



# An Efficient Assessment of Nursing Intervention for Paediatric Patients in the Respiratory Department using the Paediatric Early Warning Score

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## Abstract

The use of nurse-initiated procedures is expanding in an effort to enhance the quality and efficiency of treatment given to children who present to the emergency department. Reviewing the most recent research on Advanced Nursing Directives, validated clinical grading systems for emergency departments, and nurse-initiated protocols (ANDs), and the process of creating a clinical pathway for kids who show up to our paediatric emergency department (PED) with a suspected appendicitis will be utilised to show how Advanced Nursing Directives successfully integrate validated clinical scoring systems into practise. Last but not least, two further advanced nursing directive examples for typical clinical PED presentations will be given.

**Keywords:** Critical care, Identification, Pediatric emergency department (PED), Child, Early Warning scores, Mortality, Resuscitation, Advanced nursing directives (ANDs)

## INTRODUCTION

Long ED wait times and the difficulty getting acute inpatient hospital beds have received a lot of attention internationally. Some believe that ED overcrowding is caused by inpatient overcapacity and excessive use of emergency rooms as primary care facilities. As a result, healthcare professionals are implementing innovative techniques including nurse-initiated protocols and Advanced Nursing Directives in an effort to enhance patient care (ANDs) (Goldman RD, et al., 2009).

The Pediatric Emergency Department (PED) of the Alberta Children's Hospital (ACH) has experienced significant increases in patient visits along with the related development in ED length of stay, similar to many other healthcare facilities (LOS). The creation and application of Advanced Nursing Directives and the associated patient care maps have been successful in our PED,

focusing on departmental flow. Intentionally focusing on three of the most frequent PED presentations (asthma, vomiting and diarrhoea, and suspected appendicitis), we created procedures that ensure children who meet the requirements of the unit-based nursing protocol receive timely, evidence-based nursing care before being evaluated by an emergency physician. To create hospital-based care maps, a large academic partnership examined the current clinical scoring systems and on-going research relevant to these typical paediatric medical problems. In order to create Advanced Nursing Directives (ANDs), which have the potential to significantly improve patient care outcomes, administrative metrics, and overall patient and carer satisfaction for children presenting to the ED, it is necessary to review the theoretical underpinnings of nurse-driven protocols, the evidence supporting clinical scoring systems, and how the two integrate to create these three areas of knowledge (Thompson G, et al., 2011).

Pain is a unique, multifaceted sensation that is influenced by culture, past painful experiences, beliefs, moods, and coping mechanisms. It might be a sign of tissue injury, but it might simply exist in the absence of a clear reason. In the same way those individual responses to pain management techniques vary, so does the degree of disability in relation to pain experience. Unrelieved pain makes patients less mobile, which increases the risk of consequences like deep vein thrombosis, pulmonary embolism, and pneumonia. This is especially important for nursing care. Due to prolonged hospital stays and readmissions, both of which raise the cost of treatment, postsurgical problems resulting from insufficient pain management have a detrimental impact on the patient's well-being and the hospital's performance (Snyder M, et al., 1996).

Children's pain is not fully handled today, and there is a knowledge gap in the management of pain among professionals in several health fields, including doctors, nurses, psychologists, and dentists. Despite the effectiveness of numerous psychological and pharmacological therapies for pain reduction in children, medical professionals frequently demonstrate broad and incorrect attitudes regarding pain management in this population. Inadequate pain management is provided to a statistically significant percentage (49–64%) of hospitalised children, despite advances in knowledge and available treatments. Because of this, both developed and developing nations have worked to enhance and assess the training of medical professionals in order to give children in pain the best possible care (Verhoeven JJ, et al. 2009).

In this manner, 274 nurses at a sizable children's hospital were subjected to the Pediatric Nurses' Knowledge and Attitudes Survey Regarding Pain (PNKAS) tool. The right answers to 66% of the questions were provided. Specifically, there was a lack of understanding on the pharmacology of opioids and analgesics. Vincent assessed the analgesics given by nurses in relation to the degrees of children's pain, as well as their knowledge, attitudes, and perceived barriers to optimal pain treatment. 99% of nurses cited inadequate or insufficient physician pain medication orders as the biggest obstacle to effective pain management (Boyd RJ, et al., 2005).

The average score was 76%, and nurses had knowledge gaps about alternative pain management approaches, analgesic medications, and the prevalence of respiratory depression. Rieman and Gordon assessed nursing competence to treat pain at eight paediatric hospitals using a modified version of the PNKAS. There were 295 nurses who took part in the trial. The PNKAS results for nurses as a group ranged from 37 to 100% right, with a mean of 74%. Higher results on this survey tool reflect the information required for proficiency in pain treatment, which was influenced by nursing education, professional activity, and years of clinical experience. The ten survey questions that were most frequently answered incorrectly have to do with the pharmacology of opioids and

analgesics. For each survey item, the correct response rate ranged from 5.13% to 56.41%, with an average of 35.41%. The mean number of correctly answered questions among the 39 pain knowledge questions evaluated was 13.81 5.02, with a range of 2 to 22 items. On a 30-item scale, the basal score (preintervention) of 13.1 3.89 was the most significant outcome. This finding indicated that a sample of Mexican nurses lacked understanding of pain and how to handle it. A study on nurses in Turkey used the PNKAS to assess paediatric nurses' attitudes and degree of knowledge regarding a child's discomfort. On the PNKAS scale, the overall mean score was 38.2%. The greatest and lowest scores were 65% and 15%, respectively. It is likely that the paediatric nurses' lack of knowledge from the aforementioned research is due to flaws in their educational nurse preparation and training as well as a lack of opportunities for continuing professional development. To assess the level of knowledge and attitudes surrounding paediatric pain among nurses working in a Mexican paediatric hospital and nursing students at a Mexican university, we suggested performing a study in two phases (Smallwood A, et al., 2004).

## DISCUSSION

Early and quick evaluation of children's problems is crucial in clinical work. In China, the Pediatric Critical Care Score (PCIS) is a widely used tool for evaluating the condition of seriously ill children. However, the score includes up to 10 physiological indicators, such as electrolytes and liver and kidney function, which are challenging to quickly and accurately apply in clinical work. Regular physiological measurements like vital signs and laboratory data are commonly used in PEWS as input, and the output is an assessment of the likelihood of clinical deterioration episodes in children. The PEWS score is primarily employed in China for emergency triage as well as clinical assessment applications in paediatric neurosurgery, respiratory medicine, neurology, and haematology. The nurse notifies the relevant clinician for additional examination and intervention when a child's score exceeds a predetermined threshold. The PEWS offers a precise picture of disease prognosis, outcomes, and other markers as a rather well-established predictive and assessment tool. It is advised that PEWS be widely utilised as a crucial component of the evaluation of kids' conditions in paediatric hospitals (Muntlin A, et al., 2011).

Currently, in clinical work on general paediatric wards, the majority of disease communication between doctors and nurses is subjective and erroneous, using terms like "mild, moderate, or severe." Junior nurses lack the clinical expertise and sufficient illness observation, dynamic assessment, analytical, and problem-solving skills. Furthermore, youngsters frequently can only mechanically follow medical directives due to the concealed and rapidly changing nature of their diseases. Clinical doctors and nurses' ability to communicate effectively can be enhanced by using PEWS, especially the independence and self-assurance of junior

nurses (Puckridge D, et al., 2010).

PEWS standardises and quantifies children's aberrant physiological markers, making it easier for medical personnel to recognise and treat seriously ill or potentially seriously ill children, facilitating the wise use of medical resources, and enhancing children's safety. Children admitted to paediatric general wards were employed in this study as the study subjects for early detection and early intervention of critically or possibly critically sick kids based on the aforementioned analyses. The study demonstrated that following intervention with the PEWS graded response strategy, the incidence of disease deterioration, average length of stay, and hospitalisation cost of children hospitalised in paediatric general wards were significantly reduced, along with higher satisfaction of children's families and physicians. The study's findings were also supported by the literature. The PEWS-based nursing documentation method can quickly identify children's problems and provide effective care in the beginning, as shown by the decrease in nursing intervention time and disease assessment time, the increase in assessment accuracy, and the increase in nursing satisfaction following the PEWS-based intervention in this study. It enhanced efficiency and prevented treatment delays caused by taking too long to assess and care for the child's condition. This was especially true for junior nurses (Pasero C, et al., 1999).

Nursing documents must be written strictly in accordance with document writing standards because they are medical documentation with legal benefits. In this study, all nurses were able to write nursing records on time, in accordance with the frequency of medical orders, and in keeping with clinical reality once the nursing intervention was put into place. Additionally, the total nursing record writing error rate reduced dramatically. This procedure lessened the workload of nurses while enhancing the timeliness, objectivity, and accuracy of nursing documentation. In the observation group, there was still one instance of specificity, spelling, and expression problems. This can be because individual nurses have not yet mastered the problems and the intervention time is still limited. In the future, more facilities and a massive PEWS-based nursing intervention paradigm will be required. The experiment provided additional confirmation for these samples (Cohen LL, et al., 2008).

## CONCLUSION

PEWS-based paediatric interventions can effectively increase the effectiveness of care and medical satisfaction while reducing the number of unplanned PICU admissions, the incidence of exacerbations, the average length of stay, and

hospital costs. They can also speed up the recovery process for children. Finding the best PEWS system, standardising it so that it can be widely accepted, implementing the PEWS system more effectively, training the corresponding medical and nursing staffs effectively, measuring those critical vital signs of patients more precisely, recording and computing scores more methodically are the main challenges facing paediatric acute and critical care workers today. Through constant investigation and study, we think that a more integrated and efficient PEWS system is possible.

## CONFLICT OF INTEREST

None

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## REFERENCES

1. Goldman RD, Scolnik D, Chauvin-Kimoff L (2009). Practice variations in the treatment of febrile infants among pediatric emergency physicians. *Pediatrics*. 124: 439-445.
2. Thompson G, deforest E, Eccles R (2011). Ensuring diagnostic accuracy in pediatric emergency medicine. *Clin Pediatr Emerg Med*. 12: 121-132.
3. Snyder M, Egan EC, Nojima Y (1996). Defining nursing interventions. *J Nurs Scholarsh*. 28: 137-141.
4. Verhoeven JJ, Brand JB, Van De Polder MM, Joosten KFM et al (2009). Management of hyperglycemia in the pediatric intensive care unit; implementation of a glucose control protocol. *Pediatr Crit Care Med*. 10: 648-652.
5. Boyd RJ, Stuart P (2005). The efficacy of structured assessment and analgesia provision in the paediatric emergency department. *Emerg Med J*. 22: 30-32.
6. Smallwood A, Pidgeon J, Kemp H (2004). The introduction of nurse-initiated thrombolysis in coronary care. *Br J Nurs*. 13: 1314-1318.
7. Muntlin A, Carlsson M, Säfwenberg U, Gunningberg L (2011). Outcomes of a nurse-initiated intravenous analgesic protocol for abdominal pain in an emergency department: a quasi-experimental study. *Int J Nurs Stud*. 48: 13-23.
8. Puckridge D, Higgins M, Hutton S (2010). Nurse-initiated X-rays: a leap forward for children and nurses. *Paediatr Child Health*. 13:1.
9. Pasero C, McCaffery M, Gordon DB (1999). Build institutional commitment to improving pain management. *Nurs Manage*. 30: 27-33.
10. Cohen LL (2008). Behavioral approaches to anxiety and pain management for pediatric venous access. *Pediatrics*. 122: 134-139.