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

Fireside Chat
Pain Assessment

July 11, 2023

EMSC Quality Improvement Collaboratives

Acknowledgments

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Thank you for joining!

Session is being recorded and posted online along with slides

Utilize the Q&A feature to ask questions

Place your name in the chat for nursing and social work credit

Discussion will follow presentation

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Objectives

After participating in this session, attendees will be able to:

- Describe how these measures impact a site's pediatric readiness
- Be familiar with how to assess and reassess pain in pediatric patients
- Bookmark resources that are available to you as you embark on your QI Journey

Speakers

Aubri Carman, MD
Pediatric Emergency Medicine Physician
Banner Children's at Thunderbird/North Valley Emergency Specialists

Corrie Chumpitazi, MD, MS, FAAP, FACEP
Pediatric Emergency Medicine Physician
Chief, Pediatric Emergency Medicine
Professor of Pediatrics, Duke University

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Understanding Pediatric Pain

- Pediatric pain is underrecognized
- Children are less likely to report or describe pain
- Anxiety and situational distress can be difficult to separate from pain

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Burden of Pediatric Pain

- Pain is the #1 reason children seek emergency care
- Nearly 80% of pediatric ED patient visits are related to pain
- Children receive less pain medication than adults

Todd J Pain 2007
Spady Pediatrics 2004
Danesco Pediatrics 2000

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Opportunities for Improvement

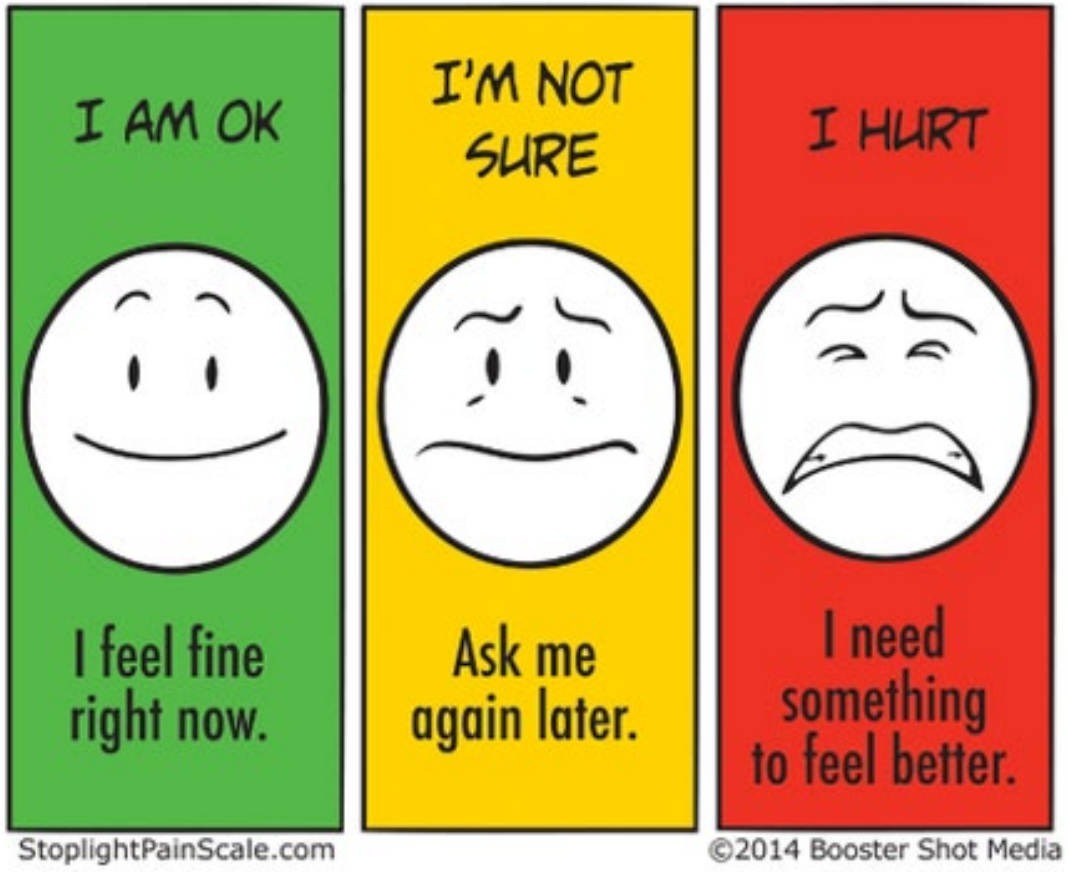
Children seen in General EDs are:

- Less likely to have pain assessed
- Less likely to receive pain medication
- Less likely to receive timely pain medication

Carman A, AAP, Denver 2022

Assessing Pain

- Diagnostic indicator
  - Guide the patient evaluation
  - Optimize diagnostic accuracy
- Symptom assessment
  - Awareness
  - Treatment decisions
  - Re-assessment after interventions



Schwetz CJEM 2018

Pain Assessment Tools

FLACC-R Score

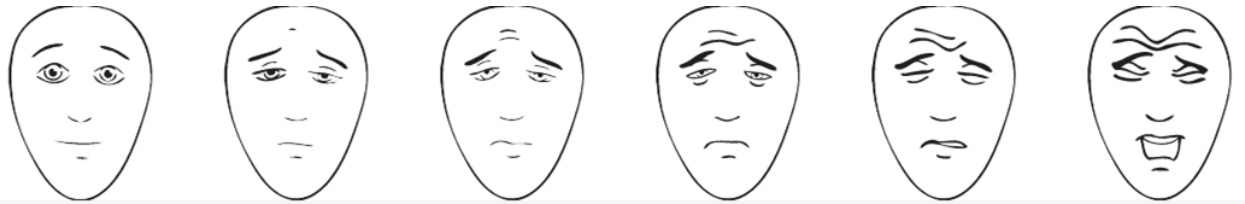
Assessing Children's Pain

r-FLACC (revised FLACC) **Pain Rating Scale for children with developmental disability.**

Starship Child Health

	0	1	2
Face	No expression or smile	Occasional grimace or frown, withdrawn, disinterested; appears sad or worried	Frequent to constant frown, clenched jaw, quivering chin; ***distressed looking face; expression of fright or panic*** *Individualised behaviour described by family:*
Legs	Normal position or relaxed; usual muscle tone and motion to arms and legs	Uneasy, restless, tense; occasional tremors	Kicking, or legs drawn up; ***marked increase in spasticity; constant tremors or jerking*** *Individualised behaviour described by family:*
Activity	Lying quietly, normal position, moves easily; regular rhythmic breaths (respiration)	Squirming, shifting back and forth, tense or guarded movements; mildly agitated (head back and forth, aggression); shallow, splinting breaths (respirations); occasional sighs	Arches, rigid, or jerking; ***severe agitation; head banging; shivering (not rigors); breath holding, gasping, or sharp intake of breaths; severe splinting*** *Individualised behaviour described by family:*
Cry	No cry (awake or asleep)	Moans or whimpers, occasional complaint; occasional verbal outburst or grunt	Crying steadily, screams or sobs, frequent complaints; ***repeated outbursts; constant grunting*** *Individualised behaviour described by family:*
Consolability	Content, relaxed	Reassured by occasional touching, hugging, or "talking to"; Can be distracted	Difficult to console or comfort; ***pushing away caregiver; resisting care or comfort measures*** *Individualised behaviour described by family:*

Faces Pain Scale-Revised



Verbal Numerical Rating Score

Voepel-Lewis Analg 2002
Hicks Pain 2001
Tsze Ann Emerg 2018

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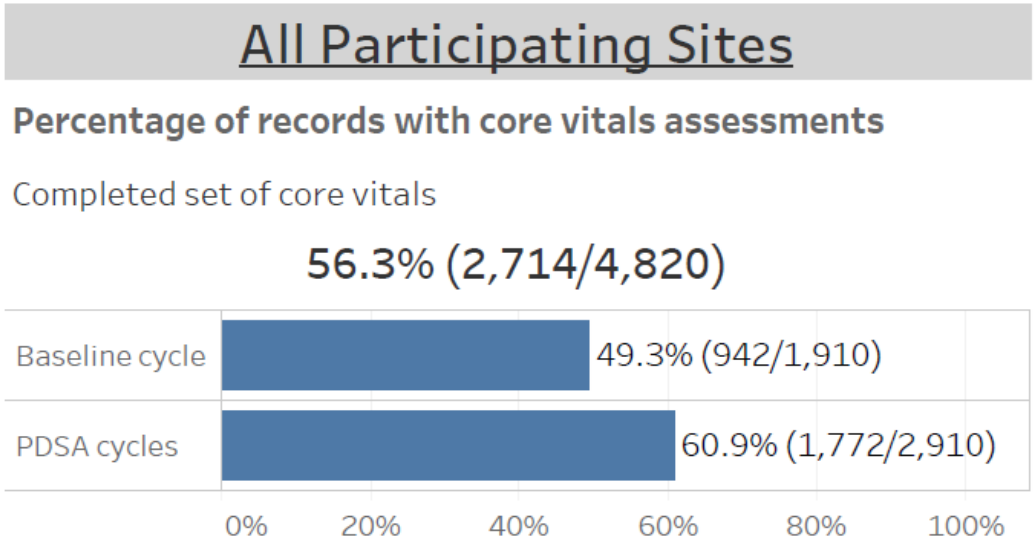
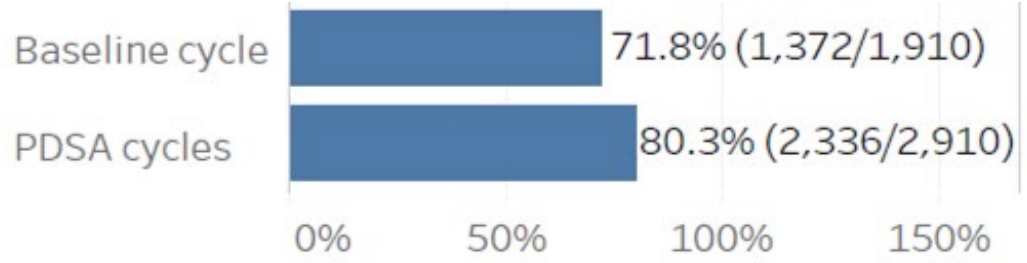
PRQC 1.0 - Prior Improvements



Pain assessment

76.9% (3,708/4,820)



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Pain Treatment

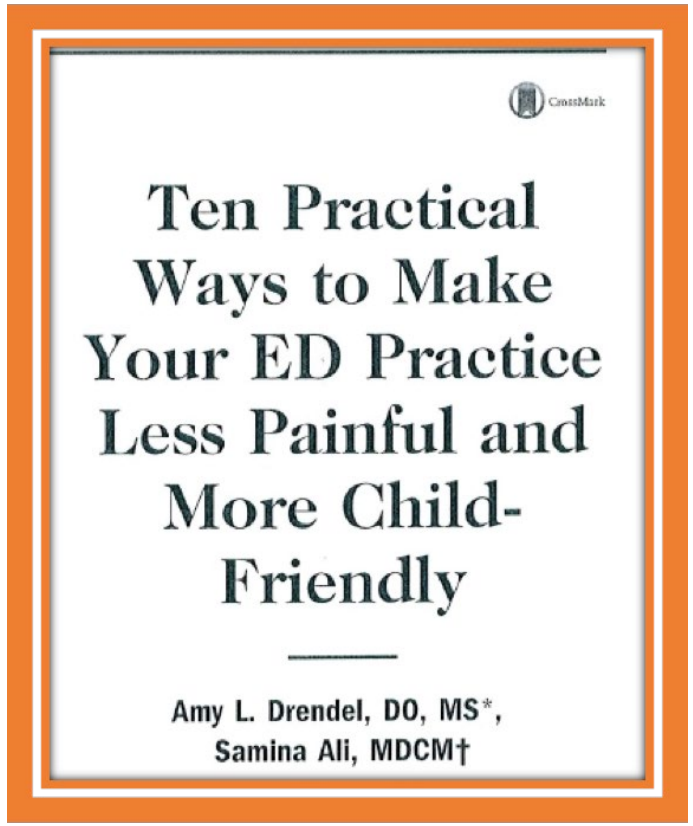
- Improvement in pain assessment is associated with improvement in pain treatment

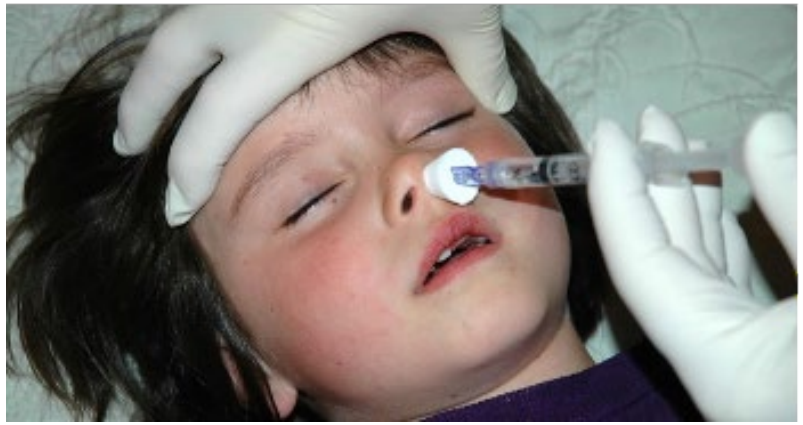
Adjusted Odds Ratios for Analgesic Prescription

Pain Score	Analgesic	Opioid
No Pain Score	1.31 (1.13, 1.52)	2.27 (1.38, 3.71)
No Pain	1.00	1.00
Mild Pain	1.54 (1.31, 1.81)	2.23 (1.34, 3.71)
Moderate Pain	2.29 (1.89, 2.76)	6.37 (3.82, 10.62)
Severe Pain	4.09 (3.06, 5.45)	22.08 (12.72, 38.3)

Drendel AL et al. Pediatrics. 2006;117(5):1511-8

Adjunct Strategies for Pain Management





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PEAK Pain Management

Pediatric Education and Advocacy Kit (PEAK): Pain

The majority of emergency department visits are related to pain. Untreated pain has short-term (pain and distress for the child, caregivers, and healthcare providers; prolonged procedure time; slower healing) and long-term consequences (increased sensitivity to pain; avoidance of healthcare settings; needle phobia, higher levels of anxiety before a procedure). Timely and effective multi-modal pain care improves procedure success rates, prevents the need for repeated attempts, improves patient flow, and improves patient and caregiver satisfaction. Repeated pain measures and consideration of each family's unique situation, level of distress, and life experience can help guide appropriate therapy. PEAK: Pain was developed to provide resources for prehospital practitioners, hospital-based care providers, patients, and families to asses and manage pain in the pediatric patient.

Last updated: July 2022

2 Resources

PAMI®: Virtual Reality for Pain Management

Details

Video

SKIP: Mom Hack: What You Can Do When Kids Are Afraid of Needles

2 minutes

Details

Infographic

SKIP: Psychological Therapies & Headache Pain

2 minutes

Details

Video

SKIP: Needle Pain & Phobia. How to Avoid Fear of Needles & Vaccines by Andrea Furlan, MD, PhD

9 minutes

Details

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PODCAST SERIES

Pain Treatment

Drug	Dose	Comments/Cautions
Mild Pain (e.g., 1-3 out of 10)		
ibuprofen PO	10 mg/kg/dose q6h PRN (MAX 600 mg/dose)	For children ≥6 months, first-line option for musculoskeletal injuries and most other painful inflammatory conditions.
acetaminophen PO	15 mg/kg/dose q4h PRN (MAX 1000 mg/dose)	Do not exceed 75 mg/kg/day or 4 g/day (whichever is less).
Moderate Pain (e.g., 4-6 out of 10) Always start with non-opioid medications above, layer on opioid medications below as needed.		
morphine PO	0.2-0.5 mg/kg/dose q3-4h PRN (MAX 15 mg/dose)	Most common pediatric opioid. Lack of demonstrated efficacy for musculoskeletal pain. For initial pain management, second dose may be given sooner than 3 hrs.
HYDROmorphone PO	0.03-0.06 mg/kg/dose q3-4h PRN (MAX 1-2 mg/dose)	Higher risk of dosing errors. Do not use if <6 months or <10 kg.
oxyCODONE PO	0.1-0.2 mg/kg/dose q4-6h PRN (MAX 5-10 mg/dose)	Risk of QT interval prolongation. Tablets must be swallowed whole.
If not responding to PO opioid, consider lower dose IV/Intranasal opioid (see Severe Pain below).		
Severe Pain (e.g., 7-10 out of 10)		
fentaNYL Intranasal	1.5 mcg/kg/dose (MAX 100 mcg/dose). May repeat 0.5-1 mcg/kg/dose (MAX 50 mcg/dose) 10 min after 1st dose if needed. Divide dose between nostrils (MAX 1 mL/nostril)	Provides rapid pain reduction. Provides early pain relief if IV access is not yet established. Give via mucosal atomization device for enhanced absorption. Monitor level of consciousness, vital signs, and pain score prior to therapy and at 10 min post administration.
fentaNYL IV	1 mcg/kg/dose q1-2h PRN (MAX 50 mcg/dose)	Monitoring as per Morphine IV below. For initial pain management, second dose may be given sooner than 1 hr. Monitor level of consciousness, vital signs, and pain score prior to therapy and q10 min post administration (for MIN 30 min). Some institutions recommend continuous O_2 sat monitoring for 30 min post administration.
morphine IV	0.05-0.1 mg/kg/dose q2-4h PRN (MAX 4-8 mg/dose)	For initial pain management, second dose may be given sooner than 2 hrs. DO NOT push medication to avoid rigid chest. Monitoring as per fentaNYL IV above.
ALWAYS ADD PO OR IV NSAID FOR OPIOID-SPARING EFFECT if the pain is expected to require multiple opioid doses.		
ibuprofen PO	Dosing as for Mild Pain section above	
ketorolac IV	0.5 mg/kg/dose q6h PRN (MAX 30 mg/dose, 15 mg/dose for subsequent)	Avoid IV ketorlac if ibuprofen or NSAIDs were given less than 6 hours before.

COUNSELING CAREGIVERS WHO ARE HESITANT ABOUT ANALGESIC USE

1. Our goal today is to keep your child comfortable while we figure out what is going on; they do not need to remain in pain while we diagnose and treat them.
2. Treating pain does not make a child weak. Untreated pain, however, can have long-term consequences for the way your child experiences future pain or medical encounters.
3. We will first use maximum doses of non-opioid medications, NSAIDs are equivalent to morphine with fewer side effects.
4. Provide education that the worst pain after a musculoskeletal injury occurs in the first 3 days, use adjuncts (e.g., immobilization and ice).
5. There is no clinical evidence that using NSAIDs affects bone healing in children.

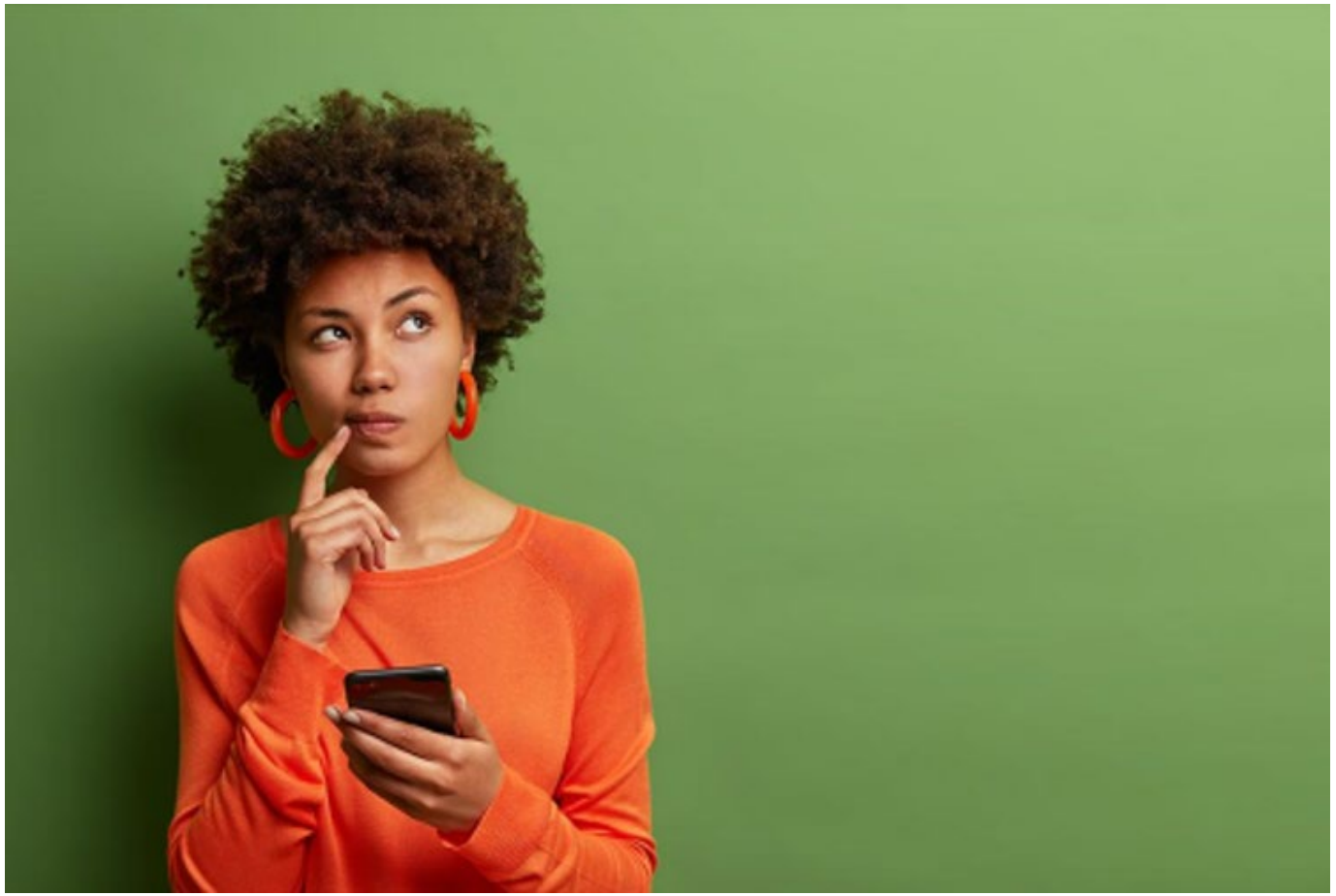
For a full list of references and development team members, please see the following page.

Please visit our websites at **trekk.ca** or **emscimprovement.center** for more information. ©May 2022, TREKK; EIIC; For Revision 2024. Version 3.0

Quality Measures

Intervention Bundle	Phase of Care	Quality Measures
Recognition and Assessment of a Sick or Injured Child	Assessment	Percentage of pediatric patients with pain assessed

Q&A Session



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Complete Registration for the Data Platform

- Share demographics
- Provide data platform users
- *Include name, email, phone # of POA signatory*
- *Upload signed POA to data portal registration*

Register for the Next Fireside Chat

- July 25, 2023
- 1-2 pm CT
- Topic: Answering your NPRQI Questions

National PRQI
Pediatric Readiness Quality Initiative
Measure • Reflect • Improve

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Data Platform Overview

July 25, 2023

Assessment

August 1, 2023

Patient Safety

August 8, 2023

Data Literacy in a QI Project

September 5, 2023

Join us for Future Fireside Chats

Interactive presentations by multidisciplinary experts
on bundle topics June through September

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Nursing - CE contact hours

Fireside Chat #2 July 11, 2023

1. Enter your first and last name in the **chat** if you have not done so already
2. Scan the QR code/use link to access session evaluation
3. Submit completed evaluation by 1700 (Pacific) on **7/13/2023** to be eligible for CE hours

https://bit.ly/PRQCFireside2

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

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

Social Work Professionals – CEU's
Fireside Chat July 11, 2023

1. Enter your first and last name in the **chat** if you have not done so already
2. Scan the QR code/use link to access session evaluation

https://utexas.qualtrics.com/jfe/form/SV_8ICwBlpENWWtt4y

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Please Complete Session Evaluation

Thank you!

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