



Does the introduction of a standard paediatric observation chart (SPOC) and a targeted intervention improve pain assessment and management in children with long bone fracture in the emergency departments of a rural local health district?



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Aim: To determine whether recording of pain assessment findings increased with the introduction of the Standard Paediatric Observation Chart (SPOC chart) in a rural Local Health District. The study also sought to explore the effect on pain management in children who presented to emergency departments (EDs) with long bone fracture. The second part of the study aimed to assess the effects of a targeted intervention for ED clinicians that included pain management education, introduction of new drugs to current practice (Intra Nasal Fentanyl (INF) and Oxycodone), pain management protocols, administration techniques and pain scoring tools.

Method: This study used a pre-post design to evaluate and compare pain assessment and management data at three periods; prior to SPOC introduction (Stage 1), following SPOC introduction (Stage 2) and following a targeted education intervention (Stage 3). All data was collected retrospectively via medical record audit.

Children aged between 0 and 16 years with a discharge diagnosis of long bone fracture during specific time frames were randomly recruited into the study. A total of 300 patient medical records were audited, 20 records from each of 3 time frames at 5 rural EDs.

Results: Data for each Stage was analysed for a total of 300 participant records with a mean age of 8.72 years (53% male, 47% female). Baseline data showed 43 of 100 (43%) children had a pain score recorded. This figure rose to 65 of 100 (65%) after the introduction of the SPOC chart. A further 13% increase in recorded pain scores occurred following the targeted intervention, with 78 of 100 (78%) children having a documented pain score. Analgesia use did not significantly increase across the three stages of the project ($p = 0.0393$). However there was a significant increase in the use of appropriate analgesia for the level of pain as described by the pain score ($p = 0.000$). Pain reassessment also increased across the three stages. 24% of children had a second pain score documented after administration of analgesia at Stage 1, which increased to 34% at Stage 2 with a total of 49% of children having a second documented pain score post analgesia at Stage 3.

Conclusion: Pain assessment in children improved when a SPOC chart incorporating a pain score was implemented into an ED. This had no direct effect on the number of children who received analgesia; however more appropriate analgesia was administered for their level of pain documented using the pain score. Further improvements of both pain assessment and pain management occurred when additional drug options and protocols, techniques and delivery devices were incorporated into a structured education program for clinicians. This study has demonstrated the value of investment in targeted, paediatric specific education and resources to assist ED clinicians to routinely assess children's pain, to provide appropriate and effective analgesia to children and to assess for efficacy by reassessing their pain.

For the full report on this project visit our website, follow the link to the Rural Research Capacity Building Program and click on 'view completed projects'

Helen Stevens is a Paediatric Clinical Nurse Consultant for Hunter New England Local Health District and the Northern Child Health Network. Helen has worked with children all of her career and is passionate about the provision of high quality and evidence based health care for rural children.



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