Implementing a Pediatric Pain Assessment Scale on an Inpatient Pediatric Unit

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Background of Topic Interest

- Anecdotal stories from patients/family members
- Personal clinical experience
  - Staff nurse
  - Clinical instructor
- High risk nursery nurses comments regarding pain management with NICU babies
Problem

- Pain management continues to be a problem in healthcare
- Negative effects can occur due to prolonged pain
- Preverbal children make up a vulnerable population that are under-represented in samples of pain research
Research Question

What are the processes nurses engage in when managing pain in preverbal children?
The specific aim of this study was to use the grounded theory method to explore the processes and factors that affected nurses’ behaviors in managing preverbal children’s pain.
Participants

- Eleven participants selected through theoretical sampling technique
- Ten Caucasian, one African-American
- Nine females, two males
- 27% (3) were single; 73% (8) were married
- Six were parents; five had no children
Participants

- Number of years of pediatric experience ranged from 1 to 30 with a mean of 14.09 years

- Seven of the participants worked in the moderate-sized inpatient pediatric unit and/or pediatric intensive care unit; two participants worked in the small inpatient pediatric unit in a small acute care hospital; and two were employed at a large pediatric hospital.
Ethical Considerations

- Approval through Human Assurance Committee at Medical College of Georgia
- Informed consent signed by each participant after explanation of the study given
- Confidentiality maintained
Theoretical Definition

Pain is defined in this study as an unpleasant experience associated with actual or potential tissue damage that involves sensory, emotional, cognitive, and behavioral components that are interrelated with environmental, developmental, sociocultural, and contextual factors.
Data Collection

- Semi-structured interviews lasting approximately 1 hour were audiotaped

- Questions used for interviews
  - What is pain management to you?
  - What information do you use to decide that a preverbal child is in pain?
  - When you have determined that a preverbal child is in pain, how do you decide what to do?
  - What are some of the factors that influence your pain management decisions?
  - Under what circumstances do you manage a PVC’s pain well?
  - Under what circumstances do you not manage a PVC’s pain well?
  - What is your biggest obstacle to effective pain management?
Data Analysis

- Line-by-line coding
- Constant comparative analysis
- Axial coding or coding along dimensions
- Simultaneous data collection, coding, and analysis
Engaging in Tactics of Pain Management

Knowing the Territory

Personal Attributes of the RN

Categorizing the Medical Diagnosis
Deputizing the Parent

Eliminating other sources of discomfort

Judging Pain

Comforting

Medicating

Letting Go

Playing the Game

Culture of the Hospital

Workload
Judging Pain

I Lack of Use of Valid & Reliable Pain Assessment Tools
- Salanterä, Lauri, Salmi, Aantaa, 1999
- Salanterä, 1999
- Higgins, Turley, Harr, & Turley, 1999
- Simons & Roberson, 2002
- Probst, Lyons, Leonard, & Esposito, 2005

I Influenced by Hospital Culture
- Abu-Saad & Hamers (1997)
- Pederson & Bjerke (1999)
Judging Pain

- Assessment includes obtaining a past pain history, current pain history, developmental level, coping strategies used in previous pain episodes and cultural background (Huth & Moore, 1998)

- Current participants did not obtain developmental or cultural background
Introducation

- Pain is defined as “an unpleasant, subjective sensory and emotional experience associated with actual or potential tissue damage” (O’Rourke 2009).
- Pain assessment and documentation (JCAHO)
- Pain is 5th vital sign (American Pain Society)
- Wong Faces scale is widely used in hospitals
Problem Statement

- Nurses are currently using an inappropriate scale to determine pain in preverbal children
- The Wong scale is only indicated for use in children greater than three years of age
Background of Problem

- Nurses on a small and a midsized pediatrics unit in Georgia think the use of a pain assessment tool is not valuable and the tool being used is inappropriate for preverbal children. (Noviello, 2006)

- Preverbal children are at risk for inconsistent pain identification and inadequate pain relief
Background of Problem

- Consequences of prolonged pain
  - Increase in O2 consumption
  - O2 deficiency in vital tissues
  - Impaired immune functions
  - Alterations in clotting time
  - Potential end organ dysfunctions
Pain with a neonate & young children

- Neonates experience pain just as adults
- Nerve endings in the skin
- Behavior changes
- Physiological responses
Project Purpose

To improve nursing practice regarding pain assessment in preverbal children by

- educating the pediatric staff nurses the necessity of assessing for pain in preverbal children
- promote the use of the FLACC scale when assessing for pain
FLACC Scale

- Designed to measure pain in preverbal children
- Reliability $r=0.94$
- Validity – pre and post analgesia $p=0.005$
<table>
<thead>
<tr>
<th>Categories</th>
<th>Score 0</th>
<th>Score 1</th>
<th>Score 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face</td>
<td>No particular expression or smile</td>
<td>Occasional grimace or frown, withdrawn, disinterested</td>
<td>Frequent to constant frown, clenched jaw, quivering chin</td>
</tr>
<tr>
<td>Legs</td>
<td>Normal position or relaxed</td>
<td>Uneasy, restless, tense</td>
<td>Kicking, or legs drawn up</td>
</tr>
<tr>
<td>Activity</td>
<td>Lying quietly, normal position, moves easily</td>
<td>Squirming, shifting back and forth, tense</td>
<td>Arched, rigid, or jerking</td>
</tr>
<tr>
<td>Cry</td>
<td>No cry (awake or asleep)</td>
<td>Moans or whimpers, occasional complaint</td>
<td>Crying steadily, screams or sobs, frequent complaints</td>
</tr>
<tr>
<td>Consolability</td>
<td>Content, relaxed</td>
<td>Reassured by occasional touching, hugging, or being talked to, distractable</td>
<td>Difficult to console or comfort</td>
</tr>
</tbody>
</table>

Noviello, 2006

- Grounded theory study to explore factors that affect nurses’ processes in managing preverbal children’s pain
- N=11, nurses at 3 hospitals in Georgia (small acute, midsized acute, & pediatric hospital)
- Lack of age appropriate pain assessment tool in 2 of the 3 hospitals
- Nurses did not value pain assessment tools
- Midsized hospital did not have optimal pain management
Setting and Population

- 400 bed acute care hospital in Georgia
- Pediatrics unit consists of 28 beds
- Proposed census of 50 preverbal children per month
- Convenience sample N=38
- RN’s & LPN’s currently employed on the Pediatrics Unit
Project Plan

- Educational In-services
- Chart Reviews: Retrospective
  - Pre FLACC: November & December
  - Post FLACC
- Surveys
  - Pre FLACC
  - Post FLACC
  - Given with self addressed stamped envelopes and mailed to primary investigator
Project Plan
In-services

- Educational in-services
  - CAP member
  - Four in-services
    - FLACC scale
    - Demonstration with a child
    - Surveys distributed to all attendees
Project Plan

Surveys

- Pre & Post FLACC implementation

- Survey components
  - Age
  - Gender
  - Level of Education
  - Years of Nursing Experience
  - Years of Pediatric Nursing Experience
  - Do you have children
  - % of time used a scale
  - Ease of use
  - Barriers to use
Project Plan
Chart Reviews

- Pre & Post FLACC implementation
- Retrospective
  - Age
  - Diagnosis
  - Scale used
  - Pain medication given
Results

Nurse Survey Demographics

Pre survey vs Post Survey

Age
3-D Column 2
3-D Column 3
Years worked as
Years worked as
Results
Survey Reported Tool

Pre-Survey
N=22

Post Survey
N=20
## Nurse Survey Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre survey Median</th>
<th>Post survey Median</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children of their own</td>
<td>21.09</td>
<td>21.95</td>
<td>p=0.79</td>
</tr>
<tr>
<td>Do you use a pain assessment tool?</td>
<td>23.77</td>
<td>19.00</td>
<td>p=0.025 *</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Which tool do you use?</td>
<td>10.89</td>
<td>24.94</td>
<td>p=0.000 *</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the tool easy to use?</td>
<td>24.00</td>
<td>17.00</td>
<td>p=0.060</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are the barriers to use?</td>
<td>19.60</td>
<td>14.83</td>
<td>p=0.166</td>
</tr>
</tbody>
</table>

*significant finding p<0.05
Results
Chart Review

Barriers to use of a pain assessment scale

- Workload
- Too hard to understand

Time

- Pre Survey
- Post Survey
- 3-D Column 3
## Chart Review Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre FLACC Mean N=137</th>
<th>Post FLACC Mean N=151</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of child (months)</td>
<td>13.27 ± 11.37</td>
<td>13.49 ± 11.76</td>
<td>0.870</td>
</tr>
<tr>
<td>Total days hospitalized</td>
<td>3.70 ± 1.58</td>
<td>4.00 ± 1.69</td>
<td>0.133</td>
</tr>
<tr>
<td># times pain assessed each day</td>
<td>1.28 ± 2.28</td>
<td>4.48 ± 6.87</td>
<td>0.000*</td>
</tr>
</tbody>
</table>

* Significant finding p<0.05
Key Findings

Increase

- The use of a pain scale
  - 81% vs 95%
- Tool used to assess for pain
  - Wong 73% vs 25%
  - FLACC 9% vs 85%
- Documentation of pain assessments
  - 1.2 times per day vs. 4.5 times per day
Results

- **Chart Review**
  - Many nurses wrote “no distress noted”, “no complaints”

- **Survey**
  - “Our manager does not value pain assessment, nor does the agency”
  - “Lack of adequate place to document in chart”
Implications for Practice

- Increased awareness of pain management in preverbal children
- In-services provided positive results
- Information obtained by pilot study can be used to implement FLACC scale

Future Studies

- Variety of locations
- Physician prescribing practices
- Attitudes of Management
Limitations

- Small sample size
- Type of Hospital
- Surveys were not matched per nurse
- FLACC documentation was limited
- Survey tool
- Chart Review tool
Project implications

- JCAHO visited the institution during the project implementation
- RFI for pain assessment documentation
- Task force with sub-investigator using this pilot project for JCAHO improvements
- Director comments on the project
References


