

# IAEM Clinical Guideline

# Pain management for Paediatric Emergency Care

Version 1

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#### **DISCLAIMER**

IAEM recognises that patients, their situations, Emergency Departments and staff all vary. These guidelines cannot cover all clinical scenarios. The ultimate responsibility for the interpretation and application of these guidelines, the use of current information and a patient's overall care and wellbeing resides with the treating clinician.

Pain Management for Paediatric Emergency Care

**INTRODUCTION** 

Analgesics with psychological/physical therapies/techniques are the mainstay of pain control.

The principals are to treat the pain quickly and effectively. Two pain scenarios commonly arise

in acute care:

1. The child presenting with acute uncontrolled pain (e.g. Fracture, Appendicitis, etc.).

2. The child to undergo a painful controlled procedure (e.g. IV line access).

It is critical to emphasise that it may not be possible to achieve a completely "pain-free"

condition. A realistic target acutely is that the child should be comfortable (or have self-control)

with the pain they are experiencing.

**PARAMETERS** 

Target Patient Population: This guideline is designed to be used for paediatric patients in

acute care setting.

Target user: This guidance has been developed for medical staff, nursing staff, pharmacists

and other members of the multidisciplinary team, to guide them through achieving effective

pain control. This guidance is designed to augment clinical judgement by provision of a

framework for all members of the clinical team treating children experiencing pain.

AIMS:

The objective of this guidance is to outline appropriate pharmacological and non-

pharmacological techniques in paediatric acute pain management.

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# PAIN ASSESSMENT(S)

The assessment of pain should include history, examination and the presumed diagnosis should be considered<sup>1</sup>. It should be recorded at first interaction with the patient. Pain scores should be recorded on movement and at rest.

Pain is classified as mild, moderate or severe, with treatment administered based on this. Always consider pre-hospital/triage analgesia and pain mimics (Figure 1) when scoring pain.

Best practice states that children presenting with moderate and severe pain should have initial pain management commenced within 20 minutes of arrival to the ED<sup>1</sup>.



H=Hunger and 'Het up'
A=Anxiety and Angry
L= Lonely
T=Tired

S= Stress and Separation

Figure 1: Distress in Children and pain mimickers

#### PAIN ASSESSMENT TOOLS

Consider the age, developmental stage, co-morbidities and previous painful experiences when assessing pain in children. Self-reporting tools are reliable in older, verbal children<sup>2-6</sup>, e.g. Wong Baker (> 3 years old), Visual Analogue Scale (VAS) (>7 years old) or Manchester Pain Ladder.

Pain rating by parent/nurse/carers can be used for younger children e.g. Modified Face Legs Activity Cry Consolability scale<sup>2,7</sup> (< 3 years old or non-verbal children/adolescents).

#### **REASSESSMENT OF PAIN**

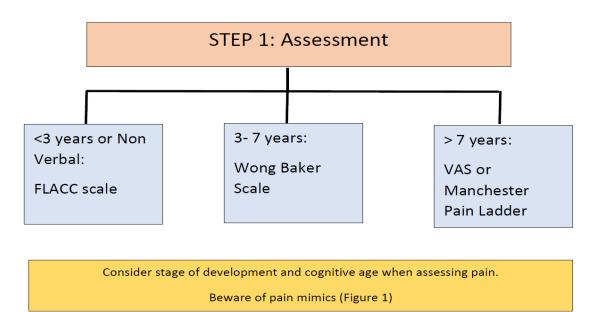
Following initial treatment pain should be reassessed and recorded. Best practice states effectiveness of analgesia should be re-evaluated within 60 minutes<sup>1</sup>.

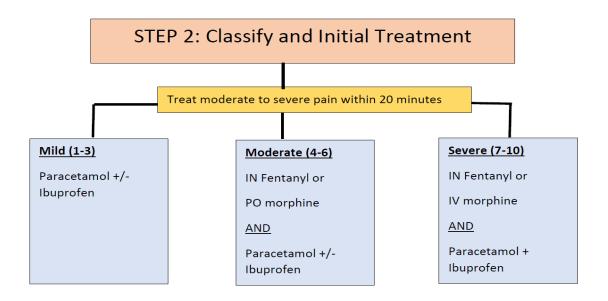
If the pain is out of proportion to the presumed diagnosis, consider alternative causes in Table 1.

Paediatric Pain Out of Proportion				
Consider pain mimickers (Figure 2)				
Unseen Injury*	Unseen infection*	Unseen Oncology*		
Fracture (s) (limb, ribs, non-	Sepsis	Leukaemia		
accidental injury)				
Corneal abrasion	Toxic Shock Syndrome	Sarcoma		
Hair tourniquet	Necrotising Fasciitis	Neuroblastoma		
Compartment syndrome	Appendicitis			
Intussusception/Volvulus				
Other				
		eletal pain in a limb that is out of		
proportion to history & physica	al findings, accompanied autono	mic dysfunction (e.g. cold limb)		
Functional Pain: Pain of no obvious organic origin is a diagnosis of exclusion				
Fabrication is a diagnosis of exclusion by clinical findings and/or investigations				

Table 1: Example differential diagnoses of pain that is maybe out of proportion (\*this list is not exhaustive)

Consider following the pain management pathway (Figure 2) as shown below to guide your initial assessment of pain.





Pain to be reassessed within 60 minutes,

If pain is out of proportion to diagnosis, consider alternative diagnosis (Table 1)

Consider use of condition specific analgesia (Table 3)

#### **PAIN INTERVENTIONS**

Interventions in pain management is through the combination of the following:

- Non-pharmacological methods (Psychological/Physical therapies/techniques)
- Pharmacological methods

## **Non-Pharmacological Interventions**

These can be used independently or in combination with pharmacological methods. Parents should remain with their child when in pain or having a painful procedure, as presence of the care giver is shown to reduce pain/distress<sup>8-11</sup>.

Age Groups	Infants: Strong evidence exists for the use of comfort measures such as	
	swaddling, non-nutritive sucking and breast-feeding for reduction of pain scores	
	in the infant population <sup>12-17</sup> .	
	Older Children: Distraction techniques such as visual (e.g. books, smart	
	devices, virtual reality headsets), play, either with a play therapist or guardian	
	(blowing bubbles, conversation/interaction with caregiver) <sup>18-22</sup> .	
	Physical techniques can include Vibration devices/ Cold spray <sup>23-25</sup> . Application	
	of support devices/cooling techniques - These may not be definitive	
	management methods but can aid in pain reduction in the interim e.g. Backslab,	
	splint and cast, ice pack, 20 minutes of water for burns.	
Language for	Positive: Use language which can be described as distracting (e.g. 'what did	
health care,	you do in school today?'), informative (e.g. 'It might feel like a pinch', 'tell me	
	how it feels') with a positive focus (e.g. 'you are being very brave', 'that was	
	hard; I'm very proud of you', 'you are doing a great job')	

providers and	Negative: Avoid using language that is falsely reassuring (e.g. 'there is nothing
parents	to worry about'), vague ('this won't really hurt') or negative ('this will feel like a
	bee sting', 'the medicine will burn', 'don't cry') <sup>26,27</sup> .
Rewards	Rewards for the child who has undergone a painful procedure should be
	considered. E.g. – stickers and teddy bears.

# **Pharmacological Interventions**

The prescription of oral/ intranasal (IN)/ intravenous (IV)/ subcutaneous (SC) analgesics/ regional/adjuvant drugs dosing is done in line with local formulary, guidelines and policies. For dosage of common analgesia used in the Emergency Department please refer to appendix 1. Separate local hospital guidance may exist for specific disease processes (e.g.: Sickle Cell Disease, Haematology/Oncology) and should be followed where appropriate.

#### Route of administration

The oral, intranasal, topical and intravenous routes are the preferred routes. Intramuscular injections should not be used to manage pain except on discussion with consultant. The subcutaneous route is useful for children receiving palliative care or where IV access is extremely poor<sup>2</sup>.

#### Sustaining Pain Relief

Maintenance analgesia must be prescribed regularly around the clock rather than "PRN" when pain is expected to be persistent. The oral route is preferable. For patient discharged a plan for pain management should be given to the carer.

Please consult local formulary for drug/dosage recommendations beyond this document.

## **SPECIAL CONSIDERATIONS**

<u>Disease Specific Conditions:</u> Certain diseases or injuries have been shown to respond well to certain pharmacological interventions. Table 3, below, is a non-exhaustive 'quick consult' list to help if your initial management has not worked.

Specific	Consider Use Of:
Disease or	
procedural	
Brief minor	SUCROSE 14,18,32-35 :Sucrose administered orally before performing
Procedure in	painful procedures e.g. heel prick blood sampling, eye examination,
small infant	insertion or removal of IV lines, phlebotomy, insertion of gastric tubes,
	has been shown to decrease the duration of crying; facial action
(< 3 months)	associated with pain, heart rate and composite scores in infants less
	than 3 months of age. Sucrose is more effective if given with a soother
	as this promotes non-nutritive sucking which contributes to calming.
Acute otitis	Lidocaine Drops 1-2% w/v (topical): Instil into the affected ear and have
media	the patient lie with the affected ear up for 5 minutes. Provides short term
	pain relief <sup>1, 28,29</sup> . For ED use only. Do not discharge patient with same.
Pharyngitis	Dexamethasone: This has been shown to be effective in reducing pain
1 Haryrights	associated with pharyngitis when used in conjunction with
	antibiotics <sup>1,31,30-32</sup> .
Corneal	Tetracaine eye drops 0.5% w/v: Instil drops in the affected eye to
Abrasion	achieve analgesic effect <sup>33</sup> .
Femoral fracture	BUPIVACAINE NERVE BLOCK: consult local guidelines and involve
	senior members of staff <sup>34-35</sup> .
Migraine	Sumatriptan as a single dose which can be repeated in 2 hours if
	migraine recurs. Use in conjunction with IV Fluids and anti – emetics.
Laceration	LAT (Lidocaine/Adrenaline/Tetracaine) GEL: Apply 30-40 minutes prior
repair	to laceration repair and cover with occlusive dressing. Not suitable for
	use on areas of distal blood supply – e.g. – fingertips/ear lobes <sup>36</sup> .
IV cannulation/	AMETOP (TETRACAINE) GEL <sup>17,35,37,38</sup> : Apply contents of the tube to
phlebotomy	the area to be anaesthetised, do not rub into the skin. Cover with

	occlusive dressing. Effective after 45 minutes approximately.		
	Contraindicated in infants <1 month corrected gestational age or if		
	history of hypersensitivity.		
	ETHYL CHLORIDE SPRAY (Cryogesic ®): Use on unbroken skin only.		
	Effect will last approximately 30 – 45 seconds <sup>39</sup> .		
Fractures/	FENTANYL INTRANASAL: Initial analgesia in children aged 1 year or		
Dislocations	older in moderate to severe pain		

Table 3 – disease specific conditions that may respond to specialised treatments.

# **COMPANION DOCUMENTS**

Appendix 1: Dosage of common analgesia used in the Emergency Department

References