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Pediatric Vaccine Pain Management & Perceptions of Caregivers and Nursing Staff: An Evidence-Based Project

Madison K. Bears

University of Tennessee, Knoxville, mkane9@vols.utk.edu

Tami H. Wyatt

University of Tennessee, Knoxville, twyatt@utk.edu

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Pediatric Vaccine Pain Management & Perceptions of Caregivers and Nursing Staff



Madison Kane, BSN, RN,
Dr. Tami H. Wyatt, PHD, RN, ANEF, FAAN

BACKGROUND

- In an age with many diseases controlled through immunization and herd immunity, the significance of immunization can wane in public memory.
- In children, injection pain is an obstacle to vaccination and can cause anxiety around medical visits, healthcare avoidance, delayed immunizations, and needle fear (McMurty et al., 2015; Shah & Sui, 2019; Taddio et al., 2022).
- Evidence-based vaccine pain relief techniques are described in the literature (Shah et al., 2009; Wu et al., 2022; Taddio et al., 2015), yet their use in practice is minimal (Taddio et al., 2022).

LOCAL PROBLEM

- An evaluation of a pediatric clinic revealed nurses infrequently used pain management methods during immunization. This assessment indicated the need for education and adoption of evidence-based vaccine pain management techniques.
- Project goals included educating staff on the effectiveness of evidence-based vaccine pain management and improving the caregiver's perception of the immunization procedure.

METHODS

- This project followed the Johns Hopkins Nursing Evidence-Based Practice Model.
- An evidence-based vaccine pain management protocol was developed and taught to a group of pediatric nurses and
- The nursing staff offered vaccine pain relief methods to all pediatric patients receiving immunizations; their caregivers and nurses then provided feedback on their perceptions of the techniques.

Caregivers have positive perceptions of vaccine pain management use in their children's care.

Nurses find the techniques effective and practical in practice.

Pediatric providers should take note of these perceptions and encourage the use of these compassionate, evidence-based interventions in pediatric care.

All Children

- Parent present during vaccination, most painful vaccine last, sitting upright on the table or in parents lap.

Infants

- Oral sucrose given prior to vaccination
- Breastfeeding prior to and during vaccination
- Parental holding during vaccination

Toddlers and Young Children

- Distraction: *music, video, singing, wiggling their fingers, etc.*
- Cold application
- 5-10 sec of coolant spray prior to injection.
- Buzzy Bee with frozen wings applied just prior to and during vaccination.

Adolescents

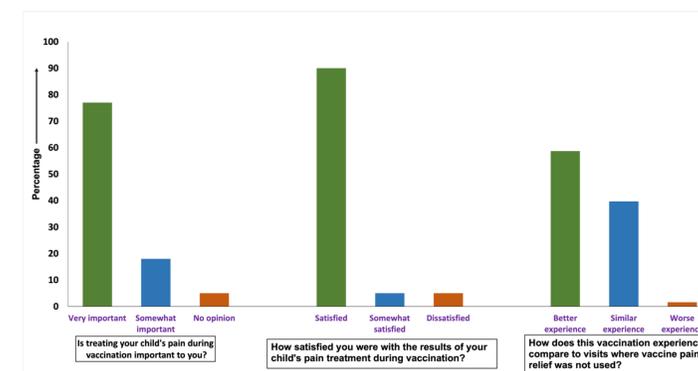
- Vaccine Education: *Explain what to expect & why they need the vaccine.*
- Cold application
- 5-10 sec of coolant spray prior to injection
- Buzzy Bee with frozen wings applied just prior to and during vaccination

INTERVENTIONS

- Vaccine pain management methods included sucrose use (Stevens et al., 2018; Taddio et al., 2015), distraction (Bergomi et al., 2018; Canbulat et al., 2014), vaccine education, parental presence, physical positioning, and the most painful injection being given last (Taddio et al., 2015).

RESULTS

- Sixty-four parents and nine pediatric nurses completed post-intervention questionnaires. 60% of caregivers reported their child's vaccine experience was improved with vaccine pain management, while 100% of nursing staff found the vaccine pain management effective.



CONCLUSIONS

- Based on these results, it is possible pain management techniques improve the caregiver's immunization experience.
- Pediatric providers, therefore, should encourage these effective and compassionate interventions to support timely immunization and overcome pain as barrier to immunizations. Future projects should investigate vaccine pain management barriers and how to increase their use in practice.
- References can be found by scanning the QR code.

