Behavioral Management of Pediatric Acute Pain

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Pediatric Psychology

- The Cross Roads between Clinical Child Psychology and Pediatric Medicine
Pediatric Psychology

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Child Medical Distress

- Pain
- Fear
- Anxiety

Distress
Factors that Influence Child Medical Distress

**Distal Factors**
- Clinic/Hospital Policies; Community; Culture; Insurance

**Proximal Factors**
- Positioning; Parent Anxiety and Behavior; Staff Anxiety and Behavior; Environment

**Child Factors**
- Coping; Temperament; Prior Experience; Age; Trust

**Child Distress**
Evidence-based Recommendations

- Best available research evidence
- Patient characteristics, culture, and preferences
- Clinical expertise

Behavioral Preparation and Intervention Techniques
- Implementation and Tailoring of Techniques
- Relationship with Patient
- Non-specific factors

Age; Temperament; Coping Style; Context; Expectations; Prior Experience
Contribution to Success of Behavioral Treatment for Medical Distress

- Patient / Extratherapeutic (40%)
- Relationship (30%)
- Model / Technique (15%)
- Placebo, Hope, and Expectancy (15%)

Hubble et al., 1999
Patient/Extratherapeutic - 40%

- Humbling and freeing
- Relatively out of our control
- Identify personal/idiosyncratic coping (e.g., favorite toy)
- Tap into family’s world
- Research suggests that expectations and memories impact reaction to needles

Chen et al, J Consult Clin Psychol, 1999;67:481-490
Relationship - 30%

- Parents and patients
  - Know them (e.g., notes in charts, bedside skills)
  - Connect with them on a personal level
  - Empathize around distress
    - Insulated---------------Empathy------------------Pity
Relationship - 30%

- **Infants**
  - Unique toys or movies that are available that have positive associations for infant

- **Kids**
  - Incentives
  - Instill a sense of mastery/efficacy
Placebo, Hope, and Expectancy - 15%

- Help them believe that there will be low distress
- Whatever intervention/technique you use, believe in it, sell it
Model/Technique - 15%

- Behavioral Techniques
  - Developmental considerations
  - Environmental manipulations
  - Positioning
  - Preparation
  - Intervention
Developmental Considerations

- Up to 1 - Stranger Anxiety; Imitates Facial Expressions; Follow Simple Directions; Find Hidden Objects
- 2 - Explore; Short Attention Span; Enjoy Familiar Activities; Make-Believe Play
- 3 - Interest in Picture Books; Respond to Directions; Do not Like Routine Change
- 4 - Explain Own Drawings; Ask Questions for Simple Answers; Fantasy Play; Scared of Monsters
- 5+ - Ability to seriate; Concept of time; Can understand why things happen
Distilled Recommendations

Environment

Research

Preparation

Positioning

Coaching
Environment

- Family-friendly
- Non-medical
- Engaging and fun
- Calming
Positioning

- Parents should be present
- Infants or young/small child should be in the parents’ lap
  - Young infants - swaddled and held by parents
  - Infants who have some head and trunk control (3 to 5 mos) and Children might straddle the parent
- Children are more distressed when laying flat on their back
Preparation

• Helps children face a range of stressful medical events (e.g., surgery, hospitalization, injections)

• Recommended for children who are 6 years of age and older; 1-3 have difficulty distinguishing reality and fantasy
Preparation: Timing

- Not Too Early
  - Heighten anxiety
  - Information forgotten

- Not Too Late
  - Not enough time for the patient to process
  - Heighten anxiety

- Rule of thumb for brief procedures - 1 week

Preparation: Timing (cont.)

- Procedure type
  - Major procedures (e.g., surgery) requires advance preparation
  - Minor procedures (e.g., blood draws) may only require same-day information
  - However, if the family *perceives* the procedure to be a major event, use advanced preparation

Preparation: Format

- Variety of formats have been used usually combining diversion along with didactics and experiential learning; interaction important
  - Computer programs
  - Videos
  - Puppets
  - Written summaries
  - Live models
  - Web pages

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Preparation: Content

- Must be clear, concrete, and detailed
- Both sensory and procedural expectations should be included
- Accurate expectations allow parents and children to engage their unique coping style
- Emotive language should be avoided

“This is gonna hurt like hell.”
Preparation: Content

- Children who have experience with the procedure should receive less information.
- Children who have had high distress with previous procedures should have coping skills emphasized.

References:

Preparation: Parents

- **Target parents**
  - Parent anxiety is strongly predictive of child procedural anxiety
  - Parent behavior is a strong predictor of child distress
  - Parents should coach, distract, and praise
  - Parents should minimize reassurance, apologizing, criticism, and giving control

Coaching

- Adults should tailor coaching to patient (e.g., age-appropriate toys)
- Adults can help school-age and older children cope
  - Relaxation
  - Breathing exercises
  - Rehearsal
  - Reinforcement for appropriate behavior
  - Imagery

Coaching - Distraction

- Beneficial with infants - adults
- Minimizes fear, anxiety, and pain
- Can include
  - Movies and music
  - Toy robots
  - Virtual reality goggles
  - Bubble-blowing
  - Short stories

Mason 1993.
Coaching - Distraction (cont.)

- **Timing**
  - Use before procedure to lessen anxiety
  - Use during procedure to lower distress
  - Use after procedure to enhance recovery
- Involve all sensory modalities if possible
- Match distraction to child’s coping style (e.g., approach - avoidance)

Summary

- Success depends on clinical expertise to flexibly tailor techniques to the patient
- Environment - Family-friendly, calming, distracting
- Positioning - Physically and emotionally comforting
- Preparation - Family, timing, content
- Coaching - Distraction
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