BOTTOM LINE RECOMMENDATIONS:

Pain Treatment

The majority of healthcare visits are related to pain, and untreated pain has consequences for children[1]. **Short-term consequences:** pain and distress for the child, parents and healthcare providers, inadequate patient assessment, and slower healing. **Long-term consequences:** increased sensitivity to pain, healthcare avoidance, social hyper-vigilance and higher levels of anxiety before a medical visit. Expeditious and effective pain care improves patient and caregiver satisfaction, decreases the 'wind-up' phenomenon of untreated pain, improves ED flow, and decreases likelihood of litigation. Physical, psychological, and pharmacologic interventions can be employed to minimize pain for children[2].

WHY ASSESS CHILDREN'S PAIN

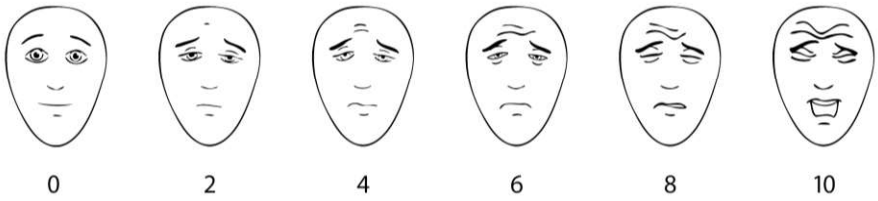
» Assessing a child's pain helps direct healthcare professionals to appropriate therapy.
» Pain is a complex, biopsychosocial experience, and a single measure of pain severity cannot accurately represent it. Repeat measures and consideration of each child's unique situation, state of distress and life experience can help guide treatment.

HOW TO MEASURE CHILDREN'S PAIN

» Ideally, children should be asked to rate their pain. If unable/unwilling (e.g. cognitive disability, non-verbal), then the parent/caregiver should be asked.

RECOMMENDED SCALES

1. **FLACC Score** – For use < 4 years of age or non-verbal
2. **Faces Pain Scale (Revised)** – For use 4-12 years of age



*Hicks CL, von Baeyer CL, Spafford P, van Korlaar I, Goodenough B. Faces Pain Scale-Revised: Toward a Common Metric in Pediatric Pain Measurement. PAIN 2001; 93:173-183. With the instructions and translations as found on the website: www.iasp-pain.org/FPSR. This Faces Pain Scale-Revised has been reproduced with permission of the International Association for the Study of Pain® (IASP®). The figure **may NOT** be reproduced for any other purpose without permission from IASP.*

3. **Verbal Numerical Rating Score** – (e.g. – "On a scale of 0 to 10, where 0 is no pain and 10 is the worst pain you can imagine, tell me what number your pain is"). For use > 6 years of age.

GENERAL SUGGESTIONS TO MINIMIZE PAIN

PHYSICAL

» **Ask the parents/caregivers** to stay in the room and provide them with direction to calmly support their child with distraction, gentle touch (if desired by the child), and suggestions to relax and breathe.
» If available and the child is not NPO, **breastfeeding** can be very soothing.
» **Non-nutritive sucking** (i.e. pacifier) can be used if breastfeeding is not available to the child, or if the child is NPO.
» Young infants can have **facilitated tucking or swaddling** with blankets to calm them while awaiting assessment/results.
» If available, parents may provide infants with **kangaroo care** with skin-to-skin contact while awaiting assessment/results.
» Parents may **hold** the child in a number of positions that do not interfere with examinations or procedures (e.g. upright and in direct physical contact with themselves), and **rock** the child after the exam.

PSYCHOLOGICAL

» **Simple distraction techniques** such as bubbles, books, I-spy books/cards, portable distraction kits, and conversation.
» **Technology-based distraction** such as tablet device, DVD player, smart phone games, music, videos, virtual reality etc. Can utilize devices brought in by the family, or kept within your emergency department.

PHARMACOLOGICAL TREATMENT OF ACUTE PAIN

» To be used in conjunction with physical and psychological interventions as above.
» Reassess response to pharmacotherapy regularly during the ED visit. Re-dosing, as required, is recommended.
» There is no evidence that provision of early analgesia negatively affects diagnostic accuracy.

PHARMACOLOGICAL TREATMENT OF ACUTE PAIN (CONTINUED)

» The recommended dosing for medications is for children **1 year and older**. Please consult your hospital formulary or consult with a specialist for infants.

MILD PAIN

» 1-3 out of 10 on a pain scale and minimal discomfort
» **Ibuprofen PO –** 10 mg/kg (max 600 mg per dose, q6-8h, prn) **OR**
» **Acetaminophen PO –** 15 mg/kg (maximum 1000 mg per dose, q4-6h, prn)

MODERATE PAIN

» 4-6 out of 10 on a pain scale and moderate discomfort
» **Ibuprofen PO –** 10 mg/kg (max 600 mg) **AND Acetaminophen PO –** 15 mg/kg (maximum 1000 mg)
» Consider adding oral opioid:
  » **Oxycodone PO –** 0.1-0.2 mg/kg (maximum 10 mg per dose, q4-6h, prn)
» Titrate all opioids to clinical effect/side effects.
» Recommend/prescribe stool softeners (e.g. Lactulose®, PEG 3350, RestoraLax®) when opioids are used.
» As per Health Canada recommendations, codeine and hydrocodone should be avoided in children, especially <12 years of age due to limited efficacy and safety concerns.
» Consider lower dose IV/IN medications if child is not responding to PO (see **SEVERE PAIN**).

SEVERE PAIN

» 7-10 out of 10 on a pain scale and visibly distressed with pain
» **Intranasal (IN) Fentanyl –** 1-2 micrograms/kg (maximum 100 micrograms per dose). Deliver with atomizer device; ½ dose per nostril; maximum 0.75 ml/nostril; best to use high concentration fentanyl (50 micrograms/mL); provides expeditious pain management while establishing IV; **OR**
» Intravenous (IV) opioids:
  » **Morphine IV –** 0.05-0.1 mg/kg (maximum 10 mg) **OR**
  » **Fentanyl IV –** 1-2 micrograms/kg (maximum 50 micrograms per dose) **OR**
  » **HYDROmorphone IV –** 0.01-0.02 mg/kg (maximum 1 mg per dose)
» Consider the addition of IV or PO NSAIDS for their opioid sparing effect, if the pain is expected to require multiple doses of analgesia: **Ketorolac IV** 0.1 mg/kg (maximum 30 mg) **OR Ibuprofen PO** (see **MILD PAIN** for dosing).

COUNSELLING PARENTS ABOUT ANALGESIC USE

» Some parents may be hesitant to treat their child's pain, due to fear of side effects, adverse events, or misperceptions. The following are facts/statements that can be reinforced to help them.

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. There is no clinical evidence that using NSAIDS affects bone healing in children.
4. We will first use maximum doses of non-opioid medications, since they have fewer side effects than opioids. We will only use opioids for persistent or severe pain.
5. The worst pain after a musculoskeletal injury occurs in the first 3 days. Opioids will be provided ***just*** for the first three days when we expect pain to be the worst (e.g. 5-10 doses only).
6. Opioids should be stored safely out of reach and only given to your child as needed. Unused quantities of any medication should be returned to the pharmacy for safe disposal.

This summary is based on:

1) Hartling L, et al. How Safe Are Common Analgesics for the Treatment of Acute Pain for Children? A Systematic Review. *Pain Res Manag*. 2016:5346819.
2) Drendel AL, Ali S. Ten Practical Ways to Make Your ED Practice Less Painful and More Child-Friendly. Clinical Pediatric Emergency Medicine. Volume 18, Issue 4, December 2017, 242-255.
3) Drendel AL, Kelly BT & Ali S. Pain assessment for children: overcoming challenges and optimizing care. *Pediatr Emerg Care*. 2011;27(8):773-81.
4) Fein JA, Zempsky WT, Cravero JP; Committee on Pediatric Emergency Medicine and Section on Anesthesiology and Pain Medicine; American Academy of Pediatrics. Relief of **pain** and anxiety in pediatric patients in **emergency** medical systems. *Pediatrics*. 2012;130(5):e1391-405.