Saving Lives through Pediatric Readiness Collaborative

April 24, 2023

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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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Saving Lives through Pediatric Readiness Collaborative

Thank you for joining!

Remain on mute for the presentation

Session is being recorded and posted online along with slides

Feel free to put questions in the Q&A feature

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Agenda

- Value of QI in Pediatric Emergency Care
- Overview of Pediatric Readiness Quality Improvement Collaborative
- Value of PRQC in a Hospital Setting
- PRQC and Trauma Centers
- Registration, Logistics and Incentives

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Value of QI in Pediatric Emergency Care

Laura M. Garcia
Pediatric Liaison Nurse
Pediatric Emergency Care Coordinator at PIH Whittier Hospital

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Right care
Right place
Right time

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Where do parents take their children when they have an emergency?

- >80% seek care in their local ED (28 Million)
- Of the local EDs
  - > 90% are general EDs
  - < 10% are pediatric specific/designated peds area
- Of those general EDs >70% see less than 15 children a day

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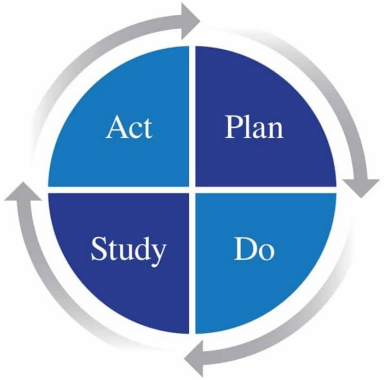
The National Pediatric Readiness Project (NPRP)

Aim: Ensure high quality emergency care for all children

- Phase 1: 2013 national self-assessment
- Phase 2: QI efforts (www.pediatricreadiness.org)
- Phase 3: 2021 national re-assessment



EMERGENCY NURSES ASSOCIATION
SAFE PRACTICE, SAFE CARE

EMSC Emergency Medical Services for Children

American College of Emergency Physicians
ADVANCING EMERGENCY CARE

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

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National PRP Pediatric Readiness Project
Ensuring Emergency Care for All Children

National Assessment of Pediatric Readiness of Emergency Departments: Impact of QI Efforts

Median Adjusted Pediatric Readiness Score by Presence of QI Plan

	No QI/PI Plan	Yes QI/PI Plan	Median Difference
All Hospitals	**62** [51.2, 68.7]	**88** [IQR 76.7, 95]	26pts [95% CI 25-27pts]

QI plan includes pediatric patients – 45% EDs

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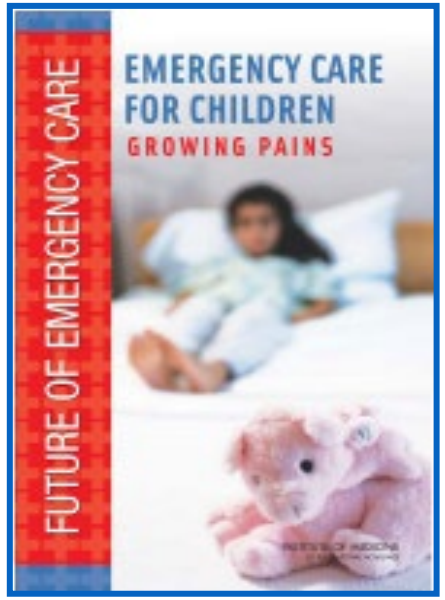
Remick K, et al. Ann Emerg Med. 2016

Institute of Medicine Call to Action

- "EDs and EMS agencies should appoint a pediatric emergency care coordinator (PECC)"



	No PECC	Nurse PECC only	Physician PECC only	Both PECCs	P-value
All Hospitals	**66.5** [IQR 56.0,76.9]	**69.7** [IQR 58.9, 80.9]	**75.3** [IQR 64.4, 85.6]	**82.2** [IQR 69.7,92.5]	<.0001

Physician PECC - 48% of EDs
Nurse PECC – 59% of EDs

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Gausche-Hill et al. JAMA Pediatr. 2015

Institute of Medicine Committee on the Future of Emergency Care in the U.S. Health System. Washington, DC: National Academies Press; 2006.

Peds IV starts in the ED

- Collect data (how big is/isn't the problem)
- Compare to national benchmarks/studies
- Distribute findings
- Improvements to process
- Educate
- Reaudit to measure progress

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Pediatric Sepsis

- 10-year-old male with sepsis
- Missed by providers and nurses at beginning of visit
- Reviewed charts
- Reviewed best practice
- Distributed findings
- Educated and implemented new protocols
- Reaudit charts until met benchmark.

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Small changes over time can make a big difference.

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Overview of the Pediatric Readiness Quality Improvement Collaborative (PRQC)

Robin Goodman, MSN, RN, CPEN

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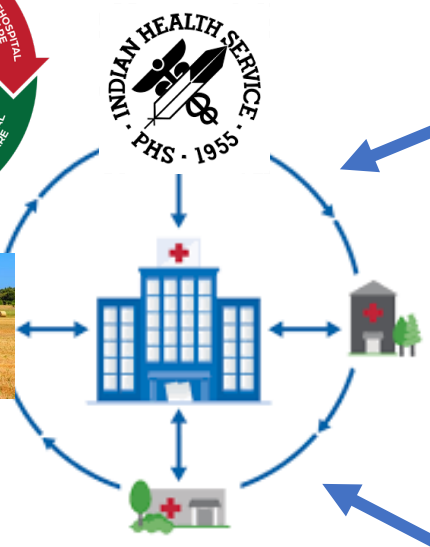
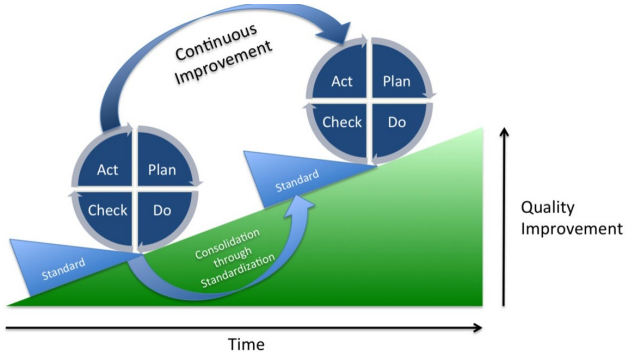
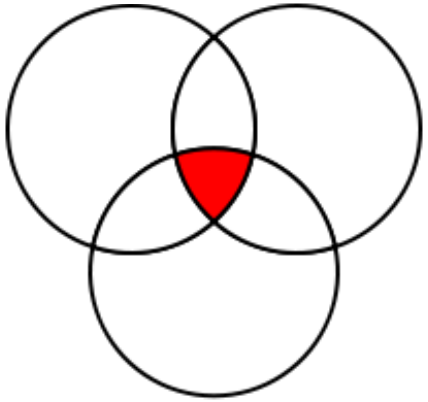
EIIC Efforts to Improve Pediatric Emergency Care



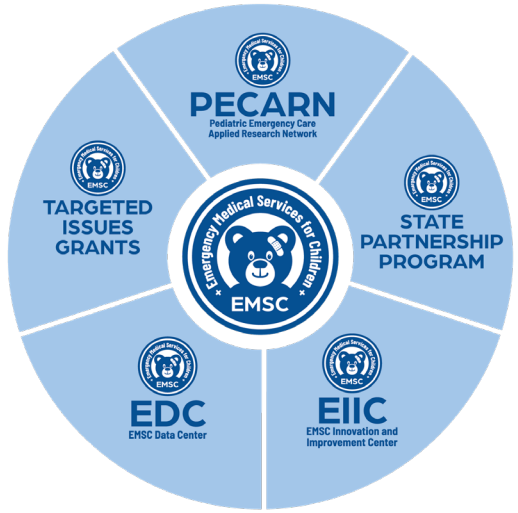
Increase Access to High Quality Health Services





Knowledge Management

Partnerships



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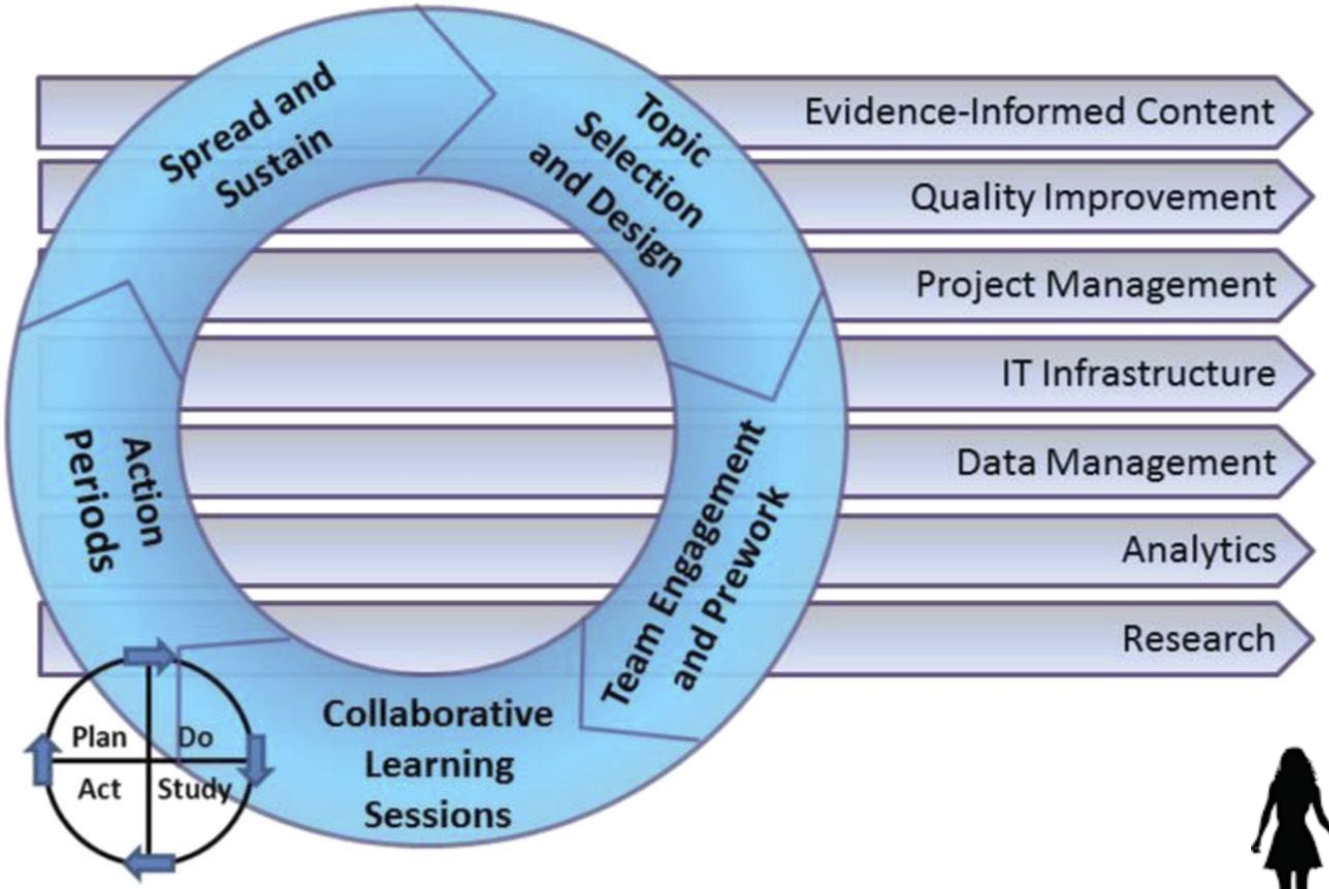
Quality Improvement Collaboratives

Partnership across institutions
Incentives to engagement



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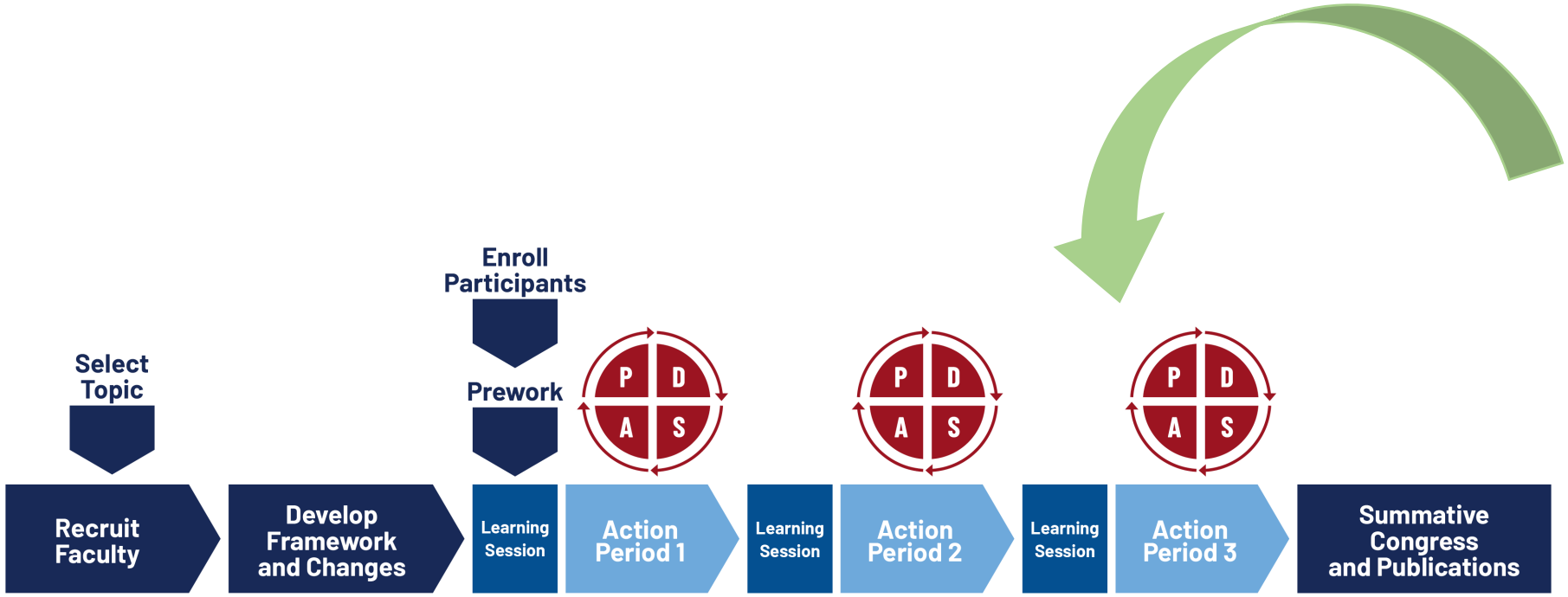
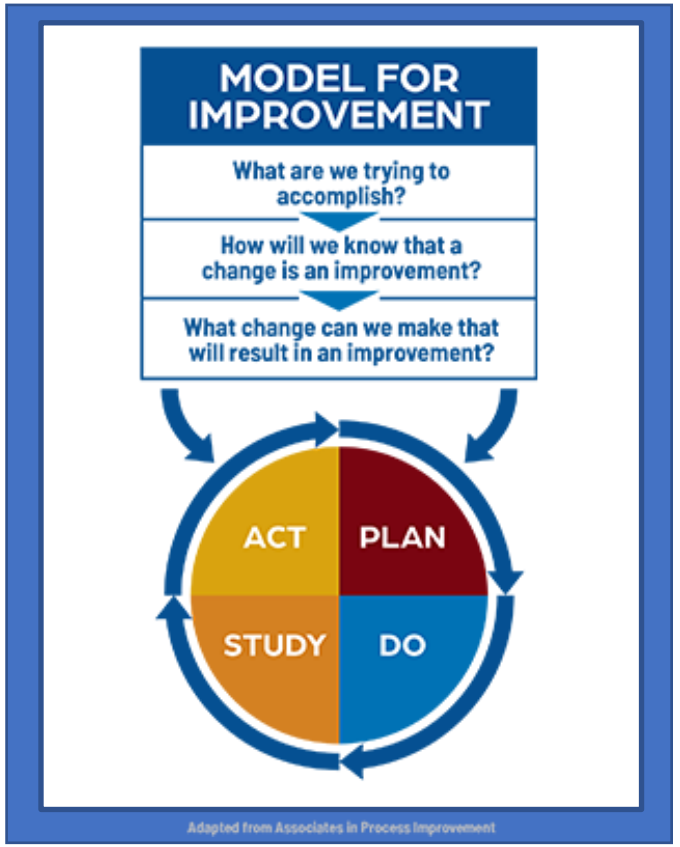
Terao, Hoffman, et al, 2019

Institute for Healthcare Improvement's Breakthrough Series Model





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PRQC Global Aim:

Support pediatric champions to implement local pediatric quality improvement efforts.

- Coaching by experts in pediatric emergency care (pain, suicide, patient safety)
- Coaching by QI experts
- Networking opportunities
- Drive best evidence into practice

- Resources, tools, & best practices
- Shared learning
- Environmental scan to help prioritize areas of focus
- CAPCE/CNE/MOC Part 4 credit for all participants at no cost

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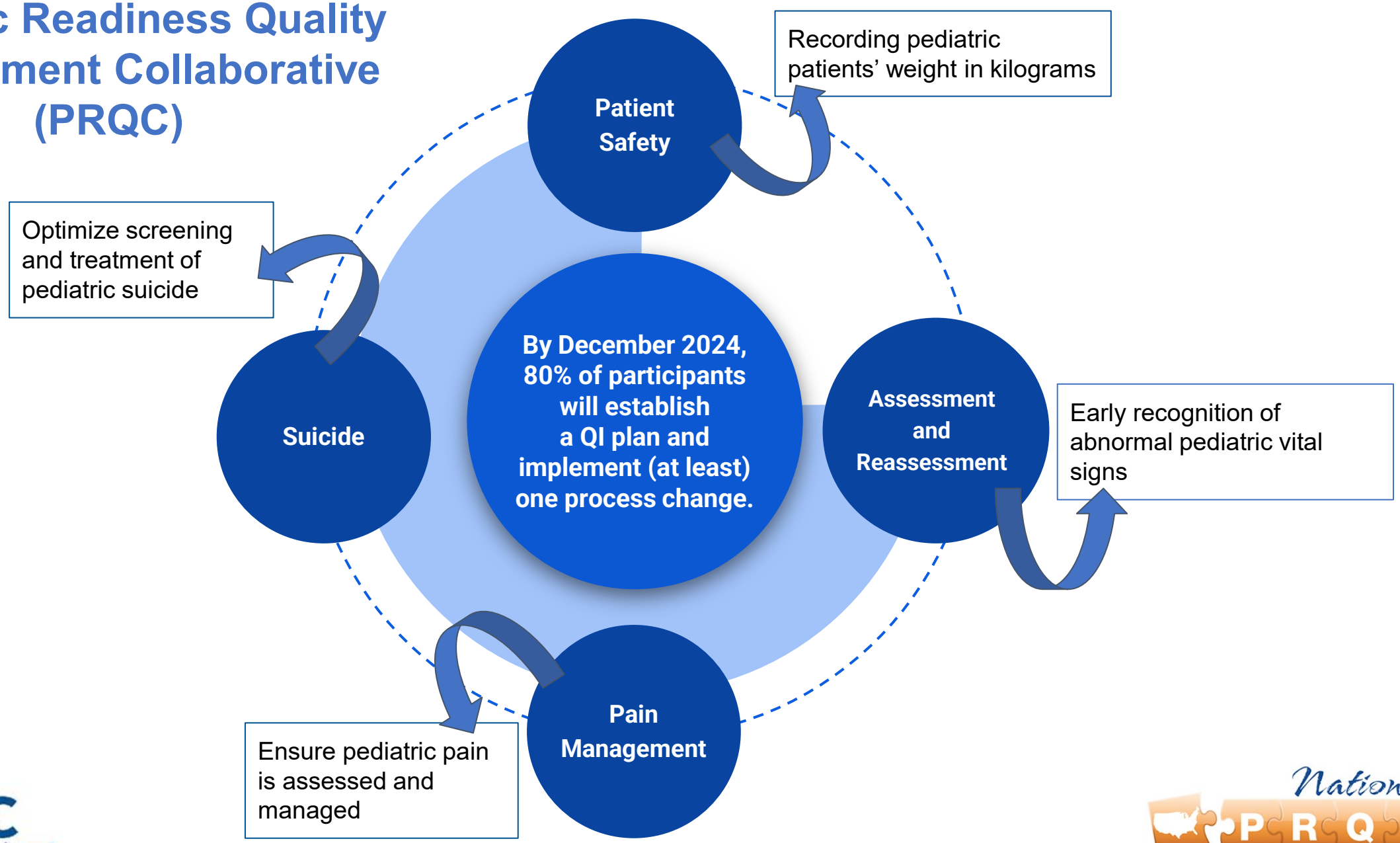
National PRQC Pediatric Readiness Quality Collaborative Ensuring Emergency Care for All Children

Pediatric Readiness Quality Improvement Collaborative (PRQC)



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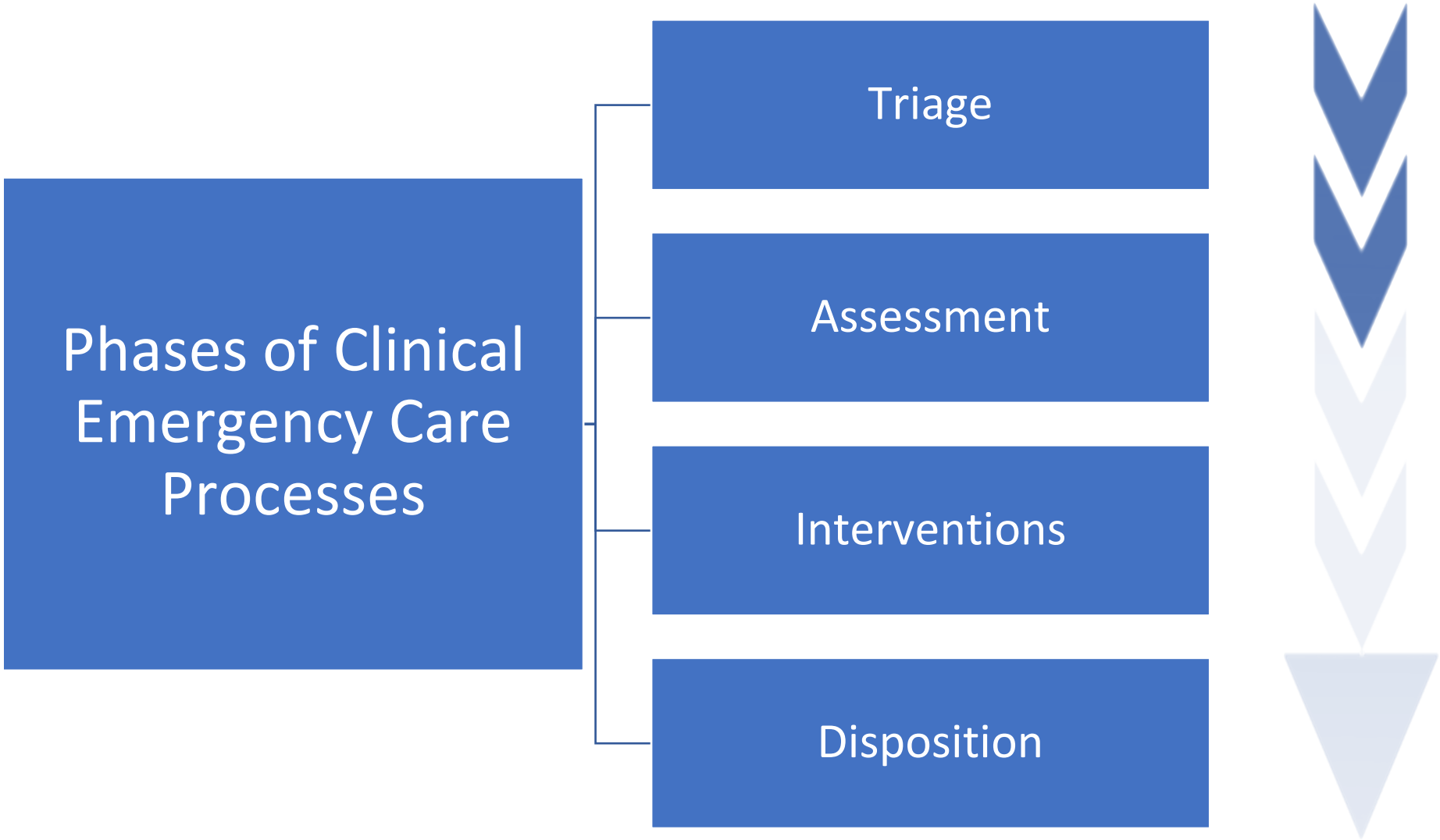
National PRQC
Pediatric Readiness Quality Collaborative
Ensuring Emergency Care for All Children

PRQC



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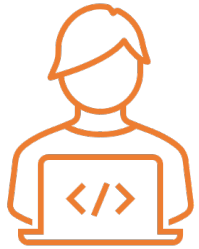
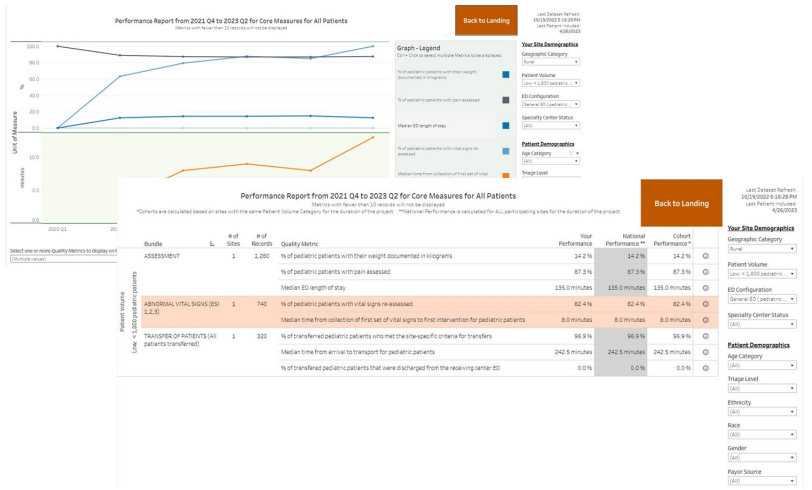
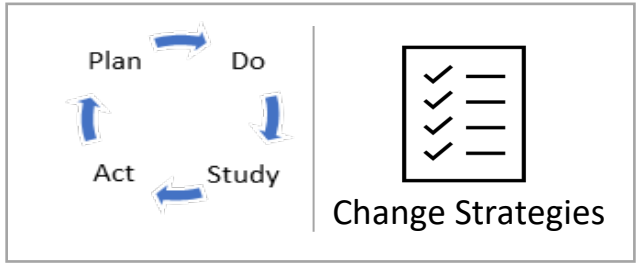
PRQC Activities



Data Entered from Pediatric Encounters





Improvement Efforts

National PRQI
Pediatric Readiness Quality Initiative
Measure • Reflect • Improve

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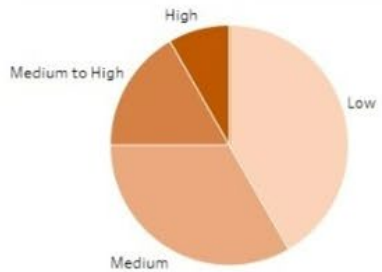
NPRQI Reporting Dashboard
12 Sites / 15,120 Records

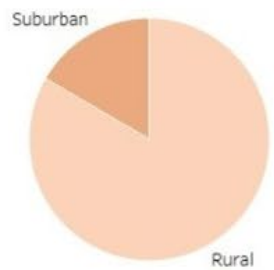
Make your selections from the green filter bar, and Click "GO" to return your report

Year	Quarter	Site	Results View	Clinical Measures Group	
Select all that apply	Limit the # of Quarters by selecting Year(s) first				
(All)	(All)	Graham Regional Medical Center (23238)	Table	Core Measures for All Patients	GO

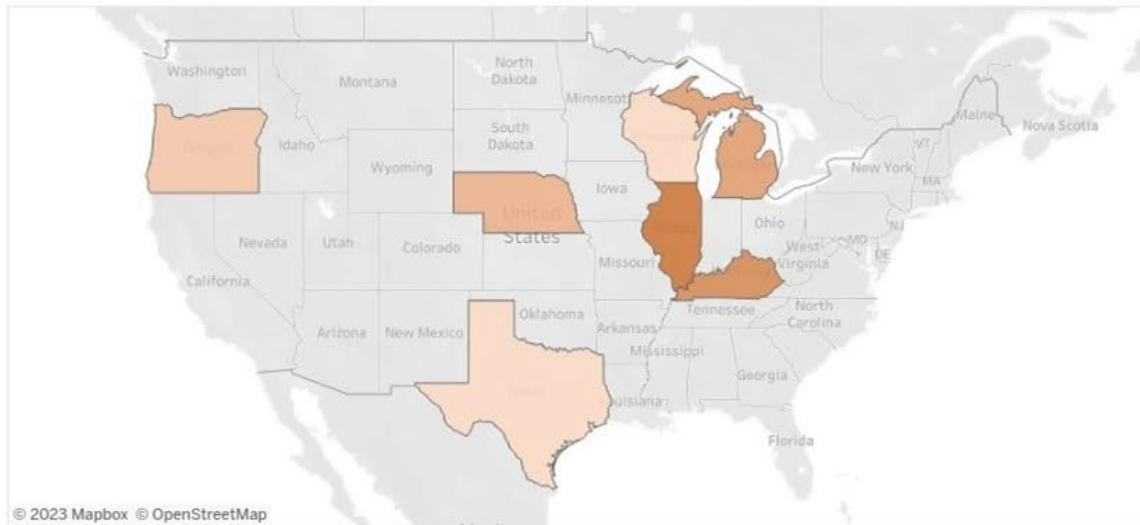
Number of Sites by Patient Volume Category

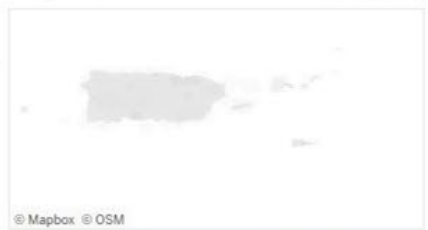


Number of Sites by Geographic Category



Participation in the National Pediatric Readiness Quality Initative





The NPRQI 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 totaling $1.2M with 0% percentage 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.

Last Dataset Refresh:
10/19/2022 5:18:28 PM
Last Patient Included:
4/26/2023

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Performance Report from 2021 Q4 to 2023 Q2 for Core Measures for All Patients

Metrics with fewer than 10 records will not be displayed

*Cohorts are calculated based on sites with the same Patient Volume Category for the duration of the project **National Performance is calculated for ALL participating sites for the duration of the project

Back to Landing

Last Dataset Refresh: 10/19/2022 5:18:28 PM
Last Patient Included: 4/26/2023

Patient Volume	Bundle	# of Sites	# of Records	Quality Metric	Your Performance	National Performance **	Cohort Performance *
Low: < 1,800 pediatric patients	ASSESSMENT	1	1,260	% of pediatric patients with their weight documented in kilograms	14.2 %	14.2 %	14.2 %
				% of pediatric patients with pain assessed	87.3 %	87.3 %	87.3 %
				Median ED length of stay	135.0 minutes	135.0 minutes	135.0 minutes
	ABNORMAL VITAL SIGNS (ESI 1,2,3)	1	740	% of pediatric patients with vital signs re-assessed	82.4 %	82.4 %	82.4 %
				Median time from collection of first set of vital signs to first intervention for pediatric patients	8.0 minutes	8.0 minutes	8.0 minutes
	TRANSFER OF PATIENTS (All patients transferred)	1	320	% of transferred pediatric patients who met the site-specific criteria for transfers	96.9 %	96.9 %	96.9 %
				Median time from arrival to transport for pediatric patients	242.5 minutes	242.5 minutes	242.5 minutes
				% of transfered pediatric patients that were discharged from the receiving center ED	0.0 %	0.0 %	0.0 %

Your Site Demographics

Geographic Category: Rural

Patient Volume: Low: < 1,800 pediatric ...

ED Configuration: General ED (pediatric ...

Specialty Center Status: (All)

Patient Demographics

Age Category: (All)

Triage Level: (All)

Ethnicity: (All)

Race: (All)

Gender: (All)

Payor Source: (All)

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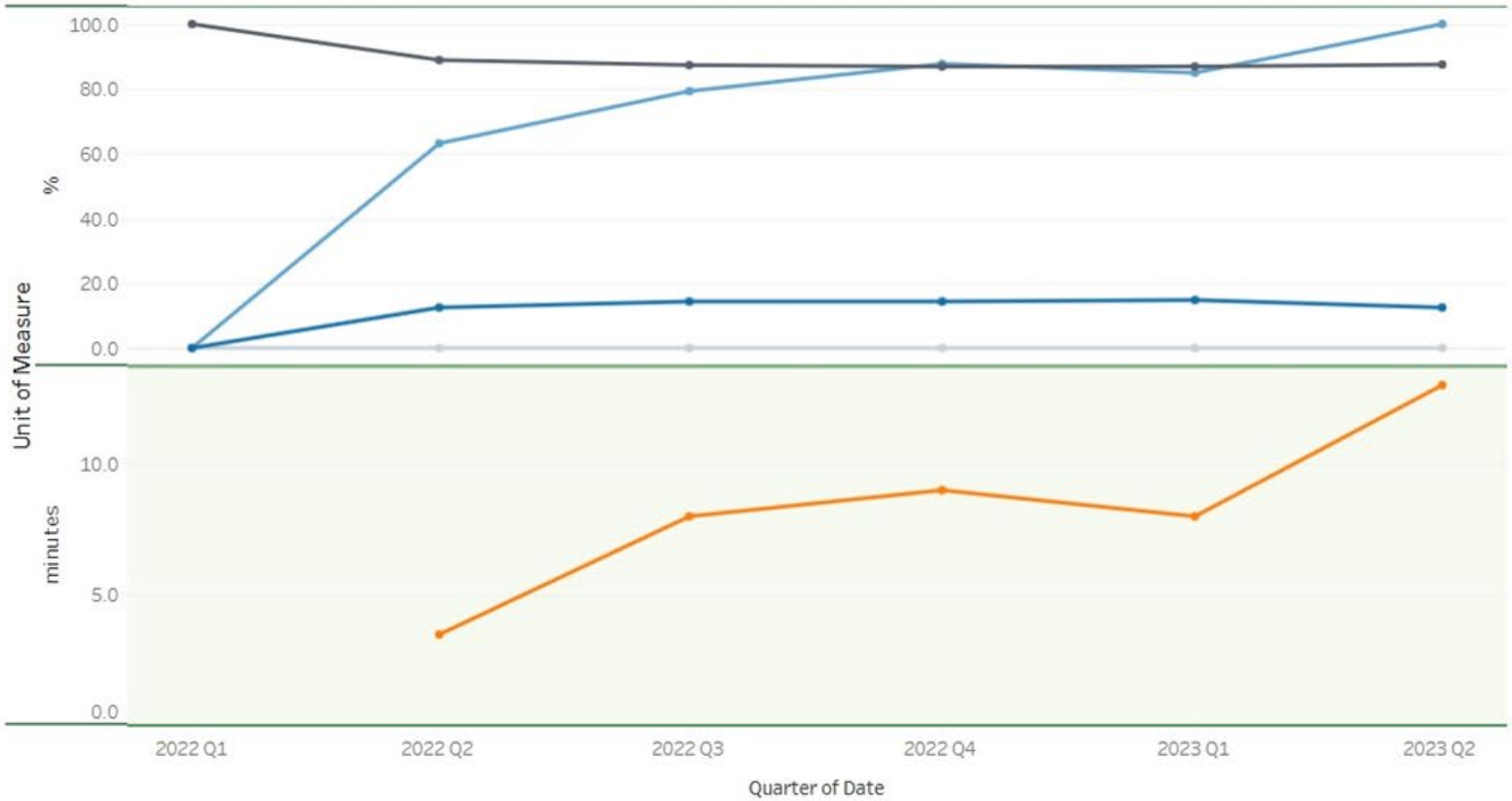

Select one or more Quality Metrics to display on the Graph

(Multiple values)

Graph - Legend

Ctrl + Click to select multiple Metrics to be displayed

- % of pediatric patients with their weight documented in kilograms
- % of pediatric patients with pain assessed
- Median ED length of stay
- % of pediatric patients with vital signs re-assessed
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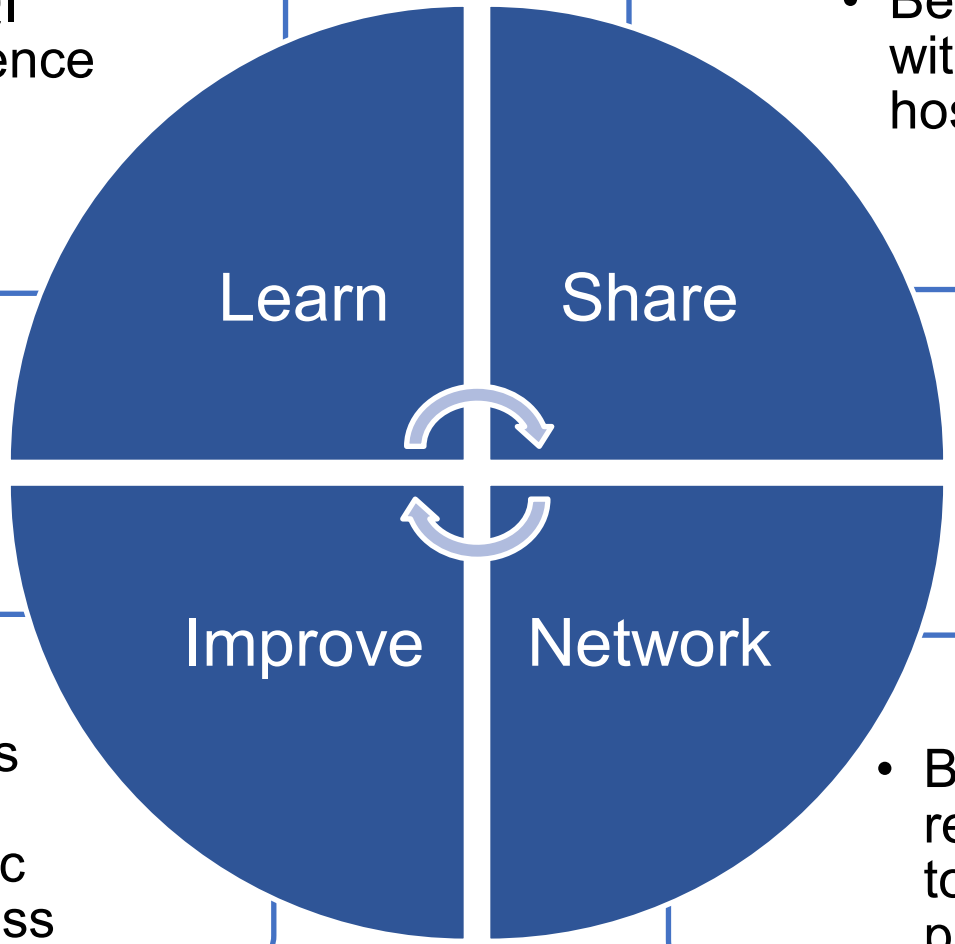
Why Join PRQC?

- Gain QI experience
- Benchmarking with like hospitals



- Address gaps in pediatric readiness
- Build relationships to improve pediatric care

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PRQC Experience

Timothy W. Staed, MD FAAP

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Top Barriers to Pediatric Readiness

- Lack of educational resources
- Cost of training personnel
- Lack of a QI plan for children

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National Assessment of Pediatric Readiness of Emergency Departments: Impact of QI Efforts

Median Adjusted Pediatric Readiness Score by Presence of QI Plan

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All Hospitals	**62** [51.2, 68.7]	**88** [IQR 76.7, 95]	26pts [95% CI 25-27pts]

QI plan includes pediatric patients – 45% EDs

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Remick K, et al. Ann Emerg Med. 2016

Why Join PRQC?

- Improve pediatric care and outcomes in your emergency department
- Connects you with community partners to improve pediatric care in your area – “rising tides lift all ships” (Community hospitals, EMS agencies, school districts)
- Connect with national leaders in pediatric emergency care and disaster preparedness
- Help close the gap in equitable access to health care for ALL children across the nation
- Involvement in future projects: PRQC 2, MO EMSC PFRP, PPN

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National PRQC

Pediatric Readiness Quality Collaborative

Ensuring Emergency Care for All Children

Team #2

LifesavERsTeam

SSM Health Cardinal Glennon Children's Hospital St Louis Missouri

Timothy Staed, MD Physician Champion EMSC PRQC

Mary Bixby, RN Nurse Champion EMSC PRQC

Terry Cuellar, RN Nurse Champion EMSC PRQC

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- 10 Affiliate Sites

1.	**St. Louis University**	Jennifer Garnica, RN
2.	**St. Mary's Richmond Hts**	Mary McBride, RN
3.	**St. Clare**	Kristy Haggett, DO and Stacey Freshman, RN
4.	**DePaul**	Deb Yersky, MD and Samantha Pigg, RN
5.	**St. Joseph St. Charles**	Maryjo Petruska, MD and Elise Diekroeger, RN
6.	**St. Joseph Lake St. Louis**	Tim Staed, MD and Cheri Coletta, PNP
7.	**St. Joseph Wentzville**	Tina Hatfield, RN
8.	**Anderson**	Chris Wangard, MD and Phyl Becker, RN
9.	**St. Elizabeth's O'Fallon Ill**	Chauncey Tarrant, MD and Margie Oliver, RN and Amy Signore, RN
10.	**Heartland**	J.J. King, RN and Robert Eilers RN

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- **University Hospitals**

1.	St. Louis University	800/yr	Weight in Kilograms	Abnormal Vital Signs		
2.	St. Mary's	800/yr	Weight in Kilograms			
3.	Cardinal Glennon	60K/yr				Disaster Preparedness

Community Hospitals

1.	DePaul	8K/yr		Abnormal Vital Signs		
2.	St. Clare	7K/yr		Abnormal Vital Signs (Emphasis on Respiratory)		
3.	St. Joseph St. Charles	5K/yr		Abnormal Vital Signs		Disaster Preparedness
4.	St. Joseph Lake St. Louis	10K/yr		Abnormal Vital Signs		Disaster Preparedness
5.	Anderson	10K/yr		Abnormal Vital Signs		
6.	St. Elizabeth's	6K/yr		Abnormal Vital Signs		
7.	Heartland	8K/yr	Weight in Kilograms		Interfacility Transfers	Disaster Preparedness

Stand Alone

1.	St. Joseph Wentzville	2K/yr	Weight in Kilograms			

- Total = 120K/yr

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Celebrate the victories

1. Each hospital has its own victories - this takes LOTS of hard work by people who do not necessarily have extra time for more hard work.
2. Celebrate the victories – because each one is a win for pediatric patients across the country

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This is a marathon – and a sprint

1. Sprint to the end of each goal – finish each ASAP (DUA's, PDSA cycles, Change strategies, etc.)
2. Keep in mind the BIG picture – long-term goals and agendas of each group

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SSM Health St. Joseph Lake St. Louis

It takes a Team

1. Involve as many people as you can on your team
2. Not everyone is available all the time – so encourage many people to participate
3. More participants = more buy-in from the hospital

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SSM Health St. Joseph Lake St. Louis

REPORT to Administrators

1. Tell the people who are NOT part of the project what progress you are making
2. They will more likely support changes you want to make

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LifesavERsTeam

SSM Health St. Joseph Lake St. Louis

Celebrate victories and say Thank You

1. Each step forward is a victory that takes hard work and someone's time
2. Participants are giving up their most valuable resource – their TIME. And not necessarily being reimbursed. Tell them how much you appreciate their contribution.

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Value of PRQC in the Hospital Setting

Christine Aspiotes, DO, MS

EMSC Innovation and Improvement Center

Affiliation

Gives your hospital the ability to provide each pediatric emergency patient in your ED with the:

right care...

delivered by the right staff…

in the right place…

at the right time.

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Mission

- Establish a collaborative network of hospitals to provide quality pediatric emergency care for *ALL* children in the region through a combination of:

- Outreach
- Oversight
- Direct service delivery

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Why?

- Research shows that critically ill children may have worse health outcomes if their local hospital is poorly equipped to respond to pediatric emergencies

- Aligns with national movement to improve pediatric readiness
  - American College of Emergency Physicians (ACEP)
  - American Academy of Pediatrics (AAP)
  - Emergency Nurses Association (ENA)

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Standardization

- Protocols/Pathways
- Crash Carts
  - Mirror peds to adult carts
  - Color-code

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Standardization

- Weight in kg

- Pain/Fever package
  - Syringe
  - Dosing chart
  - Basic instructions

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Conclusion

- Utilize EMSC and PRQC 2.0 as your “affiliate”
- Reach out to regional hospitals to explore opportunities!

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PRQC and Trauma Centers

Lisa Gray, MHA, BSN, RN, CPN, TCRN

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Access to Trauma Centers for Injured Children

Pediatric Trauma Center

57% of Children within 30 miles

100% coverage only in Northeast

Any L1-L3 Trauma Center

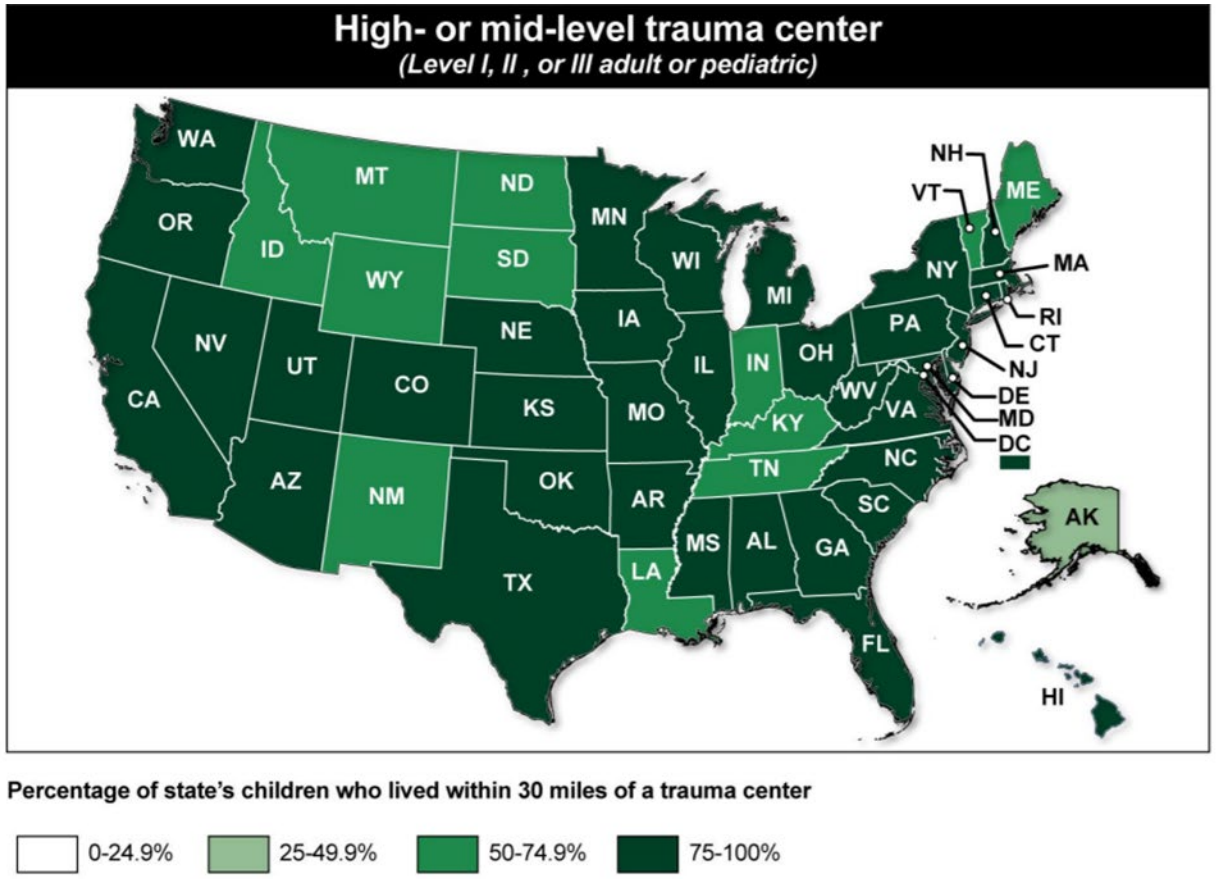
88% of Children within 30 miles

100% coverage in 37 states

United States Government Accountability Office

GAO

Report to Congressional Requesters



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Pediatric Readiness Matters…

832 EDs/ 372,000 Kids:

- Analyzed outcomes by Peds Readiness Score of INITIAL RECEIVING HOSPITAL
- Risk-adjusted mortality 58% lower for kids treated at EDs with highest Peds Readiness Scores.
- "If all children cared for in the lowest-readiness quartiles were treated in an ED in the highest quartile of readiness, an additional 126 lives might be saved each year in these trauma centers".

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

Variable	OR (95% CI)	In-hospital mortality	*P* value
All patients (n = 372 004)			
4th Quartile	0.58 (0.45-0.75)		<.001
3rd Quartile	0.90 (0.70-1.17)		.44
2nd Quartile	1.16 (0.87-1.54)		.32
ISS ≥16 (n = 50 440)			
4th Quartile	0.61 (0.49-0.76)		<.001
3rd Quartile	0.90 (0.72-1.12)		.34
2nd Quartile	1.11 (0.87-1.43)		.39
Head AIS ≥3 (n = 57 368)			
4th Quartile	0.56 (0.44-0.71)		<.001
3rd Quartile	0.86 (0.68-1.10)		.24
2nd Quartile	1.03 (0.78-1.36)		.82
Any AIS ≥3 (n = 124 507)			
4th Quartile	0.57 (0.45-0.71)		<.001
3rd Quartile	0.88 (0.70-1.11)		.30
2nd Quartile	1.05 (0.80-1.37)		.44

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Raising the bar for pediatric trauma care

Published November 23, 2021

Pediatric readiness assessment to be required for trauma center verification

For immediate release

Contact: km@emscimprovement.center

(NOV. 23, Austin, Texas) More children die of injury each year than from all other causes combined. But only 57% of children across the United States have feasible access to a pediatric trauma center--even though kids, because of their unique anatomies and physiologies, require specialized care.

40-45% of all hospitals are trauma centers

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Collaboration in Trauma Centers to Care for Injured Children

- Working on a shared vision for the care of children in the Emergency Department

- Utilize the infrastructure of the trauma program and the expertise of the TPM to include the PECC and pediatric readiness initiatives in the Emergency Department (PIPS process, Operations Meeting, etc.)

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Registration and Logistics

Cristina Madero, MPH

EMSC Innovation and Improvement Center

Registration

- Registration is open now through June 6th!
- https://redcap.dellmed.utexas.edu/surveys/?s=CYWAERLEFJHAX73D
- Who can register?
  - ED professional who is willing to serve as team leader or point of contact
  - Only one person from each facility should register
  - Once you register, you will receive a welcome email with details on identifying team participants
  - Multidisciplinary teams should include two or more participants
- https://emscimprovement.center/collaboratives/prqc/2023/

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Fireside Chats

- Interactive presentations by multidisciplinary experts on bundle topics
  - Intro to QI
  - Pain Management
  - Weight in Kilograms
  - Assessment and Reassessment (Abnormal Vital Signs)
  - Suicide
  - Data Sampling
  - Data Literacy

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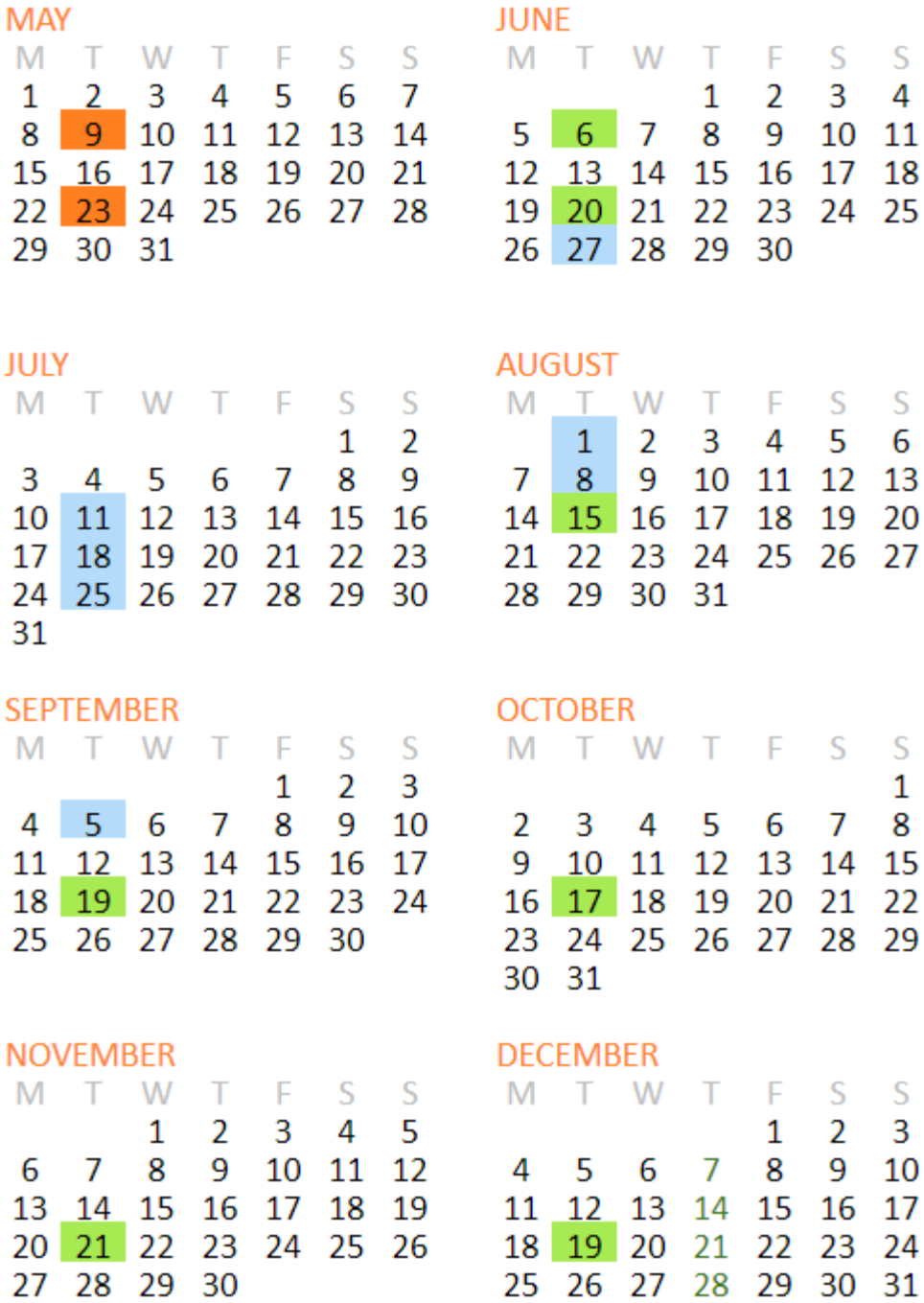
- **Orange** – Upcoming Webinars
- **Green** – Learning Sessions
  - June 6th and June 20th are session orientations (choose one)
- **Blue** – Fireside Chats



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Resources

- Pediatric Education and Advocacy Kits (PEAKs)
- QI Implementation and Data User Guide
- Intervention Bundle Guides
- Fireside Chats and Collaborative Learning Sessions
- NPRQI Platform and Dashboard

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C-suite Letter of Commitment - Optional

- Template for adoption (optional)
- Identifies team leads
- Expresses commitment to QI activities
- Expresses site commitment regardless of staff turnover

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Incentives and Support

- C-suite (Hospital Leadership) Letter of Commitment - Optional
- Maintenance of Certification Part 4 Credit
- Continuing Education Credit
- All Teach All Learn Approach - Opportunities to Learn from Regional Teams
- Develop Regional and National Partnerships
- NPRQI and its Related Resources
- Improve Pediatric Emergency Care
- Webpage Materials

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Continuing Education Credit

- For physicians, nurses, and social work professionals
- Attend the Learning Sessions
- Complete Environmental Scan
- Complete Evaluations
- QI Project and Attestation Form Required for MOC Part 4 Credit

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Upcoming Promotional Webinars

Saving Lives in Rural America through Pediatric Readiness Collaboratives

Hosted by NRHA
May 9, 2023, 2:00pm – 3:00pm CT
https://ruralhealth-us.zoom.us/webinar/register/WN_rm6YxIJMRIG6mFFfG_CbnQ#/registration

Pediatric Readiness Quality Improvement Collaborative (PRQC) A value proposition for optimizing pediatric emergency care Informational Webinar

Hosted by ACEP
May 23, 2023, 2:00pm – 3:00pm CT
Registration Coming Soon!

Encourage your colleagues to join the collaborative and learn more!

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Thank You!

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