



## Reporting on the use of patient-controlled analgesia (PCA) in the pediatric population using a systematic review

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### Abstract

**Statement of the Problem:** Patient controlled analgesia (PCA) is a pain management method that allows the patient to self-administer their medication. Because of the great variety of physical and cognitive abilities in the pediatric population, involvement of a nurse or parent proxy is necessary. Staff sometimes question the efficacy of this approach to pain control in pediatric care. The purpose of this study was to explore recent information to ascertain the most effective approaches to PCA in pediatric settings.

**Methodology:** A PRISMA systematic review was employed in peer-review journal between 2014 and 2019, in English, and directly addressed the issues of safety and efficacy of patient controlled analgesia by proxy in the pediatric patient population. Databases used included CINAHL Plus with Full Text, DynaMed, MedLine with Full Text, and ScienceDirect. yielding 172 results.

**Findings:** Eleven articles fit the selection criteria and were included in included in the report. The themes that emerged from the analysis included pain management of neonates and infants, children with developmental disabilities, children with cancer, as well as the sources and possible solutions to errors in medication preparation.

**Conclusions and Recommendations:** It was concluded that PCA by proxy remains a safe and efficient method of pain administration for the pediatric population, with the exception of children suffering from developmental and neurological disabilities. PCA by proxy, although presenting challenges, remains a safe and efficient way of pain management across different pediatric populations, such as infants and neonates or children with cancer, both inpatient and outpatient, and new technologies could positively influence the safety of this method of pain management. Conversely, children with developmental and neurological disabilities do not benefit from this method of pain management and are more prone to experiencing adverse effects.

### Biography

David Sharp started his nursing career in the UK in 1978 and has worked in the USA for the past 20 years. He has worked primarily as a psychiatric nurse specializing in forensic psychiatric nursing and care of the elderly. He has extensive teaching experience of across a wide range programs using distance learning as well as face-to face programs working in undergraduate and graduate education. He has supervised a range of research projects for undergraduate honors students as well as DNP and PhD students. He has published journal articles and book chapters and regularly presents at national and international conferences on a range of topics relating to nursing education, nursing research and nursing practice.

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