commented that the scenario had helped them to understand how to amend the BLS algorithms in view of altered body shapes.

Conclusions This in situ simulation highlights the importance of addressing how techniques and guidance delivered in BLS courses has to be tailored to the child or young person, and yet, is not necessarily discussed in clinical areas. The impact of this scenario demonstrates the power of using in situ simulation to address gaps in collective team knowledge and experiences, and how guidance needs to be written to be inclusive and to maintain quality of care for all patients who use our services.

We aim to run this and similar simulation scenarios involving children with altered body shapes in order to constantly develop the multidisciplinary team skills.

Quality Improvement and Patient Safety

679

'BUT HOW DO WE DO THAT? WHAT DO WE NEED?' USING MULTIDISCIPLINARY SIMULATION TO LEARN HOW TO SAFELY FACILITATE RADIOLOGICAL IMAGING FOR VENTILATED NEONATES

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Background Prior to 2019, magnetic resonance imaging (MRI) for ventilated neonates was not undertaken at our trust. Instead, a dedicated neonatal transport team would transfer the patient to the tertiary centre for imaging and then repatriate the patient. Due to the intensity of resources required for this 40 minute procedure, it was proposed that the teams and facilities at our trust should facilitate this instead. Training on using the transport incubator is provided at induction and team members are designated on the day to assist. Previously, the procedure has taken over 4 hours to complete.

Methods A multi-professional, inter-specialty in-situ simulation was delivered whereby a ventilated neonate was transported from the neonatal unit to MRI. The neonatal and radiology team were briefed and were asked to stay in their normal roles. Once the scenario was completed, the team were debriefed using a diamond debrief model and written feedback was requested to obtain qualitative and quantitative responses.

Results There were 6 candidates from the neonatal and radiology department. Reflective comments were overwhelmingly positive, with candidates explaining how the simulation helped to understand each other's roles or 'the strengths and failings in our common knowledge'. Candidates commented how this simulation had improved their confidence, with the average confidence score in managing this scenario increasing from 3.33 (where 1 is very low confidence to 5 as very high confidence) to 4.5. Two candidates suggested that equipment stocks needed to be re-evaluated e.g. MRI compatible ventilators and two others suggested formalising the process into a checklist or protocol and then running the scenario again.

Conclusions This simulation demonstrated why simulation based education is key to identifying latent threats and knowledge gaps due to systemic flaws. Since conducting this simulation, several changes have been made to the process in line with the candidates feedback. From a neonatal perspective, a

checklist is being ratified as well as a laminated instruction card on how to set up the transport incubator. The MRI team collated key action points and have circulated them to those working with paediatric patients. Overall, the simulation has established a better communication channel for both teams to liaise with each other to improve the patient experience and safety. We aim to run this scenario again when all these interventions have been approved for use.

Association of Paediatric Palliative Medicine

681

BEYOND THE DRUGS – PARENTAL PERSPECTIVES ON MANAGING MULTIFACTORIAL PAIN IN PAEDIATRIC PALLIATIVE CARE

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Background Management of pain in Paediatric Palliative Care can be complex and challenging, and for some children, a single pharmacological agent is not enough. This may be due to the coexistence of several types of pain; difficulty tolerating medications; difficulty describing the pain; and emotional or behavioural overlay. Managing these symptoms is challenging for the child, their carers, and healthcare professionals alike.

Objectives

- To explore the parental experience of multifactorial pain in children with palliative care needs.
- To identify effective communication techniques with children with multifactorial pain, and their parents.
- To review the management of multifactorial pain, both pharmacological and non-pharmacological.

Methods A case-series of children (3 girls, age-range 2–8 years) known to the children's hospice, with complex multifactorial pain were identified. Through an 8 item qualitative questionnaire allowing free-text entry, patient and family experience of pain, coping strategies, and communication techniques were explored. For each case, pharmacological and non-pharmacological methods of pain control were explored. A general inductive approach was used for thematic analysis.

Results

Themes identified were:

Honesty between children, parents and healthcare professionals. One child was very anxious about leaving her mother when she died. Her mother said '*she keeps telling me that she doesn't want to leave me, but we are not religious and I'm not sure what to say*'. Age-appropriate communication about the end of life helped to reduce her agitation.

Listen to parents about signs of pain. **Believe** parents if they say their child is in pain: '*Even if you don't see the pain, don't discount it.*' Being made to feel like they are 'making up' pain, is frustrating and demoralising. One parent was told – '*this type of tumour isn't painful*'.

Being able to respond to breakthrough pain is **empowering** for parents. So is **advocating** for their child: '*Whilst I have no control over the fact that she will die from this in the near future, I can advocate for her to be as comfortable as possible, with as little pain and as little emotional distress as possible.*'

The value of **distraction**, but also the awareness that this may be challenging to provide at home. Limiting sensory

input can help. Allowing the child to find comfort in things they find reassuring.

Parents had a positive experience of their child starting alternative analgesia, such as Ketamine and Methadone.

Conclusions Management of complex refractory multifactorial pain in a child with palliative care needs provides challenges to both the palliative care clinician and the non-specialist. Communication with, and between, children and their parents is key and this is a two-way process.

Honesty with the family, listening to and believing their lived experience are crucial. Developmentally appropriate explanations to the child can provide comfort. The use of breakthrough medication, and advocating for the child's needs help to maximise control for the child and their family.

Alternative analgesia such as Ketamine and Methadone can be used with excellent effect. Non-pharmacological methods, tailored to the child's needs should also be considered.

A holistic, collaborative approach to both assessment and management is key.

British Association of Perinatal Medicine and Neonatal Society

682 HYPOXIA AND BRADYCARDIA EPISODES IN NEONATAL ELECTIVE INTUBATIONS

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Background Hypoxia and bradycardia events are expected common complications during neonatal intubations, characteristics of which is under studied.

Objectives In this prospective audit, we studied the frequency and duration of all hypoxic events, prolonged hypoxic events, all bradycardia events, prolonged bradycardia events and ventilation frequency during neonatal elective intubations

Methods This audit was registered with South Tees audit department.

Audit definitions (based on the study by Poets et al).

- Definition of hypoxemia: Any single or consecutive oxygen saturation (Spo2) value <80%.
- Definition of bradycardia: Any single or consecutive pulse rate (PR) value <80/min
- Prolonged hypoxemia/Bradycardia: Consecutive values of Spo2/PR below the threshold for a period of 60 seconds (consecutive 30 values).
- Episode length: For each episode, the number of consecutive 2-second data values below the threshold was defined as the episode length.

Unit Practice: For all elective intubations we used propofol with or without suxamethonium as premedications. During the intubation procedure, all infants were preoxygenated and ventilated using T piece device.

Data capture and download: Masimo Pulse oximeter (8 seconds averaging time) was applied just prior to commencing elective intubation procedure. Recording was continued until the procedure is completed successfully. Pulse oximeter provided 2 second data on PR, Spo2 and Respiratory rate. All the pulse oximeter data were downloaded directly to the computer.

Abstract 682 Table 1

	N (%) / Median (IQR)
Any Hypoxia	
Number of intubation episodes with any hypoxia	13 (93%)
Median Number of episodes of any hypoxia (IQR)	35 (15–91.5)
Median duration of hypoxic episode in secs (IQR)	40 (12–72)
Severe Hypoxia	
Number of babies with severe hypoxemia	7 (50%)
Median Number of episodes of severe hypoxemia	0.5 (0–1)
Bradycardia	
Number of intubation episodes with any bradycardia	3 (21%)
Median Number of episodes with any bradycardia	0
Median duration of any bradycardia	0
Number of episodes of severe bradycardia	0
Simultaneous episodes with any hypoxia and any bradycardia	3 (21%)
Ventilation rate	
Number of babies ventilated with ventilation rate <30 (n=6)	6 (100%)
Median number of episodes with ventilation rate <30/min	148.5 (78.75–198)

Results We had a total of 10 babies with 16 intubation episodes. Median number of intubation attempts were 2 (1–3). Median Birth Gestational age in weeks was 30 (26–38) and median Birth weight in grams was 1000 (670–3875). Median age in days at the time of intubation was 1 (1–45). We used propofol with suxamethonium (n=8), Propofol only (n=1) and Buccal midazolam (n=1) as premedications. Following were the primary reasons for intubation: Respiratory distress with surfactant deficiency:6; Surgical abdomen:1; Unplanned extubation-reintubation:1; Poor neurology:1 and pneumothorax: 1.

Characteristics of hypoxic and bradycardia events are provided in table 1. Figure 1 shows Boxplot of Spo2 for each intubation episodes.

Conclusions Almost all intubation episodes are associated with hypoxia and half of them are associated with severe hypoxia. Bradycardia episodes are uncommon in our audit. In all of the intubation episodes ventilation rate were less than recommended (<30/min).

International Child Health Group

684 IMPACT OF PARENTAL EDUCATION LEVEL ON TREATMENT SEEKING BEHAVIOUR TOWARDS SUSPECTED CHILDHOOD MALARIA IN AN ENDEMIC AREA

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Background Malaria remains an important cause of morbidity and mortality for children in endemic areas.

According to the World Health Organisation guidelines for treatment of malaria, in endemic areas malaria should be suspected in anybody with a history of fever or temperature >37.5°C. Early diagnosis with prompt and effective treatment within 24–48 hours of symptom onset can prevent progression to severe disease, especially in young children and non-