



Inadequate Pediatric Procedural Pain Management in the Emergency Room: A Policy Analysis

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Abstract

Purpose: Within the provisions of the Patient Protection and Affordable Care Act (PPACA) are specific guidelines on advancing science related to patient pain outcomes. Invasive painful procedures are a common part of pediatric nursing. Many children experience unrelieved procedural pain while in the emergency or urgent care setting. In this paper the following health policy issue is analyzed: underutilization of pain and comfort management in the emergency care setting among children during painful procedures.

Design and methods: Using a formal policy analysis method, consideration of: criteria, related factors, and key stakeholders were completed. A proposal for adopting evidence-based clinical practice guidelines was made. This recommendation was evaluated with four essential criteria including: cost, effectiveness, timeliness, and administrative ease.

Findings: Political, social, economic, and ethical factors exist which affect the issues of inadequate pediatric procedural pain and comfort management in emergency care. Evidence suggests implementation of an institutional policy change or a unit/department-based protocol will improve nurse utilization of procedural pain treatments.

Conclusion: The issue of inadequate pediatric procedural pain management in emergency departments can be appropriately addressed by institutional implementation of evidence-based practice and policy guidelines. This action has been shown to increase nursing adherence with procedural pain management and improve child procedural pain outcomes.

Clinical relevance: Increasing nursing utilization of pediatric procedural pain treatment through policy implementation will improve child health and overall quality of life.

Keywords

Pediatric, Procedural pain, Comfort, Policy, Nursing

Introduction

Invasive nursing procedures such as injections, heel lancing, intravenous cannulation, or blood sampling are routine but painful and distressing nursing practices. Infants, children, and adolescents are often required to endure these medically necessary nursing interventions. These procedures are especially common in the emergency or urgent care setting and can be quite distressing experiences for children of all ages [1]. Unfortunately, long term negative effects of repeated and undertreated procedural pain do exist and may include fear, aggression, anxiety, distrust of healthcare providers, depression, insomnia, and more [2]. Acute pediatric procedural pain

prevention and treatment is currently a salient topic. Federal legislation outlines provisions focused on pain management, research, health, and patient outcomes [3]. These provisions are nationally recognized in the 2010 Affordable Care Act. Issues surrounding pediatric pro-

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Received: March 31, 2017; **Accepted:** May 10, 2017;
Published online: May 12, 2017

Citation: Bice AA (2017) Inadequate Pediatric Procedural Pain Management in the Emergency Room: A Policy Analysis. Sch J Emerg Med Crit Care 1(1):25-30

cedural pain and comfort have been well documented in nursing literature [4]. Children are disadvantaged and may experience diminished comfort because of their age, developmental level, fear of or decreased ability to communicate with the nurse. For this reason, the current analysis will focus on pediatric patients, as their needs are different from the general population. The health policy issue of inadequate procedural pain and comfort management in children is significant to the future of pediatric nursing and pediatric patient outcomes.

Background

Pain is global health policy issue, requiring more attention and action to decrease societal burden [5]. In the Oxford Textbook of Paediatric Pain, [6] Stevens and Zempsky (2014) define “acute pain such as heel lancing, intravenous starts, injections, and finger pricks as quick, brief, sharp, and damaging to tissue” (p. 12). The AAP/APS [1] report that discomforts associated with routine procedures experienced by children can often be reduced or even prevented.

The availability and efficacy of modern treatments such as topical anesthetic creams, vapocoolant spray, and oral sucrose has contributed to decreasing pediatric procedure-related pain [7-14]. However, this procedural pain is prevalent and is still undertreated. In a recent large-scale study authors retrospectively reviewed medical records and found that 2,987 hospitalized children (78.2% of total sample) experienced at least one painful procedure in the preceding 24 hours, while only 844 children (28.3%) received a documented procedural pain intervention [15]. In a more recent qualitative study, Linhares, et al. [16] examined the prevalence, assessment, and management of pediatric pain, including clinical procedures. Findings of this study suggested according to patients and caregivers (and as compared with nurses and physicians), pain is prevalent among hospitalized children and healthcare professionals do not adequately recognize pain in children. Additionally, “despite the increasing availability of clinical practice guidelines for procedural pain in children, the majority is of average quality” [4]. Collaboration and consideration among various emergency healthcare individuals and groups is necessary to remedy this inadequate pediatric procedural pain practice.

Stakeholders

Perhaps the most significant stakeholder in this analysis is that of the children who experience the procedural pain and the significant others who support them. These children and families influence procedural pain policy through being involved in research. The connection between research evidence and policy is apparent since

“scientific research should drive policy” [17]. Next, registered nurses managing the procedure and physicians who oversee patient diagnosis and treatment make up additional large stakeholders in this policy issue. Findings of recent studies suggest that nurses believe pain management is an essential part of nursing practice, that optimal pain management is lacking, and that policy change can help increase procedural pain treatment [8,18,19].

Other key stakeholders include professional interest groups or organizations. The Joint Commission (TJC) previously recognized as The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) is acknowledged as the national symbol of quality for those facilities aimed at meeting performance standards [20]. TJC additionally accredits organizations for the Centers for Medicare and Medicaid services. In 2001, acute, procedural, and other pain management standards for various accredited health care facilities were established by the Joint Commission [21], indicating the importance of this pediatric health phenomenon.

Further interest group examples include the American College of Emergency Physicians (ACEP), the Emergency Nurses Association (ENA), the American Academy of Pediatrics (AAP), the American Academy of Emergency Medicine (AAEM), the American Academy of Pain Medicine (AAPM), the American Pain Society (APS), and the American Society for Pain Management Nursing (ASPMN), and many more. These organizations include a variety of practitioners, scholars, and other expert professionals, who hold particular interest in the satisfactory management of pediatric procedural pain in the emergency setting. Expert pediatric and pain management professionals can collectively influence policy through the publication of expert opinion, policy statements, management guidelines, and integrative reviews [1,2,22,23].

Healthcare institutions as well as third party payors and Medicare/Medicaid payors are additional important stakeholders. The Children’s Health Insurance Program [24] for example, covers eligible children through Medicaid using varied state-by-state and federal funds to decide reimbursement. Once a procedure receives a billing code - it is valued for reimbursement purposes depending on healthcare setting and services rendered [25]. Procedural pain treatment costs are not continuously 100% covered. Resource availability such as time, equipment, cost, and staff training is a significant barrier to implementation of pain management policy guidelines among hospitals [26]. The important persons who represent these institutions are responsible for facilitating and implementing organization-wide policy changes - changes that have the potential to improve patient outcomes.

Political Factors

On March 23, 2010 president Obama signed the Patient Protection and Affordable Care Act (PPACA) into law. Within the provisions of the PPACA are specific guidelines instructing the Secretary of Health and Human Services (HHS) to make efforts on advancing science related to patient pain outcomes. Section 4305 titled *Advancing Research for Pain Care Management*, outlines the necessity to:

- a) Increase the recognition of pain as a significant public problem in the United States.
- b) Evaluate the adequacy of assessment, diagnosis, treatment, and management of acute and chronic pain in the general population, and in identified racial, ethnic, gender, age, and other demographic groups that may be disproportionately affected.
- c) Identify barriers to appropriate pain care.
- d) Establish an agenda for action in both the public and private sectors that will reduce such barriers and significantly improve the state of pain care research, education, and clinical care in the United States (p. 511).

Increasing awareness, overcoming barriers, recognizing disparities, and refining research related to pain and patient outcomes is currently a national health policy priority.

Social/Societal Factors

The approach to all types of pain should be should be valued as a public health concern and approached from a community-based perspective (IOM, 2011). Considering the approach to pain management as a public health priority helps to describe the connections with social health determinants among specific populations - particularly in an emergency setting where cultural diversity is prevalent [5]. One group of researchers showed the need for healthcare provider education with an existing disparity between perceived and documented emergency department pain management in children [27]. Pediatric patients are one population group "suffering the burden of untreated or undertreated pain worldwide. Among many stakeholders, institutions and organizations must be a part of the effort to reduce these inequalities" [28]. Considering procedural pain management as a priority positively affects public health and the economy.

Economic Factors

Some procedural pain treatments are more costly than others. Less expensive nonpharmacological and pharmacological pediatric procedural pain treatments have been investigated. Some of these treatments are FDA approved while others are Over-The-Counter (OTC) and or FDA cleared as

equivalent (comparable) to existing treatments. In primary care, vapocoolant or refrigerant spray (approximately \$0.50 per patient) and behavioral distraction techniques have been found to be quite cost effective; while EMLA cream, although an efficacious treatment is more costly [29]. The needle-free jet injection of lidocaine has also been investigated for intravenous cannulation in the pediatric emergency department and was found among all treatments to be the most cost-effective [30].

Cost-benefit analyses for procedural pain guidelines are still warranted in future research [4]. Furthermore, cost with questionable advantages of pain control is a barrier to procedural pain intervention and guideline recommendations [29,31]. However, strategic pediatric procedural pain can be cost-effective [30,32] and in certain circumstances procedural intervention costs are balanced by reduced distress leading to shorter procedure times [33]. Attention to expenses associated with time, personnel, medications, and coping interventions must be considered [34]. The National Academy of Medicine, formerly called the Institute of Medicine, [35] proposed that healthcare providers must transform how pain is perceived, assessed, and treated. This is the most principled approach not only in pediatric care but also in any population.

Ethical Factors

Basic ethical principles defined in the Belmont Report include *Respect for Persons*, *Beneficence*, and *Justice* (U.S. Department of Health and Human Services: HHS, 2016) [36]. Children require specific respect for persons as defined in this report as they have diminished autonomy given their age and developmental level. Beneficence refers to a child's well-being and protection from harm. "Unreasonable failure to treat pain is viewed worldwide as poor medicine, unethical practice, and as an abrogation of a fundamental human right" [37]. Justice is questioned when a child is entitled to treatment and denied it [36]. Successful pain management is a duty of those in healing and healthcare professions [35]. Procedural pain in the emergency department is often reducible or avoidable. This is specifically true because of safe and effective treatments available to nurses and physicians. This availability decreases justification for denied pediatric procedural pain relief. Additionally, the various providers of care in the emergency setting, beginning with triage, allow for early recognition of procedural pain treatment necessity. In one randomized controlled study comparing nursing judgment to a triage prediction rule, nurses were able to predict the need for IV placement and administer topical anesthetic 66% of the time compared to 41% with the triage prediction rule [38].

The American Academy of Pain Medicine [39] argues

that using a pain management approach, which fails to see the patient as a whole person, with a specific problem or disease, is a barrier. The necessity to perform invasive painful procedures on children requires the understanding of also doing no harm and providing basically good care in the best interest of the child. Providing nonpharmacological and or pharmacological procedural pain treatment for children when it is readily available is more than a good idea. It exemplifies the foundation of medical and nursing ethical principles including beneficence, nonmaleficence, and autonomy. A recommendation for change in practice is needed.

Recommendation for Practice: Adopt a Procedural Pain and Comfort Protocol

Evidence suggests the implementation of an institutional policy change or a unit/department-based protocol actually increases nursing adherence to procedural pain management and improves child procedural pain outcomes [8,18,19,40-43]. In a clinical report focused on pain management and anxiety reduction among pediatric patients, the AAP (2004) [22] argued, “a systematic approach to the management of pain, including staff education and protocol development, can enhance comfort among children in the emergency setting” (p. 1348). Additionally, procedural pain protocol implementation and policy change has been found to be more efficacious than nursing education, focus groups, and coaching sessions alone [8]. Furthermore, recent multicenter survey research on pediatric pain in the emergency department has shown the need for a comprehensive multimodal approach, including the development of local policy [41]. The World Health Organization (2012) recommends national pain guidelines but maintains that these guidelines cannot be effective without the concurrent execution of policy changes to direct pain standards.

Upon analyzing related factors, the background on procedural pain, and the stakeholders surrounding inadequate pediatric procedural pain and comfort management, a recommendation for change was established. A reasonably cost-effective, timely, and achievable option to address the policy issue discussed in this paper is as follows: *emergency care settings should adopt best practice guidelines for pediatric procedural pain and comfort management*. Depending on specific patient needs, there are evidence-based guidelines published by various organizations and experts, which can be utilized among pediatric institutions. The treatment recommendations in each of the following examples are based upon extensive literature review and empirical research analysis. The examples include but are not limited to: (a) The ASPMN’s clinical practice recommendations for procedural pain management [2], (b) AAP/APS assessment and

management of acute pain in infants, children, and adolescents [1], (c) Lee, et al. clinical practice guidelines for acute procedural pain [4], (d) Guidelines for pain in the newborn by the Pain Study Group of the Italian Society of Neonatology [44], (e) The Royal Australasian College of Physicians management of procedure-related pain in children and adolescents (2005) [45], (f) Good Practice in Procedural Pain Management by the Association of Paediatric Anesthetists of Great Britain and Ireland (2012) [46], and (g) The AAP’s clinical recommendations for the relief of pain and anxiety among pediatric patients in emergency medical systems.

The immediate *cost* of implementing a procedural pain protocol would be moderate but not unreasonable. Costs may include: (a) Nonpharmacological interventions for nurses to utilize such as toys, games, music and media, and (b) Materials/Staff used to educate each unit, department, or office on the protocol. The *effectiveness* of this option is encouraging but would depend on the success of implementation, nursing teamwork, and health care team collaboration, leadership skills of management and administrative staff, and staff attitudes. *Timeliness* is perhaps the most appealing part of this option. Adopting evidence-based guidelines that have already been established by a reputable organization and through evidence-based research analysis can be implemented quickly. Additionally, few obstacles are likely to inhibit the ability to begin protocol development and training, thereby making this option more attractive due to *administrative ease*.

Conclusion: Overcoming the Negatives

Using and implementing health care policy is an important way to deliver evidence-based practice. There are negative aspects related to adopting a procedural pain protocol in the emergency setting. The main problem with this option is related to time management of staff nurses. More time-consuming responsibilities are likely. However, techniques to mitigate this problem do exist and include: ensuring proper physician/provider collaboration, establishing standing orders for pharmacological and nonpharmacological treatment, encouraging optimal physician/provider to nurse communication, utilizing institutional and unit float or resource nurses, encouraging nurses to ask for help and to be of help to others who need it, and explaining the importance of sharing the responsibilities from shift to shift. Another potential problem with this option is the resistance that may be met by health care staff. One of the ways to increase the acceptance of a new protocol is to provide education and evidence. Nurses especially value knowledge and they believe pain management is essential [8]. Providing them with facts related to the preven-

tion, assessment, and treatment of procedural pain and comfort in children will further increase their practice independence. This independence will enhance nursing care through optimal procedural management among pediatric patients in the emergency care setting.

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