6.3 Pain assessment in children

Children are able to reliably articulate pain from approximately 5 years of age. However, at this age, localisation of pain is still poor, which explains the frequent reports of abdominal pain, despite the actual source. Localisation of pain becomes reliable only at approximately 7 years of age.

6.3.1 Pain history

Self-reporting is the gold standard of pain assessment and the child should be engaged at a developmentally appropriate level. Where the child is nonverbal, a collateral history from the caregiver is important. Make every effort to get information regarding the type, severity and localisation of pain, as well as any associated symptoms. Enquire about the impact of pain on daily activities, including sleep, school attendance and performance, as well as interaction with peers, play and participation in sport. Explore pain descriptors; allow the child to use their own words in their home language.

6.3.2 Pain behaviours

The expression of pain is influenced by the interplay between bio-psycho-social factors (see Figure 2). In children, previous experiences and fear are important drivers of pain behaviour.

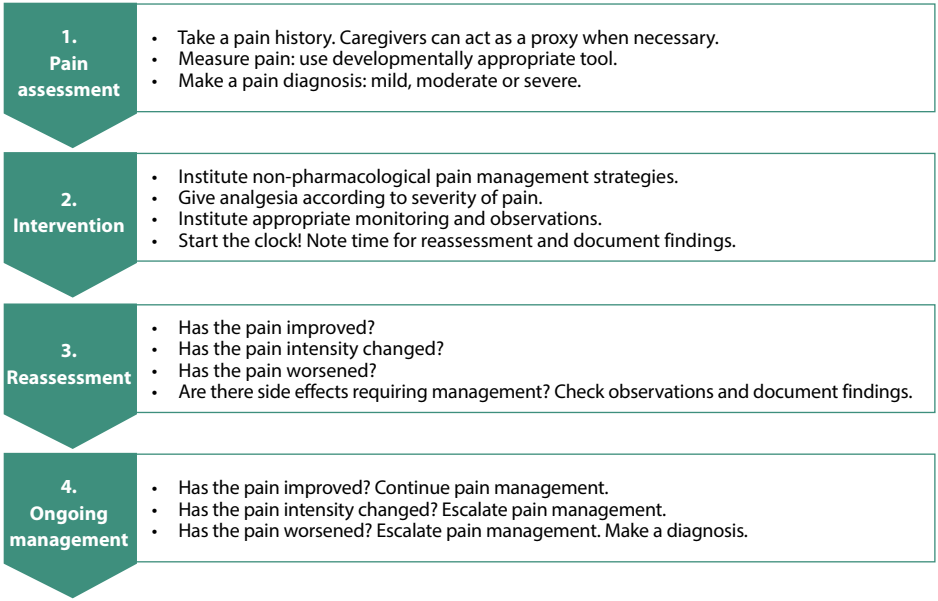


Figure 1: Pain assessment and management in children algorithm

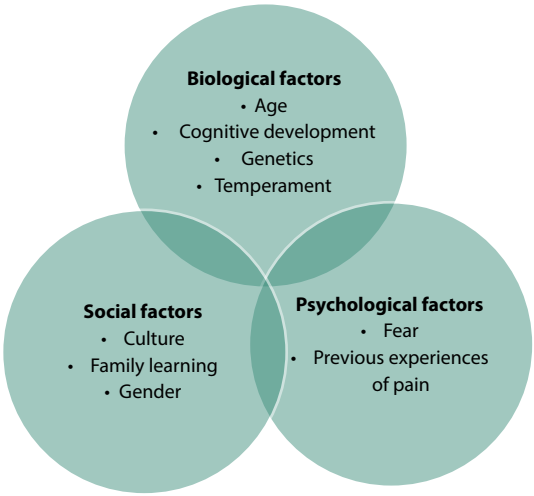


Figure 2: A bio-psycho-social model of pain behaviour

There is no scientific evidence to suggest that gender affects pain, but societal norms and pressures often regulate how boys behave when they are in pain.

6.3.3 Pain assessment tools

The routine use of pain scoring tools is strongly encouraged, as it is associated with better pain management. Three kinds of pain assessment tools are used, namely physiological, behavioural and self-report. If the practitioner cannot rely on self-report, behavioural tools should be used. Physiological variables such as heart rate, blood pressure and respiratory rate (RR) are unreliable indicators of either the presence or the absence of pain. Choose an appropriate pain assessment tool depending on the child's age and cognitive development. This facilitates the quantification of pain so that a pain diagnosis can be made. Pain is diagnosed as mild, moderate or severe.

Neonates: behavioural pain assessment tool

The Neonatal Infant Pain Scale (NIPS) is used in neonates and infants up to 2 months of age. The patient is observed for 1 minute and each is then parameter scored.

Table I: Neonatal Infant Pain Scale

	0	1	2
Facial expression	Relaxed	Contracted	
Cry	Absent	Mumbling	Vigorous
Breathing	Relaxed	Different than basal	
Arms	Relaxed	Flexed/stretched	
Legs	Relaxed	Flexed/stretched	
Alertness	Sleeping/calm	Uncomfortable	

Two months to 18 years old: behavioural pain assessment tool

The revised FLACC tool can be used in children aged 2 months to 18 years, and includes descriptors for cognitively impaired children. It allows for the diagnosis of pain with a sensitivity of 87% and specificity of 80%. The clinician assigns a score to each characteristic and tallies a score out of 10. The final score is used to diagnose mild, moderate or severe pain, which must then be treated accordingly.

Table II: Revised FLACC tool

	0	1	2
Face	No particular expression/smile	Occasional grimace/frown Withdrawn or disinterested Appears sad/worried	Constant grimace/frown, quivering chin, clenched jaw Looks distressed, expression of fright/panic
Legs	Normal position or relaxed	Uneasy, restless, tense Occasional tremors	Kicking or legs drawn up Spasticity, constant tremors, jerking

Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense, mildly agitated Shallow, splinting respirations, intermittent sighs	Arched, rigid, jerking Severe agitation Holding breath, gasping, sharp intake of breath Severe splinting
Crying	No cry (awake/asleep)	Moans or whimpers, occasional complaint, verbal outburst/ grunt	Crying steadily, screams, sobs Frequent complaints/ outbursts, constant grunting
Consolability	Content, relaxed	Reassured by occasional touching, 'talking to', hugging Distractible	Difficult to console/comfort Pushing away caregiver or comfort measures

From 5–7 years old: self-reporting pain assessment tools

The following are self-reporting tools.

For the FACES pain scale (Figure 3), the child indicates which facial expression correlates best with their level of pain. Younger children sometimes find this tool confusing and tend to choose FACES that are at the extremes of the spectrum.

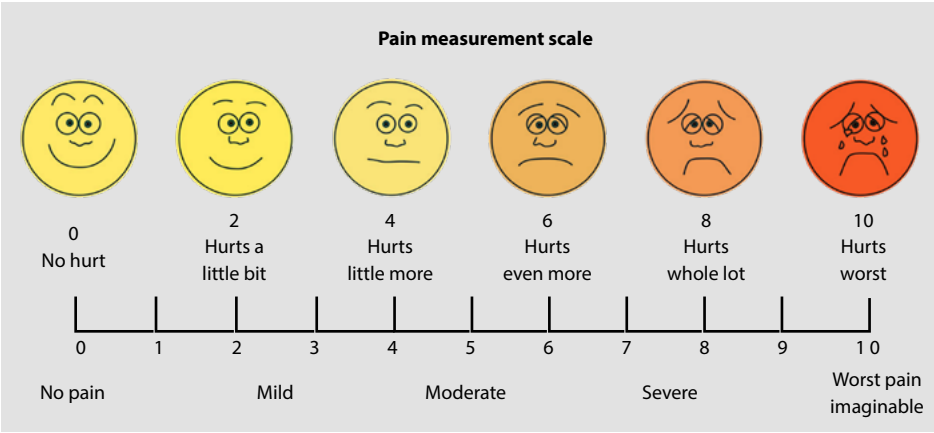


Figure 3: FACES pain scale

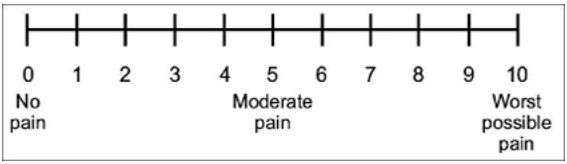


Figure 4: Numeric rating scale

Older children are able to use the NRS (Figure 4) which assigns a number to their level of pain. Note that, even though younger children (younger than 7 years) may be able to count to ten, they lack the ability to seriate.

Scores from both the FACES pain scale and the NRS are used to diagnose mild, moderate or severe pain (0 to 10).

For neonates/infants, use the NIPS:

- 0–2 points = no pain
- 3–4 points = moderate pain
- > 4 points = severe pain

For older children, use R-FLACC and NRS:

- 0 = no pain
- 1–3 = mild pain
- 4–7 = moderate pain
- 8–10 = severe pain

Once the severity of pain has been diagnosed, an appropriate level of pain management should be initiated.