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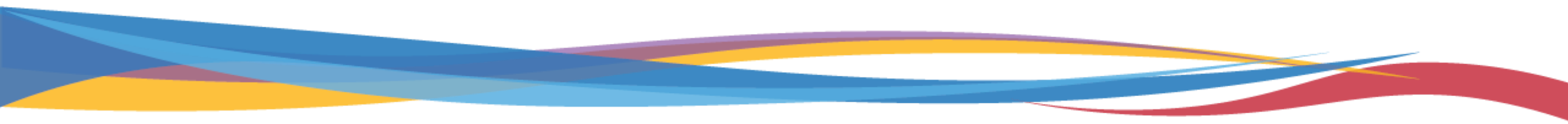
Pediatric Pain Assessment

Faculty/Presenter Disclosure

- ▶ **Faculty:** Naiyi Sun
- ▶ **Relationships with commercial interests:**
 - ▶ **Grants/Research Support:** None
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 - ▶ **Other:** None



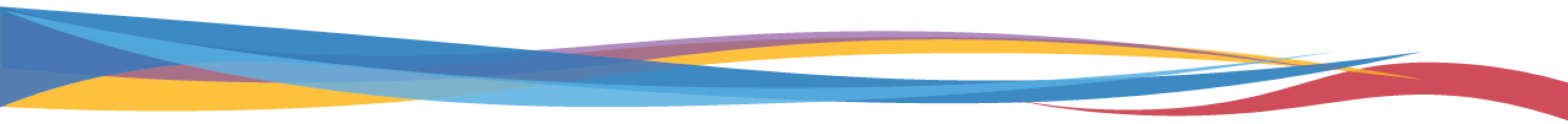
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Learning Objectives

By the end of this session, participants will be able to:

- Describe the context of chronic pain in children
- Describe the prevalence of chronic pain in children, and common pediatric pain presentations/diagnoses
- Describe the importance of assessing pain in children using a biopsychosocial model



Definitions

Pain

- An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage.
 - Pain is always a personal experience that is influenced to varying degrees by biological, psychological, and social factors.
 - Pain and nociception are different phenomena. Pain cannot be inferred solely from activity in sensory neurons.
 - Through their life experiences, individuals learn the concept of pain.
 - A person's report of an experience as pain should be respected.
 - Although pain usually serve an adaptive role, it may have adverse effects on function and social and psychological well being.
 - Verbal description is only one of several behaviors to express pain; inability to communicate does not negate the possibility that a human or a nonhuman animal experience pain.

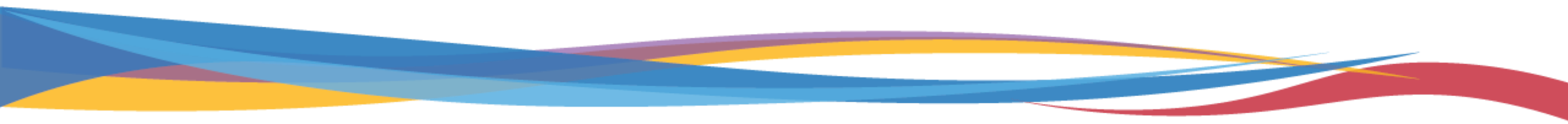
Acute vs Chronic Pain

Acute Pain

- the normal, **predicted, physiological, and time-limited** response to an adverse chemical, thermal, or mechanical stimulus associated with surgery, trauma, or acute illness

Chronic Pain

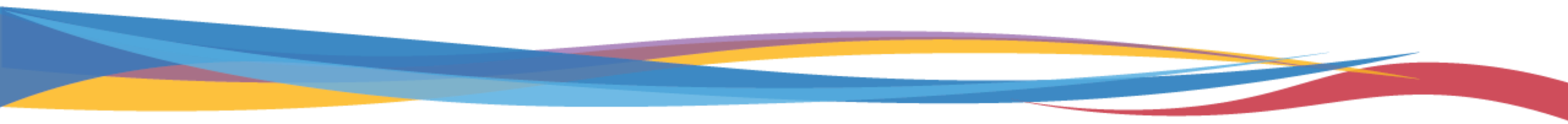
- Pain that persists **beyond expected** healing time (>3 months), or **recurrent** pain that occurs at least three times throughout **three month** period



Bar Graph

How common is chronic pain in children in Canada?

1. 1 in 100
2. 1 in 10
3. 1 in 5
4. 1 in 2



PE – Word Cloud

Why is pain undertreated in children (write a **word or 2** that best describes your idea)

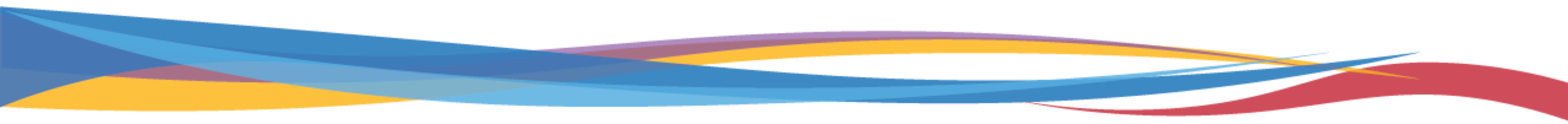


Barriers to Pediatric Pain Management:

Myth

- Babies do not feel pain
- Young children do not remember pain.
- Children are less sensitive to pain than adults.
- Children are unable to tell you when they hurt

Fact

- The CNS of a 24 wk old fetus can experience nociception.
 - Babies as young as six months can show a strong pain response to subsequent pain situation.
 - Younger children experience higher levels of pain than older children and adults.
 - Using age-appropriate measures, pain assessment is possible.
- 

Why is pain undertreated in children ?

- Inadequate pain education
- Invisible and subjective
 - Lack of 'diagnostic test'
 - Stigma; disbelieved
- Myths & misconceptions?
 - We all have pain (so suck it up...)
 - People with chronic pain
 - smile, look normal - so pain can't be that bad.
 - are 'just depressed', or lazy, or like to complain/get attention
 - If you take painkillers you will get addicted or it



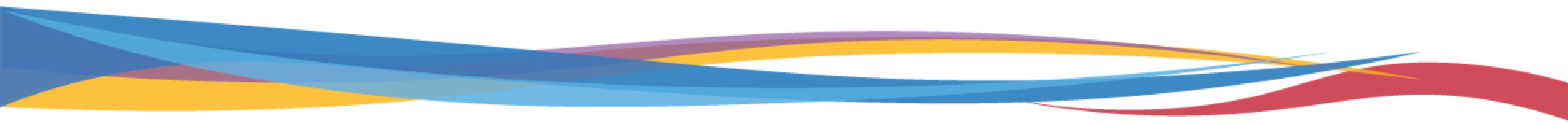
Common primary chronic pain diagnoses in Children?

Pain Sites	Prevalence (Range)	Age differences	Sex Differences
Headache	8-82.9%	Older>younger	Girls>boys
Abdominal pain	3.8-53.4%	Younger> older	Girls>boys
Back Pain	13.5-24%	Older>younger	Girls>boys
Musculoskeletal/limb pain	3.9-40%	Older>younger	Girls>boys
Multiple pains	3.6-48.8%	Unclear	Girls>boys
Other/general pain	5-88%	Unclear – possible age X sex interaction	Girls>boys

(King et al., 2012)

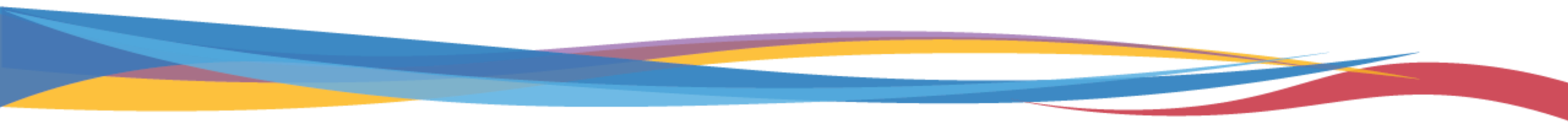
PE – Bar Graph

- How often do kids with chronic pain become adults with chronic pain?
1. $1/10$
 2. $1/2$
 3. $2/3$
 4. $3/4$



Furthermore...

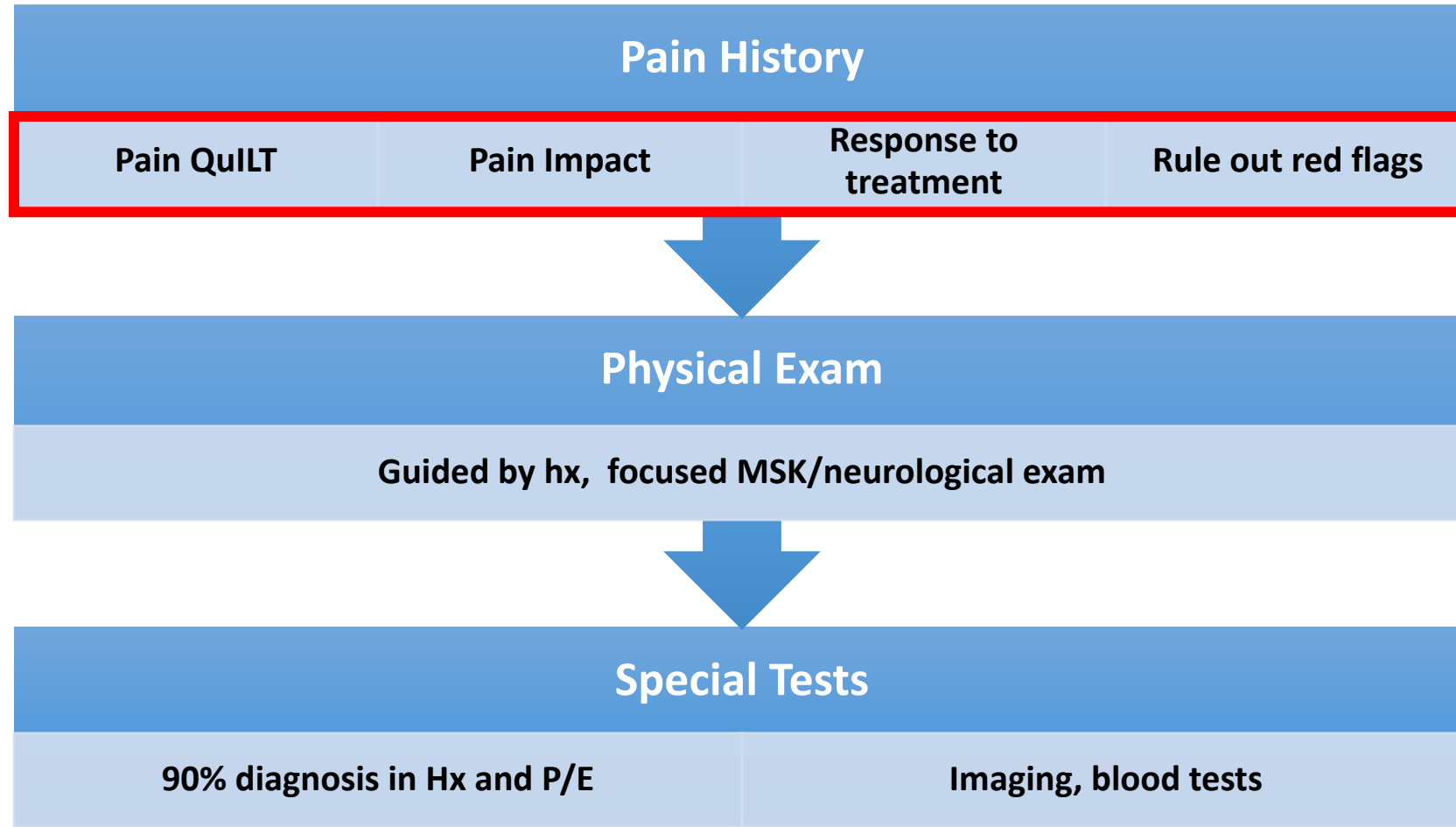
- 2/3 of kids with chronic pain become adults with chronic pain
- Adolescents living with chronic pain are at increased risk of opioid addiction as adults
- Adolescents with chronic pain are associated with lower educational attainment and poor vocational function as adults.
- By treating pain in youth, we can reduce the burdens of pain and addiction in adults



What Does a Child in Pain Look Like?



Pain Assessment





Pain History (current)

- History of the current pain problem (QuILT)
 - **Quality:** pain descriptors
 - Intensity
 - Location / radiation
 - **Timing** – duration, variability
 - Aggravating and relieving factors
- 

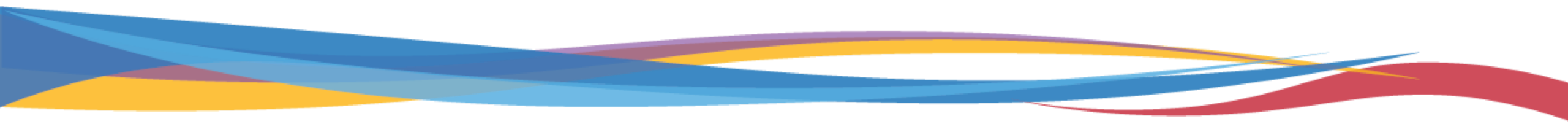
Pain Intensity Measurement:

1. Self Reporting:

- Pain should be self-reported whenever possible since pain is a subjective experience.

2. Observation (Behavioral):

- Self report is not always available depending on the child's age and his/her ability to communicate



Young and Non-Verbal Children:

FLACC PAIN RATING SCALE for children 1 to 3 years of age

The FLACC (Face, Legs, Activity, Cry, Consolability) is a behavioral pain assessment scale for use for non-verbal or pre-verbal patients unable to self-report their level of pain. Rate your child in each of the five measurement categories, add together, and document total pain score (0 – 10).

	0	1	2
Face	No expression or smile	Occasional grimace or frown, withdrawn, disinterested	Frequent to constant frown, clenched jaw, quivering chin
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking, or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arches, rigid, or jerking
Cry	No cry (awake or asleep)	Moans or whimpers, occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging, or "talking to"; Can be distracted	Difficult to console or comfort

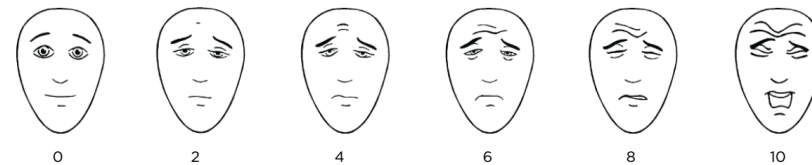
Younger Children:

Wong-Baker FACES® Pain Rating Scale



Faces PAIN SCALE - REVISED (FPS-R) for children over age 3

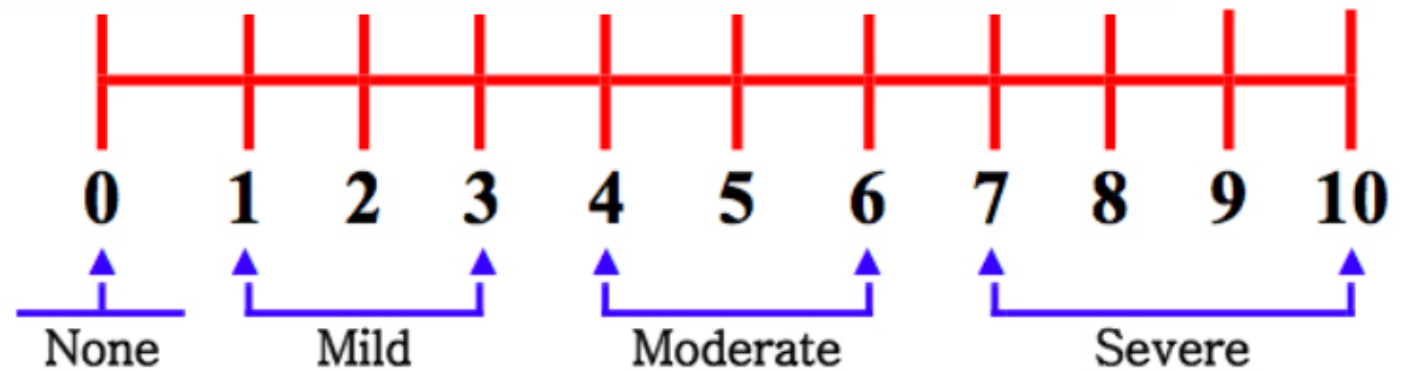
Point to the face that shows how much you hurt.



These faces show how much something can hurt. The left-most face shows no pain. The faces show more and more pain up to the right-most face - it shows very much pain.

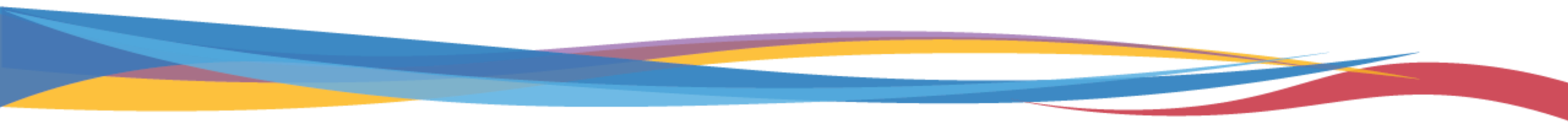
Older Children > 7:

Numerical Rating
Scale (NRS)



Special Considerations for Children with Cognitive Impairments

- Complexity of pain assessment in children who cannot verbalize their pain.
- rFLACC can be individualized for each child
- Incorporate parent knowledge of the child
- Common pain behaviors in severe neurological impairment (SNI):
 - Vocalizations, facial expressions, consolability, increased tone, movement.
- Atypical behaviors:
 - Blunted facial expression, laughter, breath holding, self injury.



Pain Descriptors

Nociceptive Pain Descriptors	Neuropathic Pain Descriptors
Aching	Burning
Cramping	Tingling
Throbbing	Shooting
Pressure	Electrical shock like
Sore	Freezing
Stiffness	Lancinating
Spasm	Numbness
Pulling	

Ask About Red Flags:

Abdominal Pain	Headaches	MSK Pain
• GI blood loss • Persistent Vomiting • RUQ or RLQ pain • Involuntary weight loss • Pain that wakes child from sleep • Difficulty swallowing • Severe diarrhea	• Focal neurologic signs • Persistent vomiting • Age < 3 years • Unexplained fever • Morning headaches • Headaches that awaken the child from sleep	• Joint redness, edema. • Pain/stiffness in the morning • Pain at rest, relieved by activity • Bony tenderness • Weight loss

Pain Classifications

By Temporal profile

- Acute vs **Chronic** (persistent)

By Mechanism

- Nociceptive, nociplastic, **neuropathic**.

By Cause

- Diseases - sickle cell, cancer, IBD, arthritis
- Tissue damage – trauma, surgery, procedures
- Primary pain – headache, fibromyalgia, functional abdominal pain.

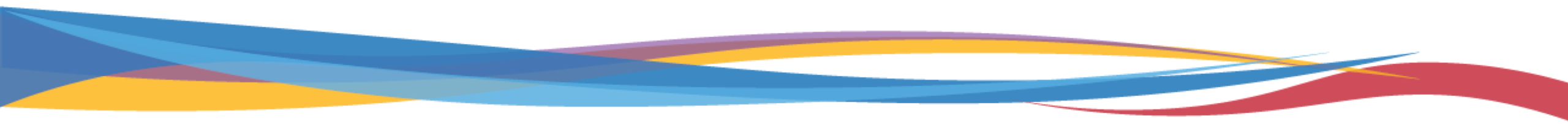


Pain Interference

- Sleep time and quality
- Physical Functioning
 - Decreased activity levels
 - Impact on pursuit of life goals
- School Functioning
 - Absenteeism
 - Stress and anxiety related to missed academic work
 - Bullying
 - Isolation from peers
- Emotional functioning
 - Anxiety and depressive symptoms

Influencing Factors

- Beliefs about pain
- Family pain history
- Child's previous pain history
- Co-morbid mental health in child and/or family
- Readiness for change



Common Parental Misconception

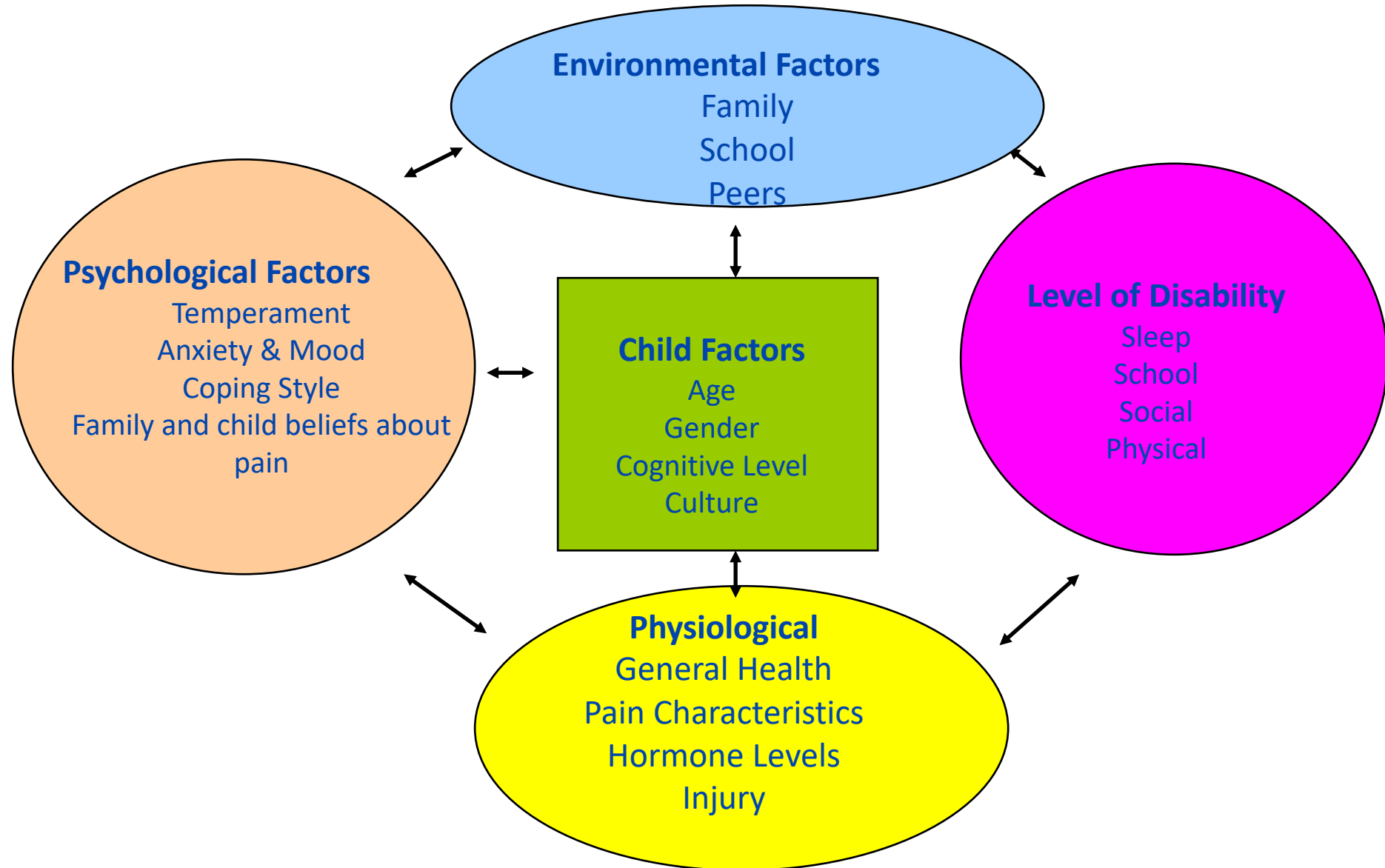
My child needs more rest because he has pain.

The more I do for my child, the faster she will recover.

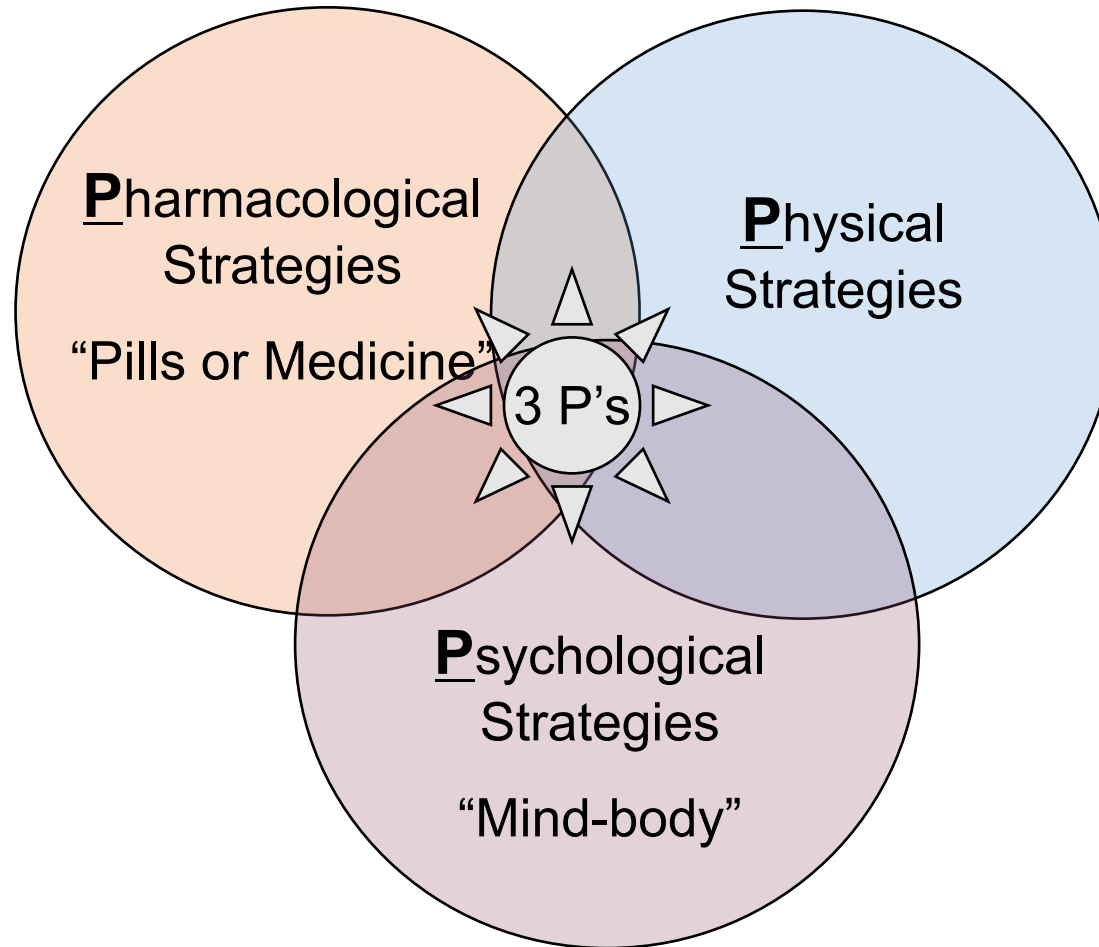
My child should not be expected to resume normal activities until her pain is completely gone.

I should always know how much pain my child is experiencing.

Biopsychosocial Model



Comprehensive Pain Treatments

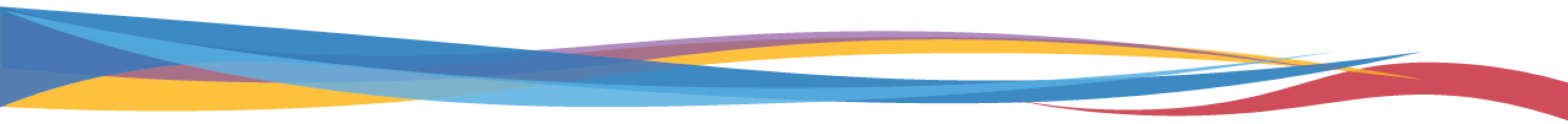


- **Pain education**
- Medical care
- Graded physical program
- Mental health support
- Health behavioral change
- Family Support

**IT'S GOING TO BE A LOT OF
WORK**



BUT WE'RE IN THIS TOGETHER



Important
Message

Key Take-away Messages

- Pain in children is common and undertreated
- Undertreated pain is associated with long-term impact on HRQL
- Thorough pain assessment using biopsychosocial model matters.



Questions: