

**Aims** The aim of our study was to assess the existing infection control guidelines and their enforcement for visitors attending tertiary level NICUs across England and to recommend a standard set of guidelines to reduce the risk of infection in infants on NICU.

**Methods** Our study included 46 level 3 NICUs across England during November 2013–March 2014. A survey questionnaire was set and the sister in charge was contacted by telephone.

**Results** Among 46 units, 46(100%) responded to the survey. 27 (58.7%) provided infection control leaflets for visitors, all of those included hand washing. 15 of the 27(55.5%) had multilingual leaflets. 34(73.9%) used a cot-side nurse or receptionist to enforce infection control policies. 11(23.9%) had no restricted visiting times, only if accompanied by parents. 42(91.3%) allowed siblings, however 2 excluded winter, 1 disallowed siblings under 6, and 1 only in infectious outbreaks. 26 (56.5%) had a limited handling policy. All allowed kangaroo care, 28 (60.9%) of which stipulated only when the baby was stable. 10 (21.7%) allowed it any time. 1(2.2%) only permitted on extubation and if lines were taken out. 42(91.3%) prohibited wearing coats. 3(6.5%) had a bare below the elbow policy and 25 (54.3%) asked that jewellery was removed. None of the units asked visitors to remove plain bands. All stipulated hand washing, however 44(95.6%) stipulated hand gelling. 3(6.5%) stipulated the wearing of gowns, and 4 (8.6%) asked visitors to wear gloves, both of which were only necessary if the baby had an infection.

**Conclusion** Our study results have thrown light on variations in infection control policies for visitors to NICUs across England. A set of infection control guidelines and methods for their enforcement are proposed.

### G125(P) UK TRANSFUSION-ASSOCIATED NECROTISING ENTEROCOLITIS CASES IDENTIFIED THROUGH A MULTICENTRE AUDIT

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**Aim** Transfusion-associated necrotising enterocolitis (TANEC) has been reported from The Americas and various European countries at rates comprising 27–38% of necrotising enterocolitis (NEC) cases. While the role of packed red blood cell (PRBC) transfusion in causation of NEC remains debated, there are surprisingly few reports of TANEC in the UK setting. Our aim was to analyse the incidence of NEC and TANEC in UK NICUs using uniform definitions.

**Methods** We undertook a retrospective multicentre audit covering the period October 2011 to November 2014 in four tertiary-level UK NICUs. We assessed whether definite NEC cases (NEC diagnosed surgically via laparotomy, post-mortem, and/or a strict clinical-radiological diagnosis) were also TANEC cases (first onset of NEC symptoms within 48 h of commencement of a PRBC transfusion). Of participating NICUs, three introduced routine probiotic prophylaxis during the study period and one practised routine cessation of enteral feeding during PRBC transfusions.

**Results** 1608 (20.1%) of 8007 babies admitted in the 38-month study period were very low birth weight (VLBW) and 68 (4.2%) had definite NEC. Of these 15 (22.1%) were TANEC; 34 (50.0%) had received prior PRBC transfusion but were not TANEC; 19 (27.9%) had received no prior PRBC transfusion. Across NICUs, the incidence of definite NEC ranged from 4.5–9.7 cases/year (3.6–7.8 per 100 VLWB admissions) and that of TANEC ranged from 0.50–1.95 cases/year (0.4–1.7 per 100 VLWB admissions). The proportion of TANEC/NEC cases within individual NICUs ranged from 11%–40%. TANEC cases were of median birth weight 695 g (range: 527–1070 g) and birth gestation 25<sup>+1</sup> weeks (range: 23<sup>+2</sup>–27<sup>+0</sup> weeks). Median age at start of the index PRBC transfusion was 18 days (range: 0–69 days). Overall, 12 (80%) required surgical intervention and 9 (60%) survived to discharge. Four (27%) TANEC cases occurred in babies who had received prior probiotics.

**Conclusion** TANEC occurs in the UK in proximal association with PRBC transfusion at rates similar to those reported from other countries. Rates of NEC and TANEC vary widely between UK centres. A large prospective UK surveillance study is now indicated to improve the understanding of the causation of TANEC.

### G126(P) AN AUDIT ON HOME NASOGASTRIC TUBE FEEDING PRACTICES IN A REGIONAL NEONATAL UNIT

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**Introduction** Infants who are borderline premature, low birth-weight and multiple births have extended stay within the neonatal unit, primarily to establish feeds. Discharging these infants' home on nasogastric feeds (NGF) to establish feeds, would have significant benefits for family bonding and freeing neonatal cot spaces. However, there is a need for risk assessment as well as parental training. **Aim** To identify the benefits and safety of nasogastric feeding at home.

The objective is to identify the number of saved bed days and costs, infants' growth and support required at home

**Methods** This audit was conducted over a period of 18 months from January 2011 to June 2012. All the infants discharged home on NGF were identified from the community database and data collected from medical as well as community nursing notes. Two days were added to the total, as the unit protocol is to observe infants for 48hrs after fully established feeds, before discharging home.

**Abstract G126(P) Table 1** Home NG feeding after early discharge, and their outcomes

Characteristic	N=30
Sex	Male: 17 (56.7%)
Gestational age at birth	Median: 33.1 weeks
Gestational age at discharge	Median: 36.4 weeks
Gestational age at end of NG feeding	Median: 37 weeks
	Median: 8 days
No. of days NG fed at home	Range: 2–24 days
Birth weight	Median: 1.94 kg
Discharge weight	Median: 2.18 kg
Weight at end of NG feeding	Median: 2.22 kg
Type of feeding	Breast: 18 (60%)

**Results** A total of 30 infants were included in the survey; 22 of these infants were  $\geq 32$  weeks gestation at birth, and the other 8 infants were  $< 32$  weeks gestation. The results are shown in Table 1. A total of 372 days were saved with a cost saving around £167,400 ( $\approx$ £450/scbu day). No family used additional support. No infant was readmitted due to poor growth or skin infection.

**Conclusions**

- Early discharge to home on NG feeds was safe and the infants gained weight appropriately. This saved a median of 8 bed days. The families required routine support from their close relatives and community team.

**G127(P) IS THE NEONATAL LIFE SUPPORT COURSE REALLY THAT STRESSFUL? AN OBSERVATIONAL STUDY**

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**Objectives** To determine whether there is a significant stress response to the neonatal life support airway test (NLSAT) amongst nurses, midwives, doctors and other professionals; to compare level of experience with the stress response measured in each participant and identify whether high stress levels correlate with difficulty passing the NLSAT.

**Design** Quantitative observational study measuring stress levels of candidates on the NLS course using salivettes to measure salivary cortisol levels and a validated anxiety questionnaire (State Trait Anxiety Inventory).

**Setting** NLS course centres in the UK in 2013

**Participants:** 80 healthcare professionals (nurses, doctors and midwives) enrolled on the NLS course.

**Interventions:** Stress levels measured at baseline (10am), immediately before and then 20 min after the initiation of the NLSAT. Demographic data including professional experience and prior exposure to the NLS course was collected.

**Results** Cortisol measurements failed to detect any significant rise in stress levels. Significant stress levels were induced by the NLSAT when measuring anxiety scores with baseline mean scores of 39.63 (11.75), mean pre-NLSAT scores of 48.38 (SD 12.89, p-value  $< 0.001$ ) and mean post-NLSAT scores of 42.82 (SD 13.65, p-value 0.03). STAI scores significantly rose in all professionals from baseline to post-NLSAT ( $p < 0.001$ ) with greatest change detected for midwives (+11.82 (SD 7.64, p-value  $< 0.001$ ) compared to nurses (+8.86 (SD 12.1, p-value  $< 0.001$ ) and doctors (+7.96 (SD 2.9.69, p-value  $< 0.001$ ). There was no impact of experience on stress levels. It was not possible to determine if stress levels impacted on performance due to the low re-sit rate (7.5%).

**Conclusions** Stress levels induced by the NLSAT are significant and need to be considered when instructing and developing the NLS course with variation amongst different healthcare professionals.

**G128(P) ABSTRACT WITHDRAWN**

**G129(P) THE EFFECT OF INDIVIDUALISED CARE ON MATERNAL ANXIETY AND DEPRESSION**

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**Aims** The introduction of individualised care rooms (ICR) at Barnet Hospital has allowed family-centred neonatal care to take place in an environment where the mother is empowered as the main carer for her newborn with the support of trained staff. This study aims to quantify the effect this has on maternal mood in the postnatal period.

**Methods** Mothers of babies that had either been in the special care baby unit (SCBU) or ICR for 3 or more days were asked to complete the Edinburgh Postnatal Depression Questionnaire. The questionnaire is scored out of 30, with a higher score representing more severe concerns regarding maternal mood.

**Results** Questionnaires were handed out to 10 parents in each of the 2 groups. They were returned by 7 parents from ICR and 8 parents from SCBU. The average length of stay was 18 days in the ICR group and 24 days in the SCBU group. The mean score was 4.57 in the ICR group, compared to 10.37 in the SCBU group with a p value of 0.04.

**Conclusion** This study highlights how important maternal involvement and empowerment can be in neonatal care. Improvements in maternal mood will aid bonding and have a positive effect on the emotional and social development of the child and the family unit.

**G130(P) WHAT IS THE EFFICACY OF NITRIC OXIDE IN NEONATES WITH PRETERM PROLONGED RUPTURE OF MEMBRANES?**

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**Background** Preterm prolonged rupture of membranes continues to be associated with significant morbidity and mortality, predominantly as a result of respiratory failure due to pulmonary hypoplasia and/or pulmonary hypertension. Although iNO is not routinely indicated for treatment of respiratory failure in the preterm infant successful treatment with inhaled nitric oxide (iNO) has been reported in small studies.

**Methods** Retrospective review of neonates with PPRM of latency 14 days or more at gestation less than 34 weeks at birth from June 2008–July 2014. Infants with respiratory failure who were treated with nitric oxide were compared to those who had not received iNO, and timing of treatment was correlated with outcome.

**Results** 41 patients with PPRM (range 23<sup>+2</sup>–33<sup>+5</sup> days) were included, of whom 61% (25/41) had respiratory failure with oxygenation index  $> 20$  (OI 53.5 (IQR 38–87). Respiratory failure was associated with ultrasound confirmed oligohydramnios ( $p = 0.01$ ) and male gender ( $p = 0.03$ ). 64% (16/25) of infants with respiratory failure were started on iNO. Within the iNO group all patients demonstrated significant reduction in OI following iNO; 81% responding within 1 h. The median OI prior to iNO 59 (IQR 47–88) vs after iNO administration 7.3 (IQR 4.7–10.8) ( $p < 0.01$ ). Neonates were more likely to respond quickly to iNO if it was started early ( $< 6$  h,  $p = 0.047$ ). This was a small cohort of infants and although infants receiving iNO had a higher OI this did not reach statistical significance. There was no difference in rate of bronchopulmonary dysplasia, intraventricular haemorrhage or mortality between patients who received iNO compared to those who did not.

**Conclusion** PPRM is associated with significant mortality (22%) and morbidity with 92% BPD and 29% IVH grade 3 or above. These babies show significant respiratory failure with