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

786

REFLECTIONS FROM A GLOBAL HEALTH OUT OF PROGRAMME EXPERIENCE (OOPE): PERSPECTIVES FROM TWO UK-BASED PAEDIATRIC TRAINEES

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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 registrar 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 implementation 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

787

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

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Background Safeguarding children is an essential part of clinical care provision. As part of normal practice staff refer to