Non-Pharmacological Pain Management in PPC

David Kavuma
15th August 2017
Learning Outcomes

• Explain the meaning of Non-Pharmacological Interventions.
• Internalize the relevance of Non-Pharmacological Interventions in PPC.
• Articulate the factors influencing pain in children with palliative care needs.
• Describe the common Non-Pharmacological Pain management strategies in Children.
• Demonstrate application of at least three Non-Pharmacological therapies in PPC.
Kisakye is a 4 year old boy who is in stage 4 of HIV disease. He is seated on the hospital bed. He is severely wasted, agitated/distressed, crying, throws away his favorite toys and pulls away from the Clinician who is trying to assess him.

What can be done to calm Kisakye so as to carry out further assessment?
• **Interactive distraction**—showing a lighted toy, singing a song

• **Comfort positioning**—allowing the child to sit in caregiver’s lap

• **Using developmentally-sensitive language**—“You are brave” (offers praise and encouragement) instead of “I am sorry” or “Don’t cry” —these intensifies distress!
• Pain responses vary widely with some children seemingly needing no assistance in managing the distress and others inconsolable despite the best efforts of parents and staff.

• Identifying individual differences predictive of distress is critical in determining how to best select and tailor pain management efforts (Martin, 2012)
What influences Pain in Children?

• **Sex:** A recent literature review suggests that women are generally more sensitive to pain and at greater risk for pain disorders (Fillingim, King, Ribeiro-Sadilva, Rahim-Williams, & Riley, 2009 as cited by Martin, 2012).

• **Age:** Younger children report and exhibit greater anxiety and pain than older children (Kleiber et al., 2007 as cited by Martin, 2012).

• **Timing:** Research suggest that equipping children with accurate expectations and coping skills results in lower medical distress and greater post-procedure adjustment. Preparation information is best provided sufficiently in advance of the event so that the child has time to process it (Kain, Mayes, & Caramico, 1996 as cited by Martin, 2012).
• **Parent’s behaviour:** many preparation programs seek to engage the parents directly through targeting their own anxiety indirectly through teaching them to be coaches for the pediatric patient.

• Some parent behaviors that tend to exacerbate the child’s pain include: criticizing, apologizing, and providing excessive reassurance.
Other factors include:

- ethnicity,
- socioeconomic
- culture,
- religion,
- previous experiences,
- patient perceptions,
- patient expectations.
Non-pharmacologic pain therapy refers to interventions that do not involve the use of medications to treat pain.

They target: body, spirit, mind and social interactions.

They have fewer side-effects and tend to be preferred by older populations.

(Pain Assessment and Management Initiative, [PAMI] 2016)
Common Non-Pharmacological Pain management strategies in Children

• Heat/cold therapy
• Relaxation techniques (breathing exercises)
• Distraction (active and passive)
• Guided imagery
• Comfort positions
• Training and coaching
• Aromatherapy
• Empathy from healthcare provider
• Physical therapy
• Hypnosis
• Psychotherapy/Counselling
• Music therapy
• Massage
• Acupuncture
• Spinal cord stimulation
• Play, etc..
Categories on Non-Pharmacological interventions

Cognitive-Behavioral Interventions
- Psychological preparation, education, information
- Distraction (passive or active): Video games, TV, movies, phone
- Relaxation techniques (breathing, meditation, etc.)
- Music
- Guided imagery
- Training and coaching
- Coping statements: “I can do this” or “this will be over soon”

Physical (Sensory) Interventions
- Positioning
- Cutaneous stimulation
- Nonnutritive sucking
- Pressure
- Hot and cold treatments
- Transcutaneous electrical nerve stimulation (TENS)
Goals of Non-Pharmacological Interventions in PPC

• Decrease fear
• Reduce distress and anxiety
• Reduce pain
• Provide patients with a sense of control
Choosing the most effective intervention depends on:

- Age
- Developmental level
- Medical history and prior experiences
- Current degree of pain and/or anticipated pain
1. Psychological Preparation, Education, Information

- Preparing the patient, caregiver or parent on what to expect and do during the procedure.

- Preparation and education of the patient and family enhances the desensitization process.

- Let the child and parents/caregivers know what to expect before, during, and after the various interventions.
2. Distraction

• Distraction is the most common type of cognitive-behavioral method.

• It is an intervention that is often used to guide attention away from painful stimuli. It is most effective when adapted to the patient’s developmental and cognitive level.

• Does not require advanced training for providers; Works with all developmental levels; Involves parents and caregivers during stressful times.
Types of Distraction

• **Passive**: Attention is redirected to a stimulus or an object is presented by a healthcare worker; like showing a toy, Storytelling, Singing songs

• **Active/Direct**: Encourage participation in activities during procedures like: Blowing bubbles, Playing a game, Interacting with any play material.

**NB:** You can use one or both at a time
3. Relaxation/Bed rest

- Lengthy relaxation techniques are enhanced by a quiet environment and having the patient in a comfortable, well supported position.
4. Music Therapy

- Music therapy additionally benefits parents and healthcare providers caring for the anxious patient.
- Have patient select music from available electronic devices—keep a supply of disposable headphones or ear-buds—if you can afford
- Play music in waiting areas
  (Bematzky et al., 2011)
5. Guided imagery

- Imagery is a relaxation technique in which words, sounds, etc., are used to evoke positive mental images, feelings, and thoughts.

- Guided imagery helps patients use their imagination to divert thoughts from the procedure to a more pleasant experience.

- Help the patient use their imagination to create a descriptive story. Ask questions about a favorite place, upcoming events or vacations to keep the patient engaged.

- Designed to develop a vivid image involving all senses.

- Very good for adolescents

- Imagery provides distraction and reduces the perception of pain by eliciting descending signals from the brain that can help block the pain signals.
Avoid imagery in case a child is:

- Confused
- Drowsy
- Has a poor grasp of the language of the relaxation therapist.
- Has a previous history of significant psychiatric history, such as having hallucinations.
6. Training & Coaching

• Caregivers & parents can assist in coping with painful procedures by engaging the patient through interaction and distraction; for example, singing, reading or holding a patient’s hand.
Healthcare providers should:

• Coach and prepare the parents & caregivers for the procedure
• At times, it is better to discuss the procedure away from children
• Discuss how they can assist in their loved one’s coping ability
• Instruct patient based on cognitive and development level
• Utilize distraction techniques
• Avoid negative or vague language
Language to Avoid & Language to use
Language to avoid

- You will be fine; there is nothing to worry about (reassurance)
- This is going to hurt/this won’t hurt (vague; negative focus)
- The nurse is going to take some blood (vague information)
- You are acting like a baby (criticism)
- It will feel like a bee sting (negative focus)
- The procedure will last as long as... (negative focus)
- The medicine will burn (negative focus)
- Tell me when you are ready (too much control)
- I am sorry (apologizing)
- Don’t cry (negative focus)
- It is over (negative focus)

(PAMI, 2016)
Language to use

- What did you do in school today? (distraction)
- It might feel like a pinch (sensory information)
- First, the nurse will clean your arm, you will feel the cold alcohol pad, and next… (sensory and procedural information)
- Let’s get your mind off of it; tell me about that movie… (distraction)
- Tell me how it feels (information)
- The procedure will be shorter than… (television program or other familiar time for child); (procedural information; positive focus)
- Some children say they feel a warm feeling (sensory information; positive focus)
- When I count to three, blow the feeling away from your body (coaching to cope; distraction limited control)
- You are being very brave (praise; encouragement)
- That was hard; I am proud of you (praise)
- You did a great job doing the deep breathing, holding still… (labelled praise) (PAMI, 2016)
7. Hypnosis

- A fantasy-like state resembling sleep, usually induced by a therapist by focusing a subject's attention, that heightens the subject's receptivity to suggestion.

- **Hypnosis** is thought to **work** by altering our state of consciousness in such a way that the analytical left-hand side of the brain is turned off, while the non-analytical right-hand side is made more alert. The conscious control of the mind is inhibited, and the subconscious mind awoken.
Some Physical (Sensory) Interventions

• Positioning

• Cutaneous stimulation

• Non-nutritive sucking

• Pressure and Massage

• Hot and cold treatments
1. Positioning: Why use positioning for comfort?

- Sitting position promotes sense of control for the child
- Reduces anxiety which promotes better cooperation
- Puts child in a secure, comforting hold
- Promotes close, physical contact with a caregiver
- Provides caregiver with an active role in supporting child in a positive way
- Comfort positioning may be prohibited in trauma patients requiring neck or spine immobilization and during transport
2. Cutaneous stimulation

- Rubbing or vibration
- Applying localized pressure
- Skin to skin contact with mother or breastfeeding during a procedure reduces pain behaviors associated with painful stimuli.
3. Non-nutritive sucking

- Use of a pacifier often in conjunction with sucrose has been shown to have an analgesic effect in neonates undergoing routine venipuncture.
- It may reduce crying with infants under 6 months of age.
- Neonates have a positive psychological response (lowering of pain scores, cry duration, and heart rate variation) to oral stimulation and physical contact or touch during painful procedures.
4. Pressure and massage
Pressure and massage cont.

- **Massage** is a useful tool that reduces pain. It can be paired with other non-pharmacologic and pharmacologic techniques to improve patient outcomes.
- **Massage can**
  - stimulate blood flow,
  - relax tight muscles and muscle spasms
  - promote a feeling of well-being
- **Risks**
  - patients with blood clots or deep vein thrombosis
  - possible nerve damage
  - infectious skin conditions
5. Heat Therapy

• Several studies have shown reduction in pain, anxiety, nausea and heart rate in patients treated with active warming for pain related to mild trauma, cystitis, urolithiasis, cholelithiasis, appendicitis, colitis and rectal trauma.

• Heat should be applied in 20 minute time periods to affected body areas.

• Heat acts by:
  – increasing blood flow to skin,
  – dilating blood vessels, increasing oxygen and nutrient delivery to local tissues, and
  – decreasing joint stiffness by increasing muscle elasticity.
6. Cold Therapy

• Cold therapy consists of applying a cool material or device to any part of the body.

• Multiple studies have reported that cold treatment may increase pain threshold, reduce edema and control the inflammation process.

• When applied to the affected area, blood vessels constrict near the skin which can:
  – reduce swelling when applied right after an injury
  – relieve pain of muscle spasm or muscle tension
Cold therapy options

• Ice packs
• Cold gel packs
• Towels soaked in ice water

• These therapy options should be:
  – completely sealed to prevent dripping,
  – flexible so they can conform to the patient’s body and
  – properly wrapped to prevent damage or irritation to skin.
7. Acupuncture

- A procedure in which specific body areas or skin associated with peripheral nerves are pierced with fine tips of needles to relieve pain.
Categories of Children and appropriate therapies

- Infant
- Toddler
- Pre-School
- School age
- Adolescent
Non-Pharmacological Therapies for Infants

- Swaddling/Wrapping/Enveloping
- Holding
- Sucking
- Sucrose pacifier (Sweet-Ease 24% sucrose solution)
- Non-nutritive sucking
- Dim lighting
- Music
- Picture reading
- Toys
- Key chains
Toddlers

• Provide distraction with music
• Provide a pacifier
• Provide light touch or massage
• Try repositioning, splinting
• Apply cold or hot pack
• Offer play with blocks
• Drawing with crayons and paper
• Encourage picture reading
• Encourage singing
• Blowing bubbles
Pre-School

• Provide a calm environment
• Provide a position of comfort
• Provide light touch or massage
• Suggest music or TV to entertain
• Coach child through the ED process and/or procedures
• Draw in coloring books
• Play with puzzles
• Look at or read storybooks
• Encourage singing or storytelling
• Hold cold or hot pack
• Engage in distracting conversation
School age child

- Provide a calm environment
- Suggest new positions for comfort
- Suggest music, TV
- Read books
- Coach child through the process and/or procedures
- Share jokes
- Provide light touch or massage
- Hold cold or hot pack
- Demonstrate relaxation techniques such as breathing exercises
- Use squeeze balls
- Encourage conversation about favorite things
Adolescents

- Apply cold or hot pack
- Suggest repositioning or positions of comfort
- Encourage talking about favorite places or activities
- Provide light touch or massage
- Listen to music
- Read
- Visit with friend
- Use telephone access
- Coach about processes and procedures
- Discuss preferred relaxation techniques
- Demonstrate relaxation techniques, if unfamiliar
- Use squeeze balls
- Encourage making choices
Common Barriers to Non-Pharmacological Therapies

- Perceived lack of enough time
- Chaotic environment
- Lack of resources or equipment
- Lack of knowledge and familiarity of techniques by providers and staff
- Perception that patients will not be amenable to non-pharmacological treatment

Above all, Non-pharmacological treatments are relatively inexpensive and safe (PAMI, 2016).
Conclusion

• Combining pharmacologic and non-pharmacologic methods may yield more effective pain control for the patient.

• Non-pharmacological therapies are low cost and easy to administer.

• Reduces the dosage of analgesic medications thereby decreasing side effects, especially when using opioids.
References

