Use of J-Tip to Decrease Pain for IV Starts

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Objectives

- Discuss which comfort measure is best in decreasing pain and level of anxiety in patients
- Discuss data collected comparing J-Tip with other pharmacological interventions
Under-management of pediatric pain is widely researched: yet continues to be concern for health care professionals.

Pain management during painful procedures or events not only adversely affects clinical outcomes, but has a lasting impact on child's sensitivity/reaction to future painful events.
Assess: Current Practice

- **In Day Medicine**: multiple tests require a needle stick for blood work or an IV insertion

- **Our goal in Day Medicine** is to improve the patient experience while child is in the unit; especially in the area of pain management

- **History of J-Tip introduction to NAIDHC**: Little to no evidence as to best practices with comfort measure
Patient/Family Options for IV Starts

We can use any of the following methods to ease your child’s anxiety for IV placement. You can discuss your options with the Sedation Team to meet your child’s individual needs. Some of the methods can be combined.

**Oral Versed**- A liquid medication that your child drinks before IV placement. Versed helps your child to relax and not remember as much about the sedation experience.

**Nasal Versed**- For young patients who will not cooperate with oral medication, we can give versed in your child’s nose.

**Topical Numbing Creams**- A cream that can be used on intact skin to lessen the pain of the needle stick. Left on the skin 30-60 minutes prior to IV placement.

**Nitrous Oxide**- A gas given through a mask over your child’s nose & mouth that provides relaxation and pain control during the IV placement

**Buzzy Bee**- Is a small vibrating bee with an ice pack. It lessens pain by confusing the pain sensors, sending stronger motion and temperature sensations instead.

**Sweet Ease**- A sugary syrup that the child’s pacifier can be dipped into to soothe pain and discomfort during the IV placement.

**Alternate Focus**- Focusing your child’s attention on something positive, our staff can help reduce pain and anxiety during an IV insertion.

Some examples are: music, games, movies, deep breathing and conversation.

**Pet Therapy**- The use of trained animals and handlers to achieve specific physical, social, cognitive, and emotional goals with patients; also called animal-assisted therapy.

**J-Tip**- A needle-free device to place numbing medication into the skin’s pores by using gas pressure.
Pet Therapy—Dog Trading Cards

I visited with Pinki today!

I visited with Heidi today!

I visited with Buddy today!

I visited with Ellis today!
Process Leading to the Study

- “Tool Kit” available to patients consists of pharmacological interventions and distraction techniques
- Addition of J-Tip welcomed but prompted:
  
  "Is J-Tip the best comfort measure for patients?"

- Asked to standardize the process and only offer J-Tips for IV starts
- **What is best practice for comfort measures during IV starts in the Day Medicine Area?**
What is Evidence?

- Review of literature revealed **no evidence** as to best practice with use of comfort measures.

- Even at Nemours AIDHC
  - Surveyed all Registered Nurses in Day Medicine before start of project.
  - Initial survey reported RN’s not always offering a comfort measure to patients.
Purpose

Purpose of this quality improvement project

- First to assess pain and anxiety levels pre and post IV insertion with J-tips
- Second to assess for the use of additional comfort measures
Methods

- Utilized tools to measure what parents and patients perceive to be the comfort measure for the child that best alleviated pain
  
  Several questions for patients
  Several questions for parents

- IRB approval established from Nemours IRB Board as Non-Human Subject Research (Quality Improvement Project)

- Data then collected from April 21 through August 13, 2015
Data Collection

- **Audit** (prior RN survey)
  - Results showed about 7 – 10% pts not being offered comfort measures

- **Added** column to flowsheet
  - Helped prompt RN to document which comfort measure was offered

- **Survey** for parents and kids: Content validated by expert researchers
  - Rated pain and anxiety levels before and after IV starts
    - Surveys for Parents/Patients utilized Likert scale 0 – 5 and Wong-Baker Face Scale for pain
  - Inclusion criteria: Patients ages of 5 - 18 yrs- Required IV- Offered a comfort measure to help decrease pain and anxiety
  - Patients chose from the following comfort measures during the project:
    - J-Tip- LMX- Versed
    - Nitrous Oxide - Buzzy Bee
PATIENT SURVEY

Before your IV insertion, how nervous were you on a scale of 0 – 5?

0 = Not Nervous  
1 = Slightly Nervous  
2 = Mildly Nervous  
3 = Moderately Nervous  
4 = Very Nervous  
5 = Extremely Nervous

During your IV insertion, how much pain did you have using the faces below?

0 = Very Happy, No Hurt  
1 = Hurts Just a Little Bit  
2 = Hurts A Little More  
3 = Hurts Even More  
4 = Hurts A Whole Lot  
5 = Hurts As Much As You Can Imagine
PARENT SURVEY

Date of Service___________  Gender:_______

Comfort Measure___________  Age_________

0 = Not Nervous  3 = Moderately Nervous
1 = Slightly Nervous  4 = Very Nervous
2 = Mildly Nervous  5 = Extremely Nervous

Before your child’s IV insertion, how do you rate your level of nervousness on a scale of 0 – 5? __________

Before your child’s IV insertion, how do you rate your child’s level of nervousness on a scale of 0 – 5? __________

During your child’s IV insertion, how would you rate your child’s pain using the faces below? __________
Collecting Data—Flowsheet Additions

Staff Concern for Comfort 2015

Staff Concern for Comfort 2016

Likelihood to Recommend 2015

Likelihood to Recommend 2016
RESULTS

- **N= 68** surveys: 34 parents and 34 patients
- Mean age was 11.7 (S.D.+/- 0.42)
- 53% female 47% male
- **Data demonstrated no significant difference in using J-Tip vs. other comfort measures (p> 0.05)**
- **Patient and parental anxiety was highly correlated (<0.05)**
Key Findings from QI Project

- Continue to offer **ALL** of current comfort measures so families have a choice:
  - Will not offer J-Tips as only choice if parents patient/family are satisfied with other measures
  - Do not need to **increase** cost of comfort measures by only using products that may have greater expense
Lessons Learned

- Perception that comfort measures were being offered to all patients before IV starts not true
  - This project helped nurses to make comfort measures a priority in plan of care
- One size does not fit all
  - Patients prefer to make a choice of own comfort measure
  - J-Tip option added to our original comfort measure information sheet
- Always important to include parents because their perceptions highly correlated with child's
Future Projects

- Separate data by choice of comfort measure and compare performance to use of J-tips
- Evaluate age groups separately: 5-10 yrs and >10 years
References


Questions ?