

CHOC – Children’s Health Orange County
Best Evidence and Recommendations (BEaR)

Improving Pain Management Knowledge in Pediatric Oncology Nurses

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Abstract

Pediatric oncology nurses are instrumental in assessing and responding to their patients' diverse and complex pain management needs. Many nurses feel ill-prepared to effectively understand their clients' pain relief needs and manage the pain relief interventions available to the child. Evidence has shown that by providing additional pain management education, nurses experience a greater retention of information and an improvement in their pain management knowledge and attitudes. To gauge the success of educational interventions that improve pain management skills and knowledge, the NKAS survey can be utilized before educational interventions to establish a baseline. A formal education class will be provided based on results from the pre-intervention survey. The same group will complete a post-intervention study immediately following the course, and three months post-education, to evaluate retention of knowledge and change in attitudes about pain management. A projected outcome is to develop a sustainable pain education program based on nursing needs to improve patient care practices.

Keywords

Pediatric oncology nursing, pain, pediatric cancer, and pain, pediatric nurses' knowledge and attitudes survey

PICO(T)

In pediatric oncology nurses, what is the effect of an interprofessional pain management education program on nurse knowledge and attitudes toward pain management?

Background and Significance

Pediatric oncology patients experience acute and chronic pain due to their disease state, treatment modalities such as surgery and invasive procedures, and side effects of treatment such as mucositis and myalgias, and peripheral neuropathies. Pain is one of the most feared and burdensome symptoms experienced by patients with cancer during their healthcare journey (Utne et al., 2019). It is a subjective symptom experienced by all children, with varying degrees of physical, mental, and emotional debilitation. Inadequate pain management may lead to unnecessary suffering and reduce the quality of life. Pain can adversely impact the child's healing process, patient and family



satisfaction, and ultimately the nurse's confidence in their ability to effectively care for their patient (El-Aqoul et al., 2020; Utne et al., 2019).

At the bedside, nurses are the personnel delegated to administer pain medications and carry out prescribed orders. Nurses need to possess the confidence to manage a patient's pain and feel empowered when advocating for effective pain management on behalf of the child. A nurse's academic education includes information about pain assessment and management. In addition, most organizations provide a pain management class during new hire orientation and continuing education refreshers on the topic. Pain management is a critical component of the national pediatric hematology/oncology certification program. In the clinical setting, the expectation is that nurses learn more about pain management through direct patient care experiences and interactions with the oncology/hematology, pain, or palliative care teams. Currently, from the Department of Nursing Education, there are no formalized pain education courses delivered regularly, and no content within new staff orientation or in-service programming specific to the needs of hematology/oncology patients.

Nurses in the Hematology/Oncology Unit have expressed feeling inadequate when managing patients' pain. This sense of inadequacy occurs when the nurse feels they are overtreating a child's perceived pain and inversely when there is concern that they are not intervening appropriately to meet the child's pain needs. Either scenario can cause stress and moral dilemmas for the nurse. To ensure an effective pain management program is implemented on the unit, nursing personnel would benefit from formal pain management education that will enhance knowledge, assessment skills, treatment options, and effective communication to provide a cohesive multidisciplinary approach to the child's pain relief needs.

The organization advocates family-centered care. To provide the entire family with the best strategies to support their hospitalized child, nurses caring for pediatric hematology/oncology patients should be equipped and empowered to identify, assess, manage, and advocate for effective pain management strategies that will specifically meet the child's needs based on age, condition, risks, and care goals. By addressing the need for a pain education program, the organization will enhance their nurse's knowledge which in turn portrays the establishment's commitment to patient nurturing and the family's well-being.

Framework

This EBP project utilizes the "Translating Evidence into Practice: CHOC Children's Approach to EBP" model, adapted from the EBPI Model © 2007 Brown & Ecoff (Ecoff, Stichler & Davidson, 2020).

Search for the Evidence

Databases searched for this review included PubMed, CINAHL, EBSCO, and Cochrane



Library, yielding more than 26 articles, including systematic reviews, literature reviews, randomized control trials, and cross-sectional studies. Key search words: Pediatric oncology nursing, pediatric nurses' knowledge, and attitudes survey, pain, pediatric cancer and pain, Pediatric oncology.

Communication inquiries on best practices were sent to 13 Children's Hospitals nationwide. Seven hospitals replied with similar practices to this organization.

Critical Appraisal and Synthesis of Evidence

- The importance of pain education is well documented. Seventeen articulated the need for pain education (Bernardi et al., 2007; Bernhofer & Sorrell, 2015; Bouya et al., 2019; Dongara et al., 2017; Ecoff et al., 2020; El-Aqoul et al., 2020; Freitas et al., 2014; Hayes & Manworren, 2000; Huth et al., 2010; Kusi-Amponsah et al., 2020; Manworren, 2001; Matthews & Malcolm, 2007; Rieman et al., 2007; Shahriary et al., 2015; Shondell et al., 2020; Stanley & Pollard, 2013; Utne et al., 2019).
- Thirteen studies conducted had nurses complete an initial knowledge survey. The survey results indicated recommendations for further formal pain education. However, none of the articles shared the results of an educational intervention (Bernardi et al., 2007; Bernhofer & Sorrell, 2015; Bouya et al., 2019; Dongara et al., 2017; Ecoff et al., 2020; Freitas et al., 2014; Hayes & Manworren, 2000; Manworren, 2001; Matthews & Malcolm, 2007; Rieman et al., 2007; Shahriary et al., 2015; Stanley & Pollard, 2013; Utne et al., 2019).
- 4 studies implemented a formal education intervention with evidence of a significant increase in pain knowledge and confidence (El-Aqoul et al., 2020; Huth et al., 2010; Kusi-Amponsah et al., 2020; Shondell et al., 2020).
- The Nurses Knowledge and Attitude Survey (NKAS) tool are one of the most validated tools used to evaluate nurse knowledge and attitude toward pain (Manworren, 2001).
- Several studies reported utilizing NKAS for an initial knowledge assessment with recommendations for further formal pain education but did not address further educational interventions (Shahriary et al., 2015).
- Education results in a significant increase in knowledge with an average documented pre-test/post-test increase of 25% using NKAS (El-Aqoul et al., 2020).
- There is limited empirical evidence regarding which interventions are most effective and a lack of emphasis on an interprofessional approach.
- A survey of children's hospitals revealed that common educational practices are limited to a one-hour lecture regarding pain management during new-hire orientation.

Practice Recommendations

- Establish a sustainable interprofessional pain management education program by:



- Distribute the NKAS survey to Hematology/ Oncology nurses to establish a baseline assessment of knowledge and attitude toward pain.
- Provide formal interprofessional education that integrates pain and palliative care team perspectives and addresses gaps in knowledge assessment.
- Complete a post-intervention NKAS survey immediately and at three months to evaluate the educational intervention and knowledge retention.
- Identify appropriate outcome and process measures to address organizational needs.

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