Association of Paediatric Palliative Medicine

HEALTHCARE PROFESSIONALS’ EXPERIENCES OF THE BARRIERS AND FACILITATORS TO COMMUNITY PAEDIATRIC PAIN MANAGEMENT AT END-OF-LIFE

Katie Greenfield, Bernie Carter, Emily Harrop, Sattbir Jassal, Julie Bayliss, Kate Renton, Simone Holley, Ian Wong, Richard Howard, Margaret Johnson, Christina Liostis. The University of Southampton; Edge Hill University; Helen and Douglas House Hospice; Rainbows Hospice; Great Ormond Street Hospital; University Hospital Southampton NHS Trust; University College London; Patient and Public Representative

Background Inadequate pain management in community paediatric palliative care is common. Evidence to inform improved pain management in this population is limited.

Objectives To explore the barriers and facilitators to paediatric community-based pain management for infants, children and young people at end-of-life as perceived by healthcare professionals.

Methods Semi-structured qualitative interviews were conducted with 29 healthcare professionals; 12 nurses, five GPs, five consultants and registrar doctors, two pharmacists and five support therapists working in primary, secondary or tertiary care in the UK and involved in community end-of-life care of 0–18-year-olds. The data corpus was analysed using an inductive thematic analysis.

Results Seven themes emerged from the data: parents’ abilities, beliefs and wellbeing; working relationships between families and healthcare professionals, and between healthcare teams; healthcare professionals’ knowledge, education and experience; health services delivery; nature of pain treatment; and paediatric-specific factors. Across themes, the concepts of partnership working between families and healthcare professionals, and within healthcare teams, and sharing expertise were prevalent.

Conclusions It is important that healthcare professionals and parents work together, and that mutual trust is built up through two-way conversations. Community healthcare professionals would benefit from education from experienced multidisciplinary teams to effectively manage paediatric pain at end-of-life and prevent emergency hospice or hospital admissions, particularly during the COVID-19 pandemic.

Abstract 785 Table 1

<table>
<thead>
<tr>
<th>Author/date</th>
<th>Country</th>
<th>Study design</th>
<th>Underlying condition</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ramesh 2020</td>
<td>India</td>
<td>Open label RCT (n=57)</td>
<td>CNS infection</td>
<td>HTS group was more responsive with less mean ICP and higher mean CPP than baselines. HTS group had less mortality, duration of ventilation, PICU stays and better outcomes at discharge. No difference was demonstrated between both groups as regards ICP, CPP, ventilation, duration of PICU, mortality, and outcome. Equal results shown in both groups with Less ICP in HTS group after second bolus. Equal ICU admission and duration of ventilation in both groups. However, higher mortality rate demonstrated in HTS treated group (p=0.37). Less mortality and duration of coma in HTS group.</td>
</tr>
<tr>
<td>Kumar 2019</td>
<td>India</td>
<td>Open label RCT (n=30)</td>
<td>Severe TBI</td>
<td>HTS group was more responsive with less mean ICP and higher mean CPP than baselines. HTS group had less mortality, duration of ventilation, PICU stays and better outcomes at discharge. No difference was demonstrated between both groups as regards ICP, CPP, ventilation, duration of PICU, mortality, and outcome. Equal results shown in both groups with Less ICP in HTS group after second bolus. Equal ICU admission and duration of ventilation in both groups. However, higher mortality rate demonstrated in HTS treated group (p=0.37). Less mortality and duration of coma in HTS group.</td>
</tr>
<tr>
<td>Roumeliotis</td>
<td>Canada</td>
<td>Retrospective observational (n=16)</td>
<td>Severe TBI</td>
<td>HTS group was more responsive with less mean ICP and higher mean CPP than baselines. HTS group had less mortality, duration of ventilation, PICU stays and better outcomes at discharge. No difference was demonstrated between both groups as regards ICP, CPP, ventilation, duration of PICU, mortality, and outcome. Equal results shown in both groups with Less ICP in HTS group after second bolus. Equal ICU admission and duration of ventilation in both groups. However, higher mortality rate demonstrated in HTS treated group (p=0.37). Less mortality and duration of coma in HTS group.</td>
</tr>
<tr>
<td>Decourcey 2013</td>
<td>USA</td>
<td>Retrospective multicentre cohort study (n=1,632)</td>
<td>Cerebral oedema due to DKA</td>
<td>HTS group was more responsive with less mean ICP and higher mean CPP than baselines. HTS group had less mortality, duration of ventilation, PICU stays and better outcomes at discharge. No difference was demonstrated between both groups as regards ICP, CPP, ventilation, duration of PICU, mortality, and outcome. Equal results shown in both groups with Less ICP in HTS group after second bolus. Equal ICU admission and duration of ventilation in both groups. However, higher mortality rate demonstrated in HTS treated group (p=0.37). Less mortality and duration of coma in HTS group.</td>
</tr>
<tr>
<td>YILDIZDAS 2005</td>
<td>Turkey</td>
<td>Retrospective observational (n=67)</td>
<td>Infection, HIE, ICH, Metabolic</td>
<td>HTS group was more responsive with less mean ICP and higher mean CPP than baselines. HTS group had less mortality, duration of ventilation, PICU stays and better outcomes at discharge. No difference was demonstrated between both groups as regards ICP, CPP, ventilation, duration of PICU, mortality, and outcome. Equal results shown in both groups with Less ICP in HTS group after second bolus. Equal ICU admission and duration of ventilation in both groups. However, higher mortality rate demonstrated in HTS treated group (p=0.37). Less mortality and duration of coma in HTS group.</td>
</tr>
<tr>
<td>Vats 1999</td>
<td>USA</td>
<td>Retrospective pilot study (n=43)</td>
<td>Closed ventricular injuries, Intracranial neoplasm, fulminant hepatic failure, viral encephalopathy</td>
<td>HTS group was more responsive with less mean ICP and higher mean CPP than baselines. HTS group had less mortality, duration of ventilation, PICU stays and better outcomes at discharge. No difference was demonstrated between both groups as regards ICP, CPP, ventilation, duration of PICU, mortality, and outcome. Equal results shown in both groups with Less ICP in HTS group after second bolus. Equal ICU admission and duration of ventilation in both groups. However, higher mortality rate demonstrated in HTS treated group (p=0.37). Less mortality and duration of coma in HTS group.</td>
</tr>
</tbody>
</table>

TBI: Traumatic brain injury; CNS: Central nervous system.
however, there hasn’t been enough evidence to favour one agent over the other.

**Objectives** Compare both the efficacy and side effects of mannitol vs 3% hypertonic saline in paediatric patients with intracranial hypertension caused by traumatic or non-traumatic aetiologies.

**Methods** Inclusive searches of electronic databases were conducted to identify scientific studies directly comparing the effect of mannitol against 3% hypertonic saline in children with increased intracranial tension. Search keywords included ‘mannitol’, ‘hypertonic’, ‘saline’, ‘cerebral’, ‘edema’, ‘intracranial’, ‘pressure’, and ‘hypertension’. Articles that met the inclusion criteria were identified and analysed.

**Results** We identified two randomized controlled trials, four retrospective studies, and two systematic reviews. The primary outcome studied was the improvement in intracranial pressure (ICP) and cerebral perfusion pressure (CPP), as well as mortality, duration of ventilation, and duration of coma.

In most of the included studies, HTS achieved greater reduction in ICP and increase in CPP compared to mannitol. HTS was associated with lower mortality, shorter duration of ventilation, and shorter PICU stays when compared to mannitol in children with traumatic and non-traumatic encephalopathies.

Only one study showed controversial results. This was a retrospective study done in patients with cerebral oedema due to diabetic ketoacidosis (DKA), which showed a higher mortality in the HTS group as compared with the mannitol group (3.7% and 2.6% respectively). However, this result was not statistically significant (p<0.34).

**Conclusions** According to the reviewed literature, HTS appears to achieve a greater reduction in ICP than mannitol with better clinical outcomes. However, there is paucity of high-quality evidence to support these findings. Larger multicentre trials are still needed to develop guidelines regarding which agent is preferred for use in the treatment for increased intracranial tension over the other.

---

**International Child Health Group**

**REFLECTIONS FROM A GLOBAL HEALTH OUT OF EMERGENCY DEPARTMENT ATTENDANCES BY TWO UK-BASED PAEDIATRIC TRAINEES**

Helen Newsome, Jessica Wan. Tropical Health and Education Trust

10.1136/archdischild-2021-rpch.198

**Background** Undertaking global health work can be an incredibly rewarding part of a clinician’s career. Well-designed OOPE’s offer invaluable learning opportunities to benefit the global healthcare community, the individual health-worker and the wider NHS.

**Objectives** To reflect on learning from the design, planning and implementation of a global health capacity building project, with focus on a collaborative approach as well as personal and clinical development for individual volunteers to bring back to their careers in the NHS.

**Methods** Between September 2019 and March 2020, Tropical Health and Education Trust (THET) recruited two paediatric registrars and one non-clinical programme and evaluation consultant to design and deliver a Health Education England-funded paediatric capacity-building project in Lusaka, Zambia. The project was collaborative and was co-designed by the volunteers and the local hospitals in which they were working.

The team worked locally with the paediatric teams in two ‘district level’ hospitals, Zambian Paediatric Association (ZPA) and Zambian Ministry of Health to understand the local healthcare needs, current ways of working and the social, economic and political context for change. Advice was also sought from the wider paediatric global health community (including RCPCH Global Links). Once local needs and priorities for paediatric care were identified, the team worked with local medical staff to design and deliver a bespoke one-day ABCDE training course using a ‘train-the-trainer’ approach to upskill local healthcare workers in the assessment and stabilisation of unwell children.

This project was unusual in global health as it involved non-clinical professionals in volunteer roles on the frontline. Having a mixed project team supported the clinical members to develop their management and leadership skills while planning and delivering a quality improvement project – these are essential leadership skills for NHS clinicians delivering change in complex systems.

**Results** Key learning:

- Collaboration is key, both within local systems and across professions. This project has highlighted several factors that lead to effective design and sustainable improvement of change:
  - Working closely with local and national clinical and political stakeholders from project conception allows for a high degree of buy-in giving local ownership increasing the success of the project. Hands-on clinical work alongside frontline healthcare workers fosters strong relationships to support change.
  - Involving a wider range of clinical and non-clinical professionals in health care (both in the NHS and abroad) improves project design and delivery and allows for skills development.
  - The global health community is becoming increasingly collaborative, with a desire to share learning and prevent duplication of work.

The volunteer clinicians found the project very valuable in terms of personal, clinical and leadership/managerial development. These are transferrable skills that are invaluable for working in the NHS.

**Conclusions** The learning and personal development opportunity provided by designing and delivering a change project within global health is considerable for NHS colleagues. Taking a collaborative approach to health care with local systems, the wider voluntary sector and across different professions can only improve the outcomes for both the global health care community, the NHS and the individuals involved.

---

**Child Protection Special Interest Group**

**EMERGENCY DEPARTMENT ATTENDANCES BY CHILDREN THOUGHT TO BE AT HIGH RISK OF EXPLOITATION**

Jessica Lee, Carrie Hartwell, Tracy Toohey, Janet Craze. Oxford University Hospitals NHS Foundation Trust

10.1136/archdischild-2021-rpch.199

**Background** Safeguarding children is an essential part of clinical care provision. As part of normal practice staff refer to Copyright © 2003 BMJ Publishing Group Ltd. All rights reserved. doi:10.1136/archdischild-2021-rpch.198

**Objectives** To identify and compare demographics and clinical outcomes of children presenting to an Emergency Department (ED) with a presentation thought to be at risk of exploitation.

**Methods** Children aged 5 years and under recorded as being at risk of exploitation by staff in an ED over a 2 year period were identified. Data were collected by trained researchers and included demographics, referral details and outcome. The data were compared against local ED attendances and demographic information of children brought into care over the same period.

**Results** 112 children were included in the analysis. 40% were male, the median age was 1 year. 77% were White British. 22% of referrals were to the Paediatric nurse practitioners and 78% to medical doctors. Of the 112 children, 20% had a documented history of maltreatment in the Child Protection Register. 19% of the children were found to be at risk of exploitation. 48% of these children had a substantiated finding of maltreatment, significantly higher than the local threshold of 10% (p<0.001). The most common maltreatment was neglect (37%) followed by emotional abuse (32%). Children who were maltreated had more hospital admissions, longer hospital stay and more emergency attendances than children who were not maltreated.

**Conclusions** Children identified as at risk of exploitation presented to the ED with a higher rate of maltreatment than local ED attendances. The data suggest that ED staff are sensitised to identify children at risk of exploitation.

The results of the study highlight the importance of collaboration between ED and child protection services. This can identify both early intervention and the need for long-term support.