

# **PAIN ASSESSMENT AND ANALGESIA PRACTICES FOR CHILDREN IN THE EMERGENCY DEPARTMENTS OF THE UK AND IRELAND: A PERUKI STUDY**

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**Background:** Pain is the most common reason for childhood attendances to emergency departments (EDs), but is commonly under-recognized and under-treated. The Paediatric Emergency Research in the UK & Ireland (PERUKI) network identified analgesic practice in children as a high priority area for research. This study therefore aimed to benchmark current practice and variations in the assessment and management of childhood pain across the PERUKI network, in order to inform future analgesia research studies.

**Method:** An online survey was distributed to PERUKI sites between November 2016 and January 2017. It was completed by one person at each site, and it explored the use of pain score tools, pain assessment and management protocols, training, and practice guidelines for specific analgesic agents.

**Results:** The response rate was 95% (38/40 EDs), with a mixture of tertiary hospitals (66%) and district general (secondary) hospitals (34%). The annual ED pediatric census across the sites was 1,225,000 (range 11,500 to 65,000, median 30,000). Variability existed in pain assessment tools utilized with the most popular scales being the Numerical rating scale and the Wong Baker Faces Pain scale. Pain assessment and scoring was a mandatory component of the initial nurse assessment or triage process in 90% of sites. A policy or guideline existed in 48% of the sites in relation to the frequency of pain assessment.

Medication available in all sites included oral ibuprofen, paracetamol and morphine, rectal paracetamol, intravenous morphine, inhaled Entonox® or nitrous oxide blender and topical anesthesia. Intranasal opioid medication was available in all sites: diamorphine (87%) and/or fentanyl (26%). The availability of other medication was more limited including oral sucrose (84%), intravenous ketamine (79%), topical wound anesthesia (76%), oral codeine (68%), intravenous propofol (63%), oral diclofenac (58%) and oral tramadol (42%). Patient Group Directions (PGDs) allow the supply of specific prescription-only medicines to groups of patients by other healthcare workers including sufficiently trained nurses to enable earlier administration of medication. These were used in 92% of sites but there was significant variation in the medications covered.

Educational strategies included induction/orientation training in pain management (63%), professional development training in pain management (42%) and mandatory pain/analgesia competencies for staff (40%). Quality improvement processes relating to pain assessment or management were ongoing in 47%, and a pediatric procedural sedation program existed in 37% of sites. Point-of care (POC) ultrasound was utilized in 90% of sites. Play specialist services were not available in 45% of ED sites, and in the remaining sites these were available on a restricted hours basis only. 62% of sites had a policy on non-pharmacological management of pain.

**Conclusion:** This survey has identified the presence in all sites of some highly effective analgesic strategies including intranasal opioids and nitrous oxide/Entonox®. The majority of sites have access to POC ultrasound and PGD prescribing of medication. This survey highlights potential targets for improvement for optimal pain management including guidance in relation to the frequency of pain assessment, training and competencies in pain management, and access to pediatric sedation and non-pharmacological therapies including play specialists.