



**Neonatal Infant Pain Scale (NIPS)**

	0 point	1 point	2 points
MPS	0 point	1 point	2 points
Facial expression	Relaxed	Contracted	—
Cry	Absent	Mumbling	Vigorous
Breastfeeding	Relaxed	Different than usual	—
Arms	Relaxed	Flexed/extended	—
Legs	Relaxed	Flexed/extended	—
Restlessness	Sleeping/quiet	Uncomfortable	—

Maximal score of seven points, considering pain 2-4.

**FLACC Scale**

	0	1	2
<b>1 Face</b>	No particular expression or neutral	Wincing, frowning, tearing	Facial grimace (squinting, frowning, or crying)
<b>2 Legs</b>	Normal position or relaxed	Withdrawn, restless, tensed	Wincing or legs drawn up
<b>3 Activity</b>	Quiet/sleeping, normal posture, relaxed activity	Restlessness, writhing, tense and rigid, restless	Avoidance, combativeness
<b>4 Cry</b>	No crying, low-intensity cry	Mild or moderate, intermittent crying	High intensity, continuous cry
<b>5 Consolability</b>	Content, relaxed	Requiring frequent attention	Difficult to console or comfort

## Problem

- Pain management can be a challenge for pediatric nurses, especially in infants and young children.
- Identified contributing factors of inadequate pain assessment knowledge include lack of education regarding proper usage and lack of appropriate tools within the diverse pediatric population.
- Consequences of lack of inadequate pain assessment include longer hospitalizations, post-op complications, decreased patient satisfaction, and missed recognition for further intervention.

## Purpose

The purpose of this proposal was to evaluate the impact of an educational intervention on nurses knowledge of pediatric pain assessment tools. The aims of this project were:

- to develop an educational intervention on pediatric pain assessment
- to evaluate the impact of the educational intervention on nurses knowledge.

## Setting/Sample

- A convenience sampling from a general pediatric care unit in a Midwest teaching hospital in the Midwest
- Inclusion criteria for the study includes registered nurses off orientation that speak English as a primary language.
- The sample size consisted of 15 pediatric general care area nurses (14 female; 1 male)

## Methods

- Non-experimental study pre/post test design
- Participation in this educational presentation was required as part of the mandatory ongoing education for nurses on this unit.
- Participants were provided a pretest and then watched a recorded power point education on pediatric pain assessment tools
- Upon completion of the power point presentation, the posttest was administered using the same five questions from the pretest.

## Results

- The percentage of participants on each question to answer incorrectly on pre and post-tests was minimal, ranging from 7%-13%.
- The greatest increase in correct answers were on questions #2 (from 53% to 90%) and #4 (from 60% to 97%), regarding criteria for the NIPS and FLACC respectively.
- No application questions based on a patient scenario achieved 100% correct answers on the pretest, however two application questions were answered 100% accurately in the post-test (question #3 and #5)

## Discussion

- The findings from this study reinforce that nurses have a lack of knowledge and education regarding pediatric pain scales, including defining criteria for each pain scale.
- With proper education, there was an increase in appropriate application of pediatric pain assessment in case based scenarios.
- Additional barriers discussed were of organizational nature, including lack of available pain scales in this unit to assess neonatal pain.

## Limitations

- Limitations to this study include the size of the study, location of the facility, and technology.
- Although the results parallel the literature, the sample size was small limiting the generalizability of the findings.
- Consideration should be taken in regards to variabilities such as free standing children's hospitals, pediatric pain scales that are used in each facility, patient volume, and diversity of pediatric patients cared for when comparing data of other institutes.
- Technology was also a barrier in the completion of this study.

## Implications and Recommendations

- Developing continuous education, establishment and reviewing of protocols, as recommended by evidence based practice, could further validate accuracy and continuity of practice.
- Conducting this study with a larger participant group from various general pediatric care units, with various demographics, could potentially allow researchers to identify parallels within and amongst the various geography of children's hospitals.
- Future research in this area would be a follow up chart audits to determine application of the knowledge in the real clinical setting.

