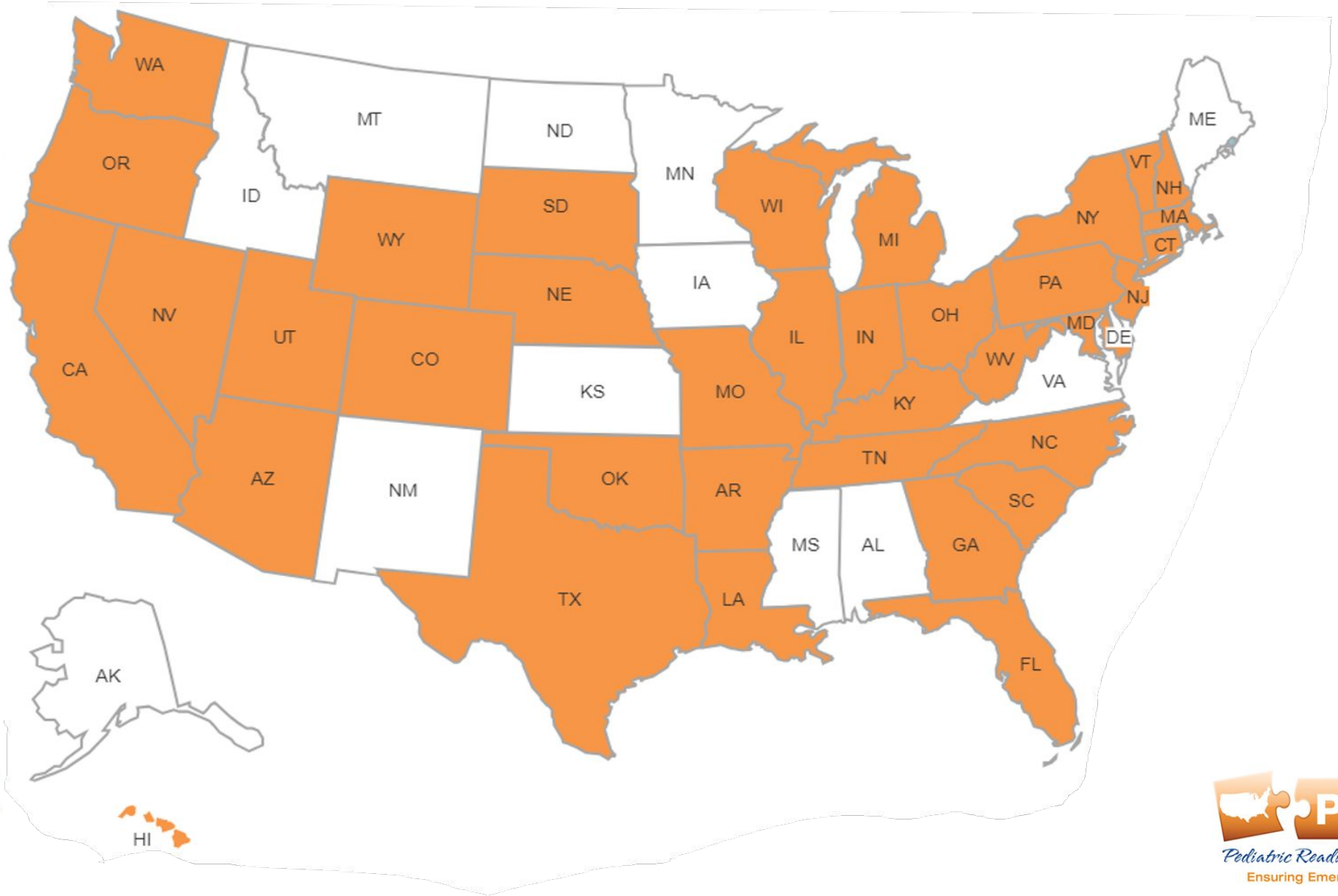
2023 Cohort



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How will you be supported?

Access to data platform

Reference Guide and
Implementation Bundles

Project Management Support

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slido

What do you hope to gain?

ⓘ Start presenting to display the poll results on this slide.

What is there to gain?

- Tool for ED's to measure pediatric emergency care and sustain pediatric QI efforts
- Identify disparities in care in pediatric population (EDs can stratify data in age, race, gender, payor source)
- Continuing Education- MOC Part 4 Credits - Nursing CE- CE for social workers
- Monitor delivery of care and improvements over time
- Improve site pediatric readiness – Poised for Recognition
- Gain leadership skills, increased knowledge of pediatric readiness, and skills in quality improvement and data interpretation, become a PECC
- Partnering with other hospitals and networking

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What's Next?

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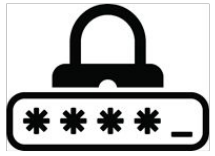
Register for Data Platform

Submit demographics about your ED and team members

Submit a Participant Organization Agreement



Receive Secure Login Credentials

View your ED's Performance Dashboard

https://redcap.link/NPRQIRegistration

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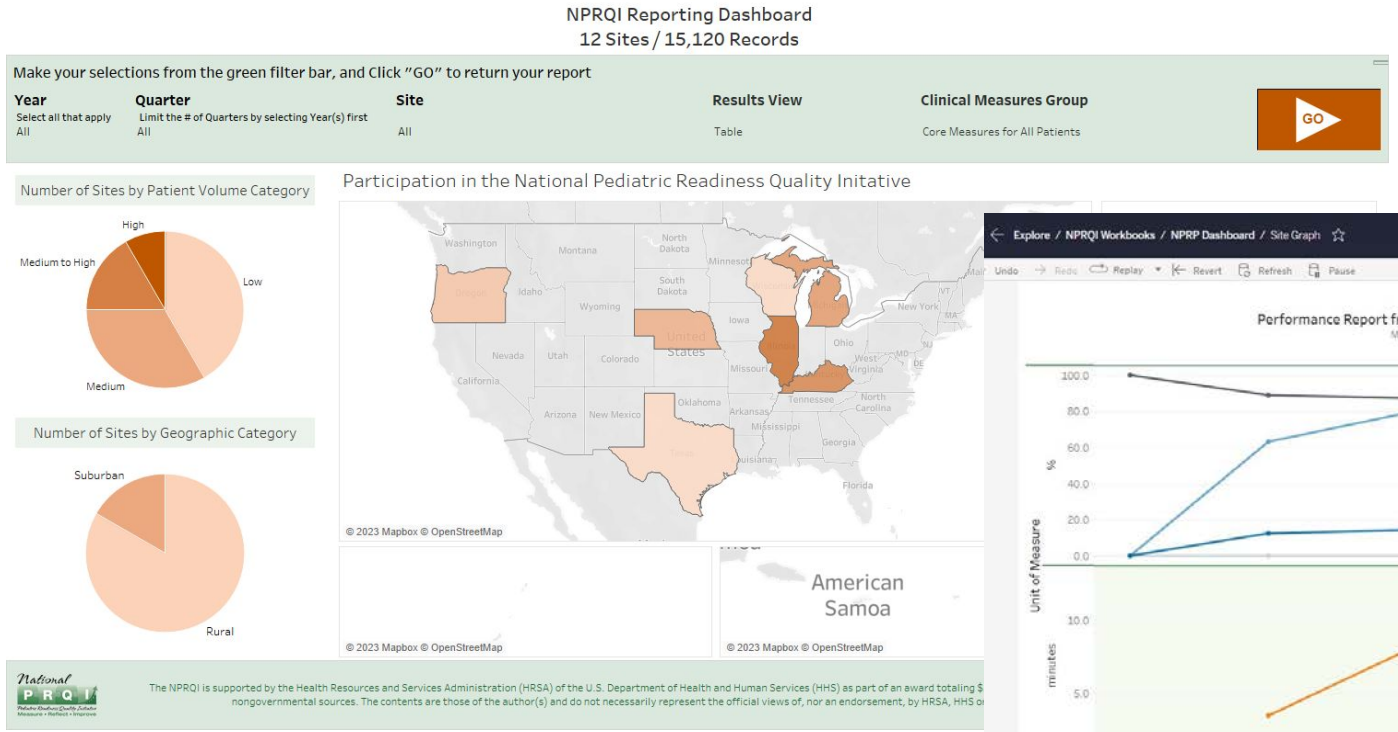
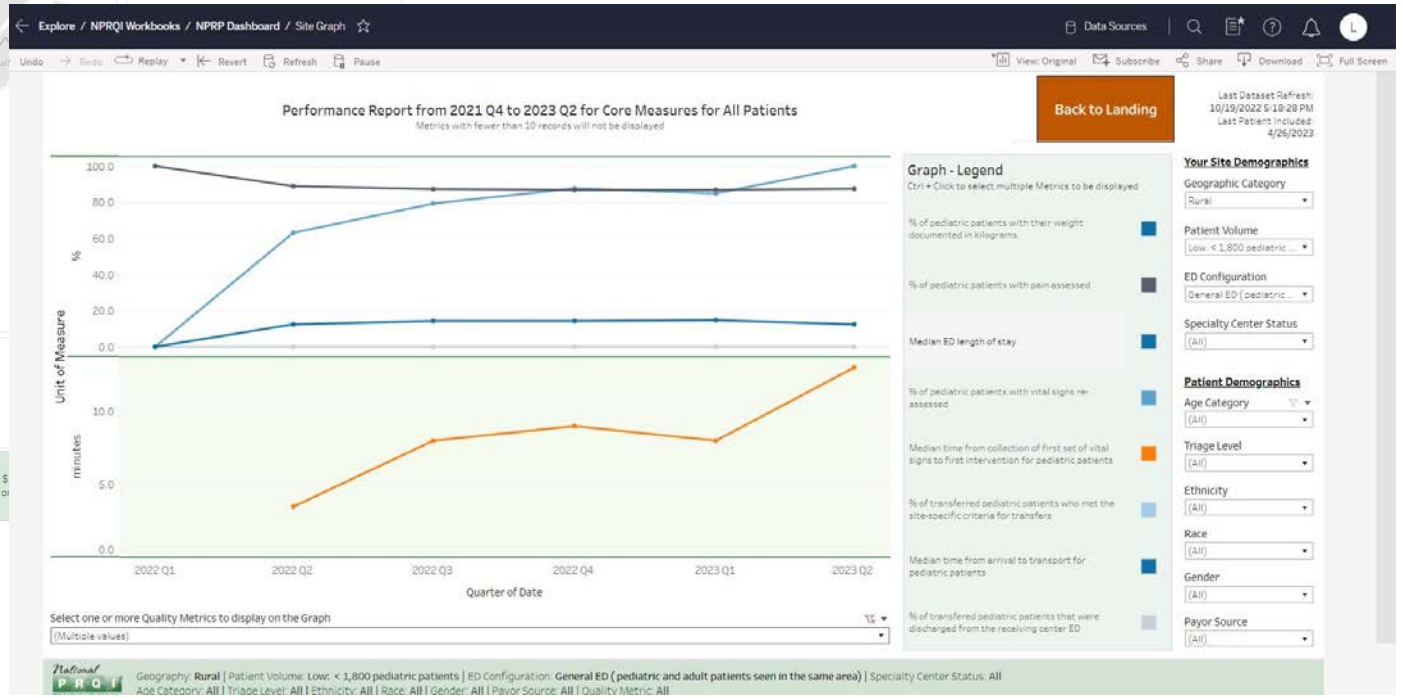
Access to the Data Platform





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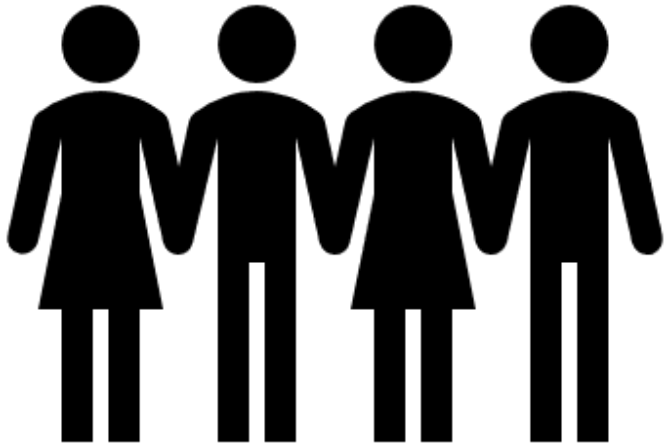
Building Your Team

- Identify your key players
  - What skillsets are needed?
  - What key staff are essential?
  - Who is most impacted?



Selecting Your Clinical Intervention

- Recording pediatric patients' weight only in kilograms
- Early recognition of abnormal pediatric vital signs
- Ensure pediatric pain is assessed and managed
- Optimize screening and treatment of pediatric suicide

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Pediatric Readiness Quality Collaborative
Ensuring Emergency Care for All Children

Suicide

June 27, 2023

Pain Management

July 11, 2023

Assessment

August 1, 2023

Patient Safety

August 8, 2023

Join us for Fireside Chats

Interactive presentations by multidisciplinary experts
on bundle topics June through September

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Time Commitment

- June 2023 to December 2024
- Collaborative Learning Sessions Start in August
  - Third Tuesday of the Month
  - 1 pm to 2:30 pm CT

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Step 1

- Complete PRQC interest form
- Register for the data platform

Step 2

- Identify core multidisciplinary team
- Attend fireside chats

Step 3

- Select intervention bundle topic
- Finalize team
- Attend collaborative sessions and implement QI project

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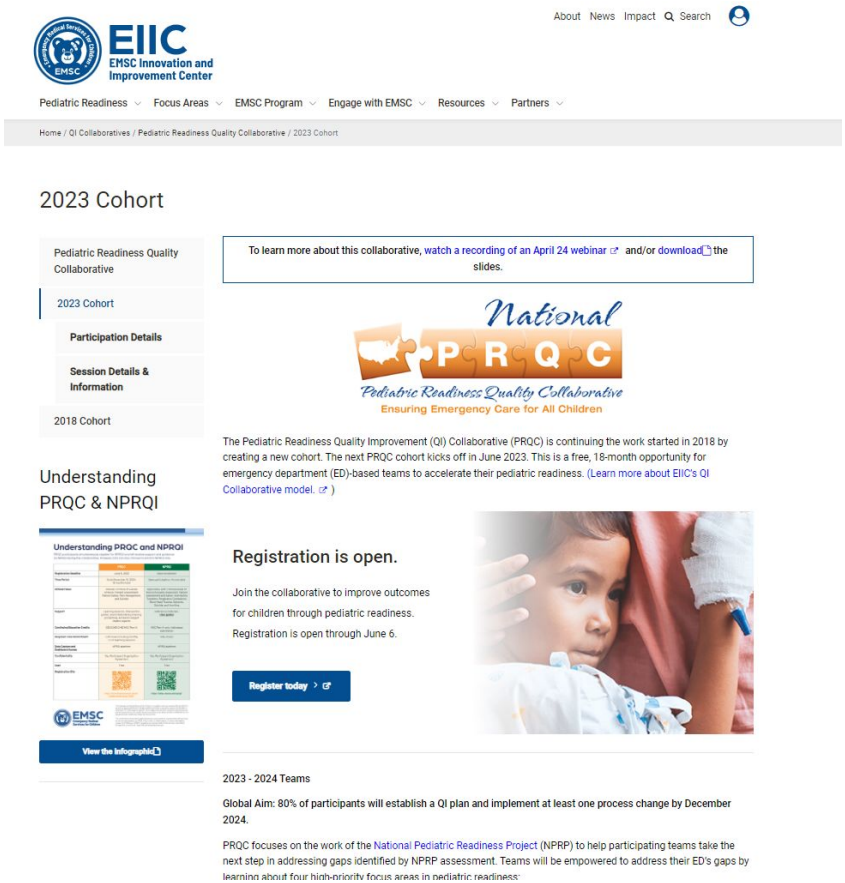
Our Contact Info



prqc@emscimprovement.center

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Nursing - CE contact hours

Welcome Session June 20, 2023

1. Enter your first and last name in the **chat** if you have not done so already
2. Scan the QR code to access session evaluation
3. Submit completed evaluation by 1700 (Pacific) on **6/22/2023** to be eligible for CE hours

If you have any questions, please contact Robin Goodman at **robin.goodmanrn@gmail.com**

BRN CE Provider: Pediatric Liaison Nurses Los Angeles County. Provider approved by the California Board of Registered Nursing, Provider # 15456, for 1 Contact Hours

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Any Questions?

- Goals of PRQC
- Collaborative Design
  - Interventions
  - Data Platform
  - Resources Available
- Time Commitment
- Registration Process
- Next Steps

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