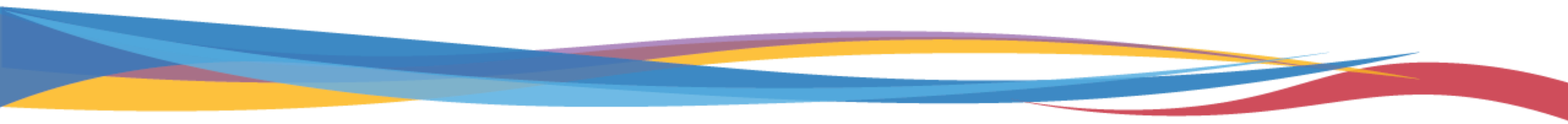


Practical Tips for the Physical Assessment of Children with Persistent Pain

February 3, 2022

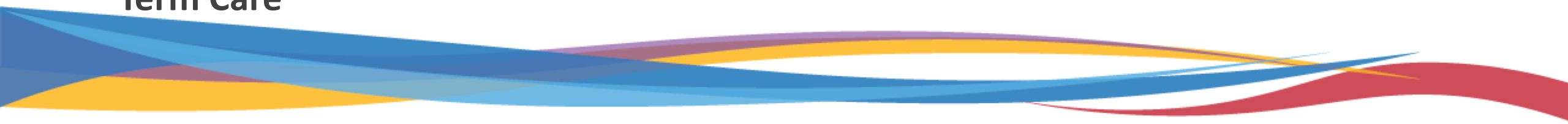
ECHO Education Event



Faculty/Presenter Disclosure

- ▶ **Faculty:** Anne Ayling Campos
 - ▶ **Special thanks to Giulia Mesaroli & Sara Klein!**
- ▶ **Relationships with commercial interests:**
 - ▶ **Grants/Research Support:** none
 - ▶ **Speakers Bureau/Honoraria:** none
 - ▶ **Consulting Fees:** none
 - ▶ **Other:** Employee of The Hospital for Sick Children

This program has received financial support from the Ministry of Health and Long Term Care

A decorative graphic at the bottom of the slide consisting of several overlapping, wavy lines in shades of blue, yellow, and red.

Learning Objectives

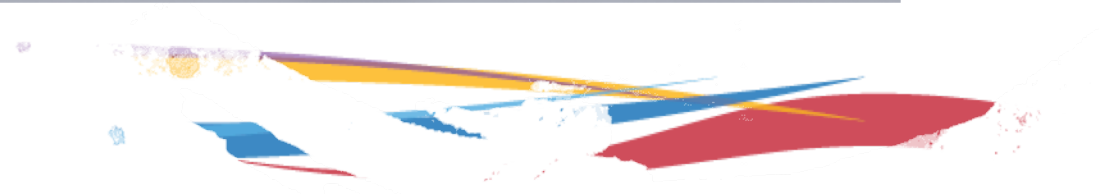
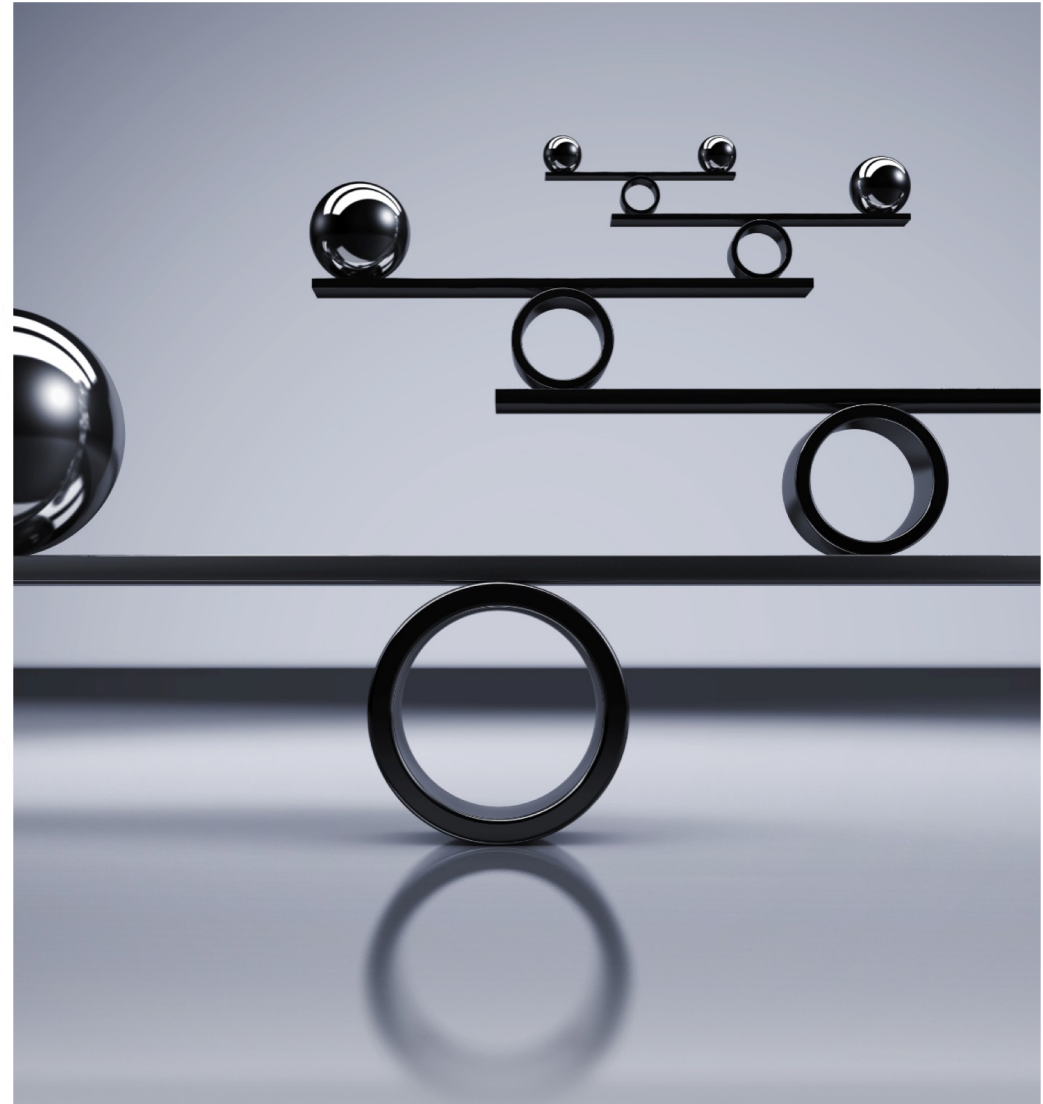
- By the end of this session, participants will be able to:

- ✓ Apply a systematic **approach** for the physical assessment of a child with persistent pain
- ✓ Learn effective **strategies** to optimize assessing a child with persistent pain
- ✓ Be open to **creative problem-solving** strategies to address circumstances that can occur when assessing pain either in-person or virtually



Goals of conducting a physical assessment

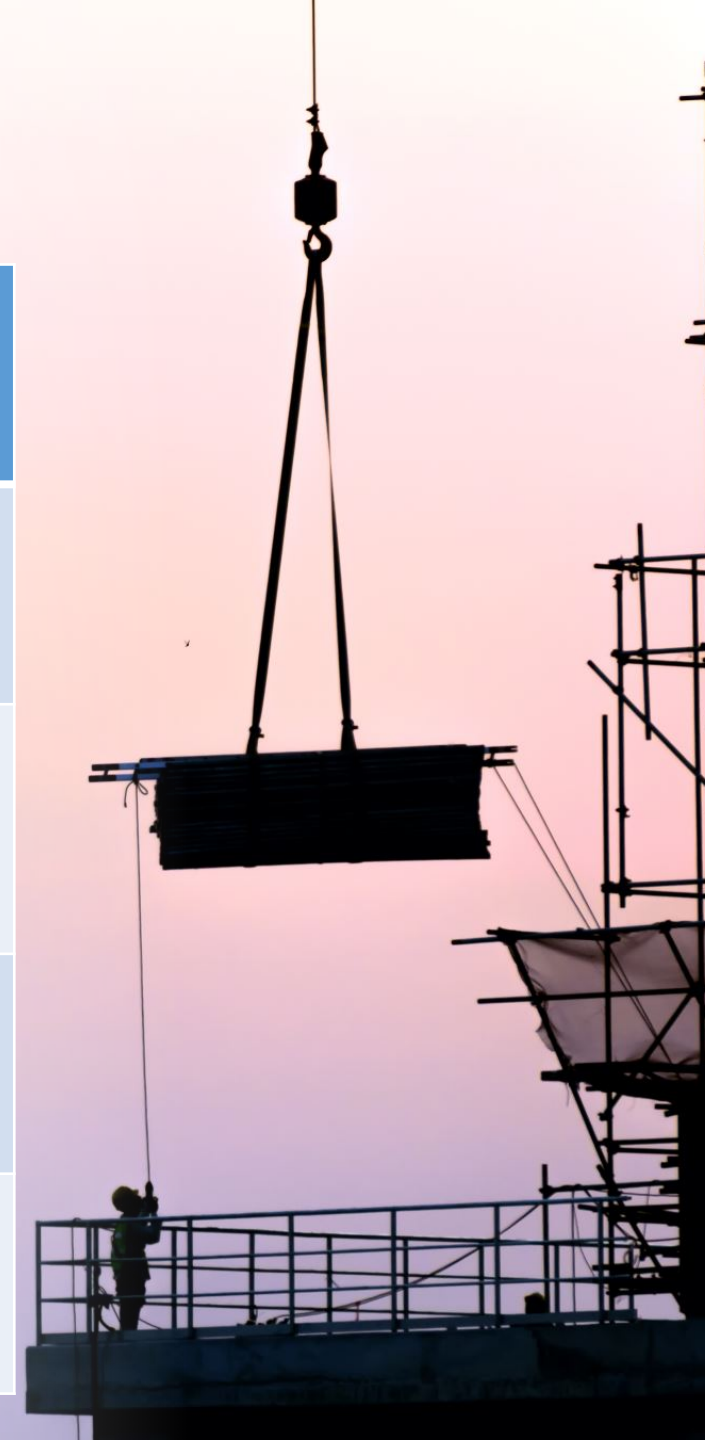
- **Identify** dominant pain mechanism/or pain diagnosis
- **Rule out** red flags or sinister pathology
- **Evaluate** the impact of pain on physical function
- **Build** patient's **trust**



Scaffolding for a pain focused physical assessment

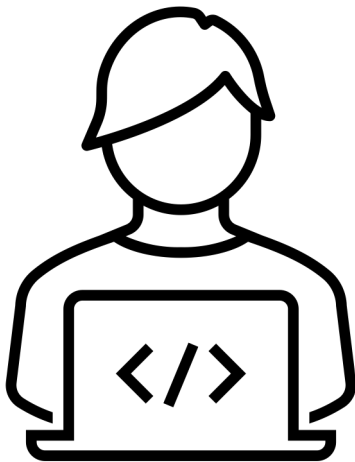
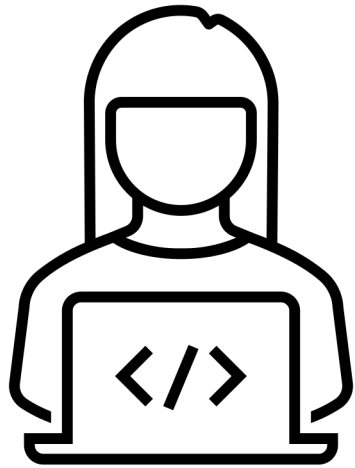
Comprehensive neuromusculoskeletal evaluation

Observation	Begins as soon as the child and parent begin the visit (in person or on screen)	• Overall presentation • Demeanour • Willingness to engage
MSK	Inspection Palpation Range of Motion (AROM)	• Symmetry, posturing • Tenderness, trigger points • Range, limits, ease of movement
Neurologic	Strength, Functional strength Sensation Reflexes	• MMT, functional strength • Sensory functioning • Grade 0-4
Target special tests	The patient's complaints should establish a direction for targeted tests	• Hypermobility • CRPS symptoms





Evolution of Physical Pain Assessment



Telemedicine - virtual clinical care participation

- How much of your current clinical pediatric practice is conducted through a virtual platform?

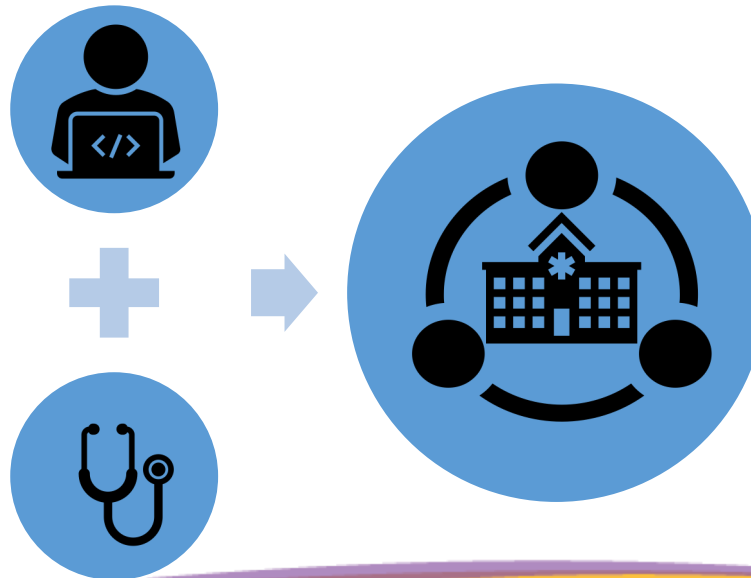
- A) none
- B) 1-25%
- C) 26-50%
- D) 51-75%
- E) 76-100%

The use of telemedicine in chronic pain

Telemedicine for Chronic Pain in the COVID-19 Era and Beyond, Emerick et al. Pain Med 2020 ; 21:1743-1748

- **Benefits**

- Psychosocial and motivational factors
- Convenience and improved access
- Gaps in medical care can be bridged by telemedicine
- Comprehensive evaluations can be performed remotely



- **Drawbacks**

- Potential for diminished quality for patient-provider interaction
- Limited ability to perform a physical exam
- Psychological/social history challenges
- Patient engagement issues

What's wrong with this set-up?



- How many areas can be improved to optimize a pain focused physical exam for right arm and neck pain?
 - A) None
 - B) 1 - 2
 - C) 3 - 5
 - D) 6 - 7

Considerations for optimizing the physical exam

	In-Person examination	Virtual examination
Examiner quality	- take time to engage the child, have good eye contact	- look directly into the camera lens
Appointment scheduling	- allow time for the child to answer questions, they may need more time to digest and reflect, do not rush	-there may be an audio lag , give the child 2 seconds or so after they stop speaking before talking
Clarification	One finger rule to point to the area of pain and delineate any radiating pain	
Room quality	✓ Adequate room for movement components of exam ✓ Good lighting	
Child	✓ Dressed in shorts and T-shirt to support exam observation and participation	

Optimizing the physical assessment atmosphere

- **Engage** the child , maintain rapport developed during interview portion of the visit
- Ask for **permission** to start the physical assessment
- Review **items needed** for the exam
- Clearly communicate, **simple directions**
- Consider **demonstrating** the examination technique
- Remain **calm**, be **flexible** and **improvise** the exam depending on child's level of co-operation
- **Avoid...**
 - medical jargon
 - drawing attention to any abnormal findings



Physical examination: Be watchful

Observation



- ☐ Start of visit note behavior and level of engagement, compare at ease to on command actions/movement
- ☐ Nervous, hesitant, hypervigilant to sensations
- ☐ Pain behaviors, audible noises, restlessness, neglect of a limb

Inspection



- ☐ Skin - rashes, colour, texture, scars, infection, bruising, self-harm indicators
- ☐ Joints – swelling, symmetry, atrophy
- ☐ Protective pain postures, posture abnormalities

An examination rule – be specific



Physical examination: Reproduction of tenderness/pain

Palpation



Examiner, Self or parent palpation: above,
below and over the area of pain ☐

Soft tissue, bone, joint line or other ☐

Note if area being touched is warm or cold
in temperature ☐

Motor



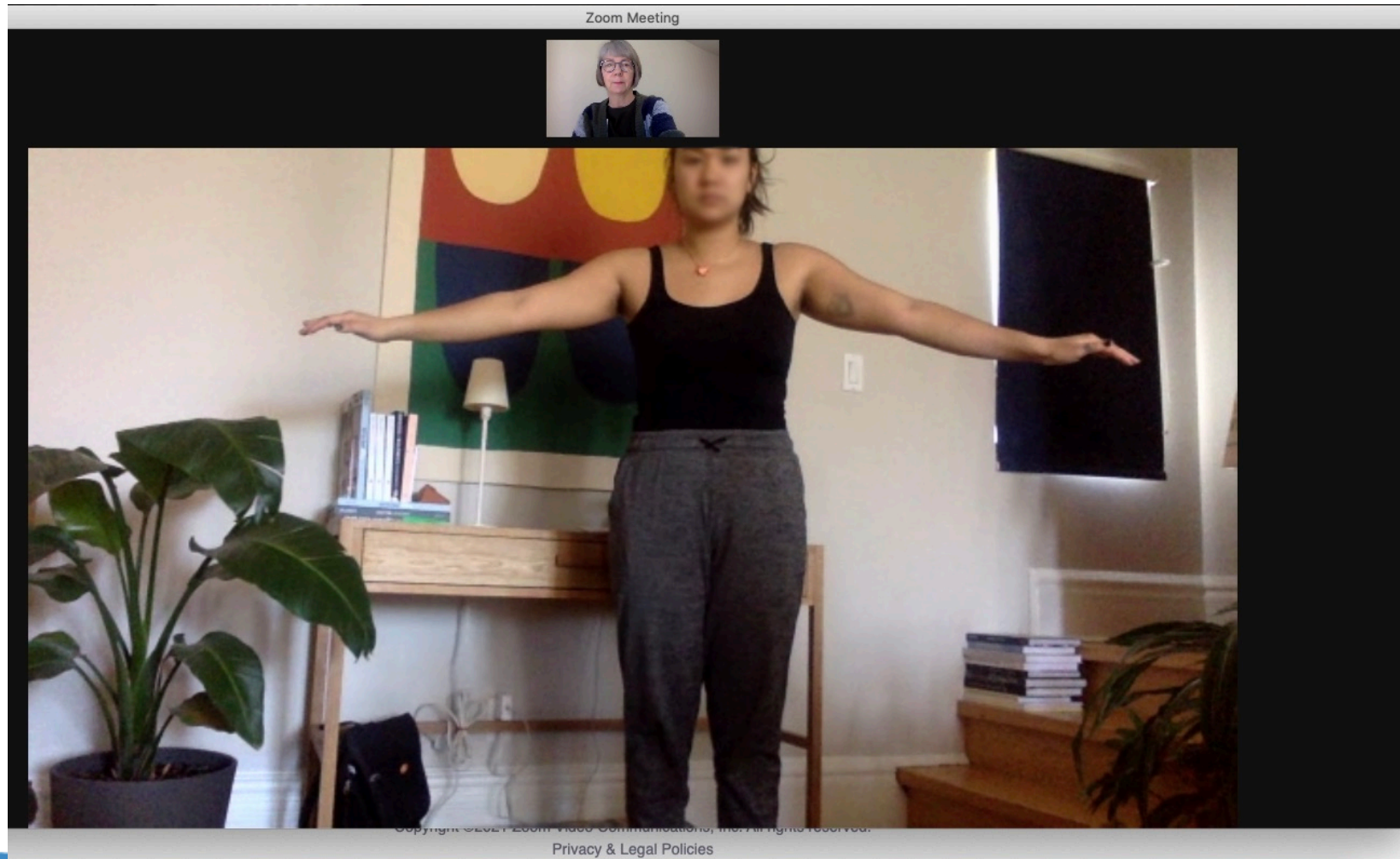
Range of movement (AROM) gross to
specific or through a functional task ☐

Movement quality, hesitation or fear ☐

Describe in terms of degrees or through
descriptors of mild, moderate or severe ☐



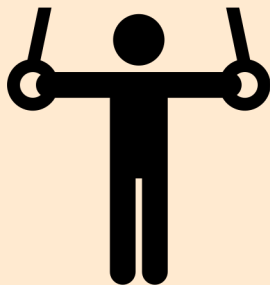
Motor assessment



Physical exam: Neurologic assessment

Strength

- Manual muscle testing (MMT) grade 0-5 – if virtual get a parent involved, compare sides
- Functional strength tests with a reference for myotomes



Sensation

- Sensory functioning using 2 modalities
- Presence of hyperesthesia – allodynia and/or hyperalgesia
- Accomplished through sensation testing using items at hand – breath, tissue or cotton ball, end of pen cap or toothpick
- Pattern – anatomical consistency with tests



Reflexes

- Assists with overall neurologic assessment
- Items for home testing can be a rubber spatula, side of hand or the side of a smart phone



Sensation testing in virtual exam



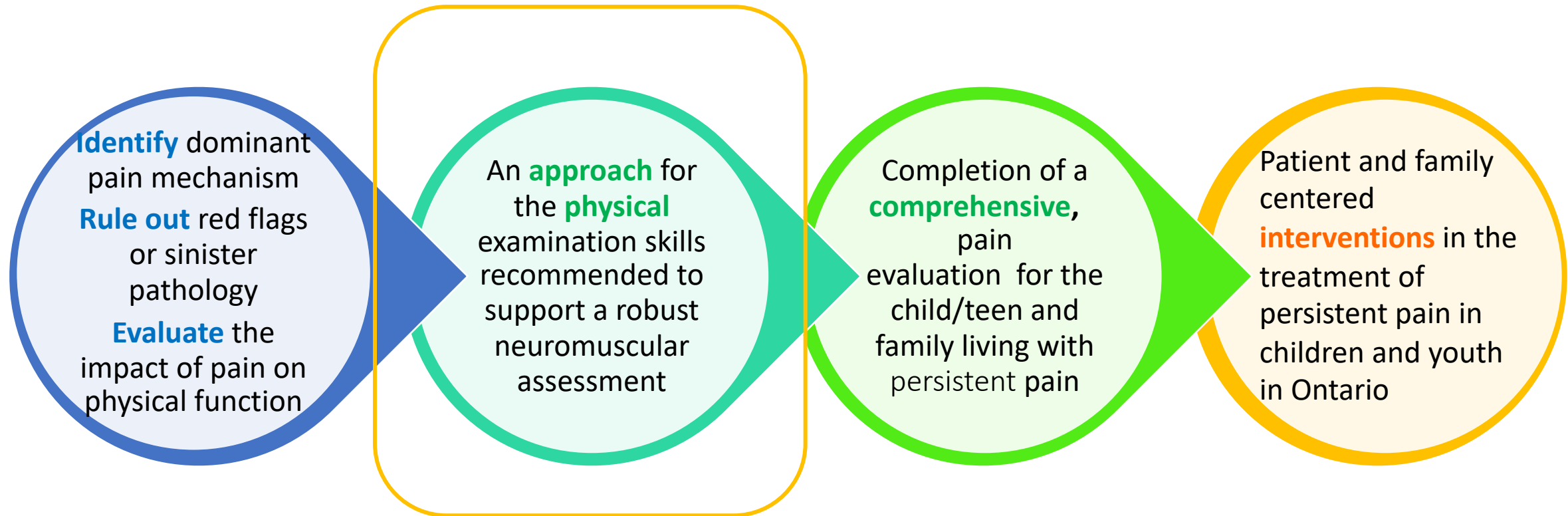


Special tests related to pain history, interview & exam

- Joint hypermobility – Beighton Score
- CRPS-1



Revisiting the exam goals and process



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Q & A on the
physical
examination of
children and
teens living
with persistent
pain

