Abstract 1546 Table 1

Study time point	Initial mean $\pm$ SD weight Z-score	Mean $\pm$ SD weight Z-score at respective time point	Mean difference (95% CI)	P value
1 month (n=21)	-1.92 $\pm$ 1.50	-1.60 $\pm$ 1.46	0.32 (0.07–0.57)	0.01
3 months (n=27)	-1.80 $\pm$ 1.45	-1.28 $\pm$ 1.37	0.51 (0.18–0.85)	0.004
6 months (n=30)	-1.80 $\pm$ 1.41	-1.14 $\pm$ 1.40	0.66 (0.25–1.07)	0.002
1 year (n=32)	-1.82 $\pm$ 1.42	-0.99 $\pm$ 1.21	0.82 (0.35–1.30)	0.001
2 years (n=20)	-2.08 $\pm$ 1.46	-1.32 $\pm$ 1.05	0.76 (0.13–1.40)	0.02
3 years (n=13)	-2.17 $\pm$ 1.43	-1.15 $\pm$ 1.02	1.02 (0.22–1.83)	0.02

reached in a different number of patients at each study time point (table 1).

Conclusions JTF exposes patients to a relatively high risk of complications. At our institution, the vast majority were minor in nature (89.8%). The need for repeated admissions and the possibility of major complications should influence parental discussions and informed consent before the initiation of JTF. Significant improvement to weight Z-scores could be seen at 1 month after the initiation of transpyloric feeds and was maintained at 3 years. We conclude that this form of enteral nutrition can be a moderately safe and efficacious method of feed delivery.

Paediatricians with Expertise in Cardiology Special Interest Group

1548 IMPLEMENTATION OF ROUTINE NEWBORN PULSE OXIMETRY TO IMPROVE CONGENITAL HEART DISEASE DETECTION – A QUALITY IMPROVEMENT PROJECT

Ronell Talker, Jayanta Banerjee. Imperial College Healthcare NHS Trust

10.1136/archdischild-2021-rcpch.711

Background Routine pulse oximetry screening for newborns is not currently recommended by the UK National Screening Committee (UKNSC), though the scheme is increasingly being adopted by maternity & neonatal units around the world. The antenatal detection rate of congenital heart disease (CHD) remains as low as 55% in the UK, with approximately 20–30% of CHD cases being undiagnosed at the time of post-natal discharge. Critical CHD affects 2 in 1000 births and accounts for 3–7.5% of infant mortality, with earlier diagnosis being associated with more-favourable outcomes. Furthermore, newborn pulse oximetry screening has been shown to detect cases of critical CHD, that would have otherwise been missed. **Objectives** Utilising quality improvement (QI) methodology, the primary aim of our project was to effectively implement a Routine Pulse Oximetry programme at a large, tertiary London maternity trust, which delivers approximately 9000 babies per year, such that every baby born across the two maternity units would have pre-ductal and post-ductal oxygen saturations recorded at the Newborn & Infant Physical Examination (NIPE) by paediatricians or midwives.

Methods Using electronic systems (Cerner, Smart4NIPE, BadgerNet), data was prospectively analysed for all babies born at the trust in a 2-week study period in May 2020 (*pre-*

intervention phase). Simultaneously, anonymised questionnaires were distributed to all staff trained in performing the NIPE, assessing their understanding and current practice of pulse oximetry (*surveillance phase*). A four-pronged intervention was subsequently carried out over a 1-month period (*intervention phase*). The results of the interventions were studied for all babies born in a 1-week period in August 2020, assessing the performance of pulse oximetry and its short-term outcomes (*post-intervention phase*).

Results During the 2-week pre-intervention phase, 32/298 babies (10.7%) had pulse oximetry recorded at the NIPE; approximately half of these were performed only due to clinical concerns (murmur, tachypnoea or abnormal fetal echocardiogram). Of all NIPEs performed by paediatricians, 6.9% (6/86) included pulse oximetry, compared with 12.2% (26/212) by midwives. This inconsistent performance correlated with the questionnaire results; 7/55 (12%) practitioners reported performing pre/post-ductal saturations routinely, with less than half correctly stating the acceptable saturation threshold and pre/post-ductal gap, according to local guidelines. Based on the responses, four key areas of improvement were postulated, and changes implemented altogether: these included upgrading ICT facilities for documentation, re-writing trust guidelines, widening multidisciplinary education, and improving the availability of neonatal pulse oximeters. In the 1-week post-intervention phase, 151/151 babies (100%) had routine pulse oximetry throughout the trust. One baby in this cohort was admitted to NICU for 48 hours because of post-ductal hypoxaemia; he was diagnosed with mild PPHN, required oxygen therapy and an echocardiogram showed a structurally normal heart.

Conclusions This project has demonstrated an effective implementation strategy for routine pulse oximetry at a large NHS maternity trust, through multi-disciplinary collaboration and careful QI planning. Future directions are to ensure this is maintained over a prolonged period of study, as well as assessing outcomes of babies with 'positive' pulse oximetry screening and its impacts on long-term CHD detection rates.

Children's Ethics and Law Special Interest Group

1549 VARIATION IN REFERRAL OF NEONATAL DEATHS TO CORONIAL SERVICES IN THE UK

Magali Dubus, Kwok Sean Mun, Vimal Vasu. East Kent Hospitals University NHS Foundation Trust

10.1136/archdischild-2021-rcpch.712

Background Previous, now somewhat historic, data have indicated variation in clinical practice with respect to whether or not a neonatal death is referred to the Coroner or Procurator Fiscal (PF)¹ and variation in how these referrals are managed by the Coroner/PF. From a legislative perspective the duty to refer cases is governed by the Notification of Deaths Regulation 2019.² However, anecdotally there remain concerns about on-going variation in practice. The implications of unnecessary referral include delays in funeral arrangements, family distress and increased workload to an already busy Coroners/PF service. Likewise, non-referral where necessary may have

Abstract 1549 Table 1 Views on whether respondent would refer to coroner/PF

Case	Brief summary of case	Referral	No referral	Unsure
1	22+1/40. HFOV in 100% oxygen. Cranial ultrasound reveals bilateral parenchymal infarcts. Decision made with parents to re-orientate care.	5 (8.1%)	55 (88.7%)	2 (3.2%)
2	38+1/40 Oesophageal atresia. Baby dies 72 hours post-operatively with clinical signs and microbiology confirmation of E. Coli sepsis.	49 (79%)	9 (14.5%)	4 (6.5%)
3	Term. Admitted for therapeutic hypothermia. Abnormal cerebral function monitor trace, abnormal clinical neurology and MRI brain shows profound abnormalities in the thalami and white matter. Decision to re-orientate care. No parental concerns or obstetric care issues.	31 (50%)	24 (38.7%)	7 (11.3%)
4	35/40 Confirmed trisomy 18 with aortic atresia and PDA. Palliative care pathway initiated. Given paracetamol for pain related to bruising. 1 hour later, collapsed and resuscitation unsuccessful.	24 (38.7%)	29 (46.8%)	9 (14.5%)

significant impacts upon the practitioner, the family and from a legal perspective.

Objectives To describe contemporaneous neonatal and paediatric consultant practises with respect to referral of hypothetical neonatal deaths to HM Coroner/PF.

Methods Online survey conducted between July-October 2020 of neonatal and paediatric consultants in the UK.

Results 62 responses were received with the majority being from level 3 neonatal unit consultants (87%). 22/62 (36%) of respondents did not have a policy or guideline for referral to the Coroner/PF (87.1% from level 3 neonatal consultants). 23/62 (37%) believed referral criteria were uncertain or unclear and only 4/62 (6.5%) respondents believed referral criteria to be unambiguous. Views on whether the respondent would refer patients from 4 clinical cases were sought (table 1).

Conclusions Our data suggest clinical uncertainty and therefore, variation when deciding if a neonatal death should be referred to the Coroner/PF except in the context of extreme prematurity and significant postnatal level of critical illness and brain injury (Case 1). This is particularly so for babies who die in the context of therapeutic hypothermia and HIE (Case 3). We propose stronger senior neonatal-Coroner/PF dialogue alongside the already established medical examiner role to reduce variation in clinical practise, protect clinicians and to ensure the right decisions are made for the bereaved family within the confines of existing legislature.

REFERENCES

- Chonlat, S., Lakshman, R., Clements, M., & Iles, R. (2007). Variations in practice among paediatric consultants when referring unexpected neonatal deaths to a coroner. *Archives of Disease in Childhood. Fetal and Neonatal Edition*, 92(3), F234.
- <https://www.legislation.gov.uk/ukxi/2019/1112/made>

British Association of Perinatal Medicine and Neonatal Society

1552

NEONATAL NURSE SHADOWING PROGRAMME: EXPLORING NEW WAYS OF LEARNING IN PAEDIATRICS & INTENSIVE CARE (A PILOT STUDY)

Ronell Talker. *Imperial College Healthcare NHS Trust*

10.1136/archdischild-2021-rcpch.713

Background Holistic and multi-disciplinary care within paediatrics & child health is widely valued, and neonatal medicine is no exception. During a baby's journey in neonatal intensive care, the role of the neonatal nurse is vast and crucial to their wellbeing, offering a blend of skill, knowledge, and compassion to a vulnerable population of patients. As junior paediatricians, the focus of learning mostly revolves around medical diagnoses, resuscitation, and procedural skills. However, rarely do trainees get exposed to the untapped reservoir of knowledge that exists amongst our allied healthcare professionals, notably the neonatal nurses; even rarer is a formal, structured way to access this.

Objectives The benefits of shadowing experienced NICU nurses could be invaluable for paediatric trainees at the start of their career. The primary aim of this pilot study was to launch a new programme involving all senior house officers (SHO) in one 6-month rotation in secondary (Level 2) & tertiary (Level 3) neonatal intensive care. The goals were to add a new dimension to their neonatal education, improve their confidence in troubleshooting bedside problems, improve team cohesion and eventually improve patient care overall.

Methods During the 6-month rotation, every neonatal SHO had at least one day pre-allocated on the rota for 'Nurse Shadowing'. A specific timetable, devised in combination with Neonatal Nurse Educators, allowed supervised experience in caring for premature and term infants on NICU, assisting in drug/trolley checks, and attending nursing meetings. SHOs were given an optional list of skills to observe (e.g. nasogastric feeding). Every trainee was also allocated a nurse mentor on the day. The impact of the pilot programme was analysed using anonymised questionnaires with Likert scale questions (1 = not confident, 5 = very confident), assessing their confidence in the 22 suggested skills before and after the shadowing days – a mean improvement in score for each skill was then calculated. The nursing team members also completed a tailored questionnaire to evaluate their experience of the days.

Results Fourteen SHOs were enrolled in the programme. 14/14 (100%) of doctors would recommend the programme to future trainees, and 13/14 (93%) felt it improved their team-working and relationship with the nursing team. The three most valuable skills for trainees were setting-up a transport incubator (+2.9), using infusion pumps (+2.5) and ventilator/CPAP set-up (+2.2). In every skill assessed, the SHOs felt on average more confident after their experience. Certain skills however, such as iNO use (+0.3) and PN administration (+1.5), were less frequently observed. Seventeen neonatal nurses were involved, and 17/17 (100%) agreed or strongly agreed that participation was enjoyable, improved their