ASSESSMENT OF PAIN IN CHILDREN: KNOWLEDGE AND PRACTICE OF HEALTHCARE PROVIDERS AT A TERTIARY CENTRE, SOUTHERN NIGERIA

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Pain:

• An unpleasant sensory and emotional experience associated with actual or potential tissue damage

• Whatever the patient says it is, and exists whenever he or she says it does
PAIN

• Pain is one of the major reasons why children present to healthcare facilities

• So prevalent, some recommend it becomes the 5th vital sign – RR, PR, T, BP, Pain

• It is however, inadequately assessed and undertreated worldwide
• **Good pain control: one of the factors that can make a great positive impact on the patient’s hospital experience**

• Pain Relief: universal human right, an ethical issue

• Inadequate pain control: adverse outcomes, negative long term effects
• Pain is a subjective sensation
• Can be described according to several relevant features or attributes, such as quality, location, intensity, frequency, emotional impact among others
• Intensity is recognized as one of the most relevant clinical dimension of the pain experience
A systematic, routine pain assessment using standardized, validated measures is now considered to be the foundation of effective pain control for patients regardless of age, condition or setting.

Good pain assessment: cornerstone for good pain management
Assessing pain: QUESTT principle

- **Question** the child and parent
- **Use** pain rating scales
- **Evaluate** behaviour, physical findings, physiologic changes
- **Secure** parent’s involvement
- **Take** the cause of the pain into consideration
- **Take** action and evaluate results
# Pain Assessment Tools

## Neonatal/Infant Pain Scale (NIPS)

(Recommended for children less than 1 year old) - A score greater than 3 indicates pain

<table>
<thead>
<tr>
<th>Pain Assessment</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facial Expression</strong></td>
<td></td>
</tr>
<tr>
<td>0 – Relaxed muscles</td>
<td>Restful face, neutral expression</td>
</tr>
<tr>
<td>1 – Grimace</td>
<td>Tight facial muscles; furrowed brow, chin, jaw, (negative facial expression – nose, mouth and brow)</td>
</tr>
<tr>
<td><strong>Cry</strong></td>
<td></td>
</tr>
<tr>
<td>0 – No Cry</td>
<td>Quiet, not crying</td>
</tr>
<tr>
<td>1 – Whimper</td>
<td>Mild moaning, intermittent</td>
</tr>
<tr>
<td>2 – Vigorous Cry</td>
<td>Loud scream; rising, shrill, continuous (Note: Silent cry may be scored if baby is intubated as evidenced by obvious mouth and facial movement.</td>
</tr>
<tr>
<td><strong>Breathing Patterns</strong></td>
<td></td>
</tr>
<tr>
<td>0 – Relaxed</td>
<td>Usual pattern for this infant</td>
</tr>
<tr>
<td>1 – Change in Breathing</td>
<td>Indrawing, irregular, faster than usual; gagging; breath holding</td>
</tr>
<tr>
<td><strong>Arms</strong></td>
<td></td>
</tr>
<tr>
<td>0 – Relaxed/Restrained</td>
<td>No muscular rigidity; occasional random movements of arms</td>
</tr>
<tr>
<td>1 – Flexed/Extended</td>
<td>Tense, straight legs; rigid and/or rapid extension, flexion</td>
</tr>
<tr>
<td><strong>Legs</strong></td>
<td></td>
</tr>
<tr>
<td>0 – Relaxed/Restrained</td>
<td>No muscular rigidity; occasional random leg movement</td>
</tr>
<tr>
<td>1 – Flexed/Extended</td>
<td>Tense, straight legs; rigid and/or rapid extension, flexion</td>
</tr>
<tr>
<td><strong>State of Arousal</strong></td>
<td></td>
</tr>
<tr>
<td>0 – Sleeping/Awake</td>
<td>Quiet, peaceful sleeping or alert random leg movement</td>
</tr>
<tr>
<td>1 – Fussy</td>
<td>Alert, restless, and thrashing</td>
</tr>
</tbody>
</table>
Non-verbal, GCS <15 or Cognitive Impairment (> 1 yr and < 4 yrs): FLACC

• FLACC Behavioural Pain Assessment Scale

<table>
<thead>
<tr>
<th>Categories</th>
<th>Scoring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Face</td>
<td>No particular expression or smile</td>
</tr>
<tr>
<td>Legs</td>
<td>Normal position or relaxed</td>
</tr>
<tr>
<td>Activity</td>
<td>Lying quietly, normal position, moves easily</td>
</tr>
<tr>
<td>Cry</td>
<td>No cry (awake or asleep)</td>
</tr>
<tr>
<td>Consolability</td>
<td>Content, relaxed</td>
</tr>
</tbody>
</table>
Verbal, Alert and Oriented (> 4 yrs)

Wong-Baker FACES® Pain Rating Scale

0
No Hurt

2
Hurts Little Bit

4
Hurts Little More

6
Hurts Even More

8
Hurts Whole Lot

10
Hurts Worst

0–10 Numeric Pain Rating Scale

0
No pain

1
Moderate pain

5
7
9

8

10
Worst possible pain
BACKGROUND

• Literature demonstrates that pain management is often dependent on the attitudes and beliefs of health care practitioners

• Inadequate knowledge and attitudes of pain assessment in children: one of the notable areas of weakness in paediatric pain management
OBJECTIVE

To determine the knowledge and practice of healthcare providers towards assessment of pain in children at a tertiary hospital in southern Nigeria
METHODOLOGY

Nigeria
- population: 182,201,962 (2015)
- 0.40 physicians/1,000 inh (2010)

Palliative Care:
- In urban areas, mostly at tertiary hospitals, at various stages of development
- 17 hospices or PC services
- 10/17 (59%) offer paediatric-specific programmes
- National Cancer Control Plan 2018-2022:
  - Goal 2: Treatment of cancer
  - Goal 3: Palliative Care
METHODOLOGY

Rivers State:
- Under-15 population: 2,437,196
- Heart of the hydro-carbon industry

University of Port Harcourt Teaching Hospital:
- 800 bedded facility
- Reference cancer center in the Niger Delta region - an oil producing area with petroleum exploration and exploitation activities
- Serves patients from within Rivers State and neighbouring states
METHODOLOGY

• Cross-sectional study in August 2017, using a semi-structured, self-administered questionnaire for data collection

• Convenient sample of physicians and nurses attached to clinical departments/units caring for children, and those in educational units obtained

• Chi-square used to compare responses of doctors and nurses to each question at a 95% confidence interval

• Data analysed with SPSS version 20.0

• Ethical Approval was obtained from the Ethics Committee of the UPTH and informed consent from all participants
RESULTS

• Participants: 95 medical practitioners and 102 nurses of various cadres
• Their working units were: Departments of
  - Paediatrics
  - Surgery (Paediatric Surgery, Burns and plastics, Orthopedics, Ophthalmology)
  - Paediatric Dentistry
  - Nursing services (Ward Nurses, Nurse Tutors and Nurses in the Post Basic Nursing Education Unit)
• Majority (33.5%) of them had 5-10 years work experience while 25% had more than 15 years
What pain assessment scales do you know?

- Neonatal pain rating scale
- FLACC score
- Faces pain scale
- Numeric/word pain scale
- None of the listed

Doctors, N=95  
Nurses, N=102
RESULTS

Have you ever used a rating scale in the assessment of pain in children?

<table>
<thead>
<tr>
<th></th>
<th>Doctors, N=95</th>
<th>Nurses, N=102</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
<td>30%</td>
<td>45%</td>
</tr>
<tr>
<td><strong>No</strong></td>
<td>70%</td>
<td>55%</td>
</tr>
</tbody>
</table>
RESULTS

Reasons for not using pain rating scales

- Do not know about them
- Pain scales are not available in the hospital
- Not aware pain scales should be used
- No reason
- No response

Nurses, N=102
Doctors, N=95
The most accurate judge of the intensity of the child’s/adolescent’s pain is:

- The child’s/adolescent’s parent: 30% (Nurses, N=102), 20% (Doctors, N=95)
- The child’s/adolescent’s primary nurse: 10% (Nurses, N=102), 5% (Doctors, N=95)
- The treating physician: 10% (Nurses, N=102), 20% (Doctors, N=95)
- The child’s/adolescent’s parent: 50% (Nurses, N=102), 30% (Doctors, N=95)
- The child’s/adolescent’s parent: 0% (Nurses, N=102), 5% (Doctors, N=95)
- I don’t know: 10% (Nurses, N=102), 20% (Doctors, N=95)
Is there a recommended pain assessment scale for use in the hospital?

- **Yes**: Doctors, N=95
- **No**: Nurses, N=102
- **I don’t know**
DISCUSSION

• Poor knowledge of assessment of pain among the healthcare workers studied, has been reported, especially in resource limited countries.

• Pre-service and in-service training programmes, Continuing medical education become important to equip staff to assess pain and provide high-quality first-line control of pain for children.
CONCLUSION

• There are gaps in the knowledge of healthcare providers concerning assessment of pain in children
RECOMMENDATIONS

• Capacity building interventions are required to enable application of standard practice and optimal pain relief in children

• Scale up of the Pain Free Hospital Initiative in Nigeria

• Advocacy for inclusion into curricula of health institutions
THANK YOU