Neonatal Audit Programme (NNAP) suggests use varies according to level of care but did not differentiate dependent on those transferred in.

Method IUT requests are coordinated by the regional transport team. Information was retrospectively reviewed from 01/11/16 to 31/12/16, just after starting collection on magnesium sulphate use. Comparison was made from 01/03/17 to 30/04/17. Gestation, base hospital, risk of preterm delivery and maternal history was also recorded.

Results 189 cases were reviewed, 104 in 2016 and 85 in 2017. 35 were ineligible since gestation was $>34^{+0}/40$. 9.2% patients had no information recorded.

In 2016, 8.5% referrals received magnesium sulphate (5/59). This increased to 11.7% in 2017 (8/68). Only one patient was $>30^{+0}/40$. Twenty neonatal units featured, two from out-of-region. The greatest use was at a level 2 unit (43%). 50% units recorded no use. Most referrals followed rupture of membranes associated with contractions.

Conclusion Magnesium sulphate has clear benefit in the pre-term population but appears to be under-utilised in our region. The majority of women met the criteria for magnesium but had not received it. Findings amongst the IUT group are below those reported by NNAP. Condition was only sought at the time of referral.

Recommendation Increased recognition of national guidance is required alongside inter-collaborative working with obstetric teams. Results have been disseminated at the network meeting and a guideline is in progress. The transport service may offer a unique opportunity to prompt use in this potentially vulnerable group.

G118(P) ASSOCIATIONS BETWEEN POSTNATAL GROWTH RATES AND COGNITIVE OUTCOMES AT AGE 16 YEARS IN INFANTS BORN SMALL-FOR-GESTATIONAL-AGE AT TERM

E Hallinan, M Fewtrell, V Palit, P Winyard, H Bedford. *UCL Great Ormond Street Institute of Child Health, London, UK*

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Background Rapid post-natal growth is associated with increased risk of adult cardiovascular and metabolic disease. In preterm infants, rapid post-natal growth is also associated with improved long-term cognition. Small-for-gestational-age (SGA) term infants have increased risk of adverse long-term cognitive outcomes compared to appropriate-for-gestational-age (AGA) term infants; they are also prone to rapid post-natal 'catch-up' growth. It is therefore important to understand whether rapid post-natal growth in this population confers any long-term cognitive advantage, and balance this with recognised metabolic risks.

Aims To investigate associations between post-natal growth in term-SGA infants and cognitive outcomes in adolescence.

Methods 60 term-SGA infants were followed-up from birth to 16 years. Weight, head circumference (HC) and length were measured at enrolment, 6, 12 and 26 weeks, 9 and 18 months and 16 years. Measurements were converted to standard deviation scores (SDS) and changes in SDS between time points calculated. Cognitive outcomes were measured at 16 years to assess global intelligence (IQ); literacy and academic attainment (Wechsler Individual Attainment Test-reading and maths subtests); and executive functioning (Stroop Colour-

Word test). Univariate and multivariate analyses explored associations between growth and cognitive outcomes.

Results In univariate analysis HC growth from 0–6 weeks was significantly associated with increased Full Scale and Verbal IQ (FSIQ and VIQ). A 1-SDS increase in HC growth over this period was associated with a 7.10-point increase in FSIQ (95% CI: 1.15 to 13.04, $p=0.02$) and a 10.82-point increase in VIQ (95% CI: 3.31 to 18.34), $p=0.006$. However, after adjustment for confounders in multivariate models, HC growth no longer significantly predicted cognitive outcome, whilst maternal education was a significant predictor of IQ, reading and maths scores.

Conclusions A positive association between HC growth from birth to 6 weeks and later IQ was seen. However, this was not significant after adjustment for confounding factors, possibly due to under-powering. Maternal education was a significant predictor of cognitive outcomes at 16 years. Given the recognised risks associated with rapid post-natal growth, this study does not support promoting rapid growth in term-SGA infants.

G119(P) IN-SITU PAEDIATRIC SIMULATION FOR MEDICAL STUDENTS

K Douch, C Branthwaite, G Thian, B Morrissey. *Paediatrics, Royal London Hospital, London, UK*

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Aims Medical students feel unprepared to assess and manage unwell patients, particularly children. We designed an innovative simulation programme, consisting of four interactive paediatric cases, to help medical students learn to recognise serious illness in children and institute appropriate management, and to support them developing skills in prescribing for children, clinical reasoning, team-working and handover. We evaluated the impact of this programme on medical student's confidence in recognising and managing sick children.

Methods We trialled the simulation programme on fourth year medical students undertaking their paediatric placement at a London teaching hospital. Scenarios were run *in-situ* in real-time in a cubicle on the paediatric short-stay unit, and were facilitated by paediatric trainees and consultants. Students took part in four scenarios, over two sessions. All students had previously attended a workshop on recognition and management of the sick child during their child health teaching week.

Students were asked to complete an anonymous survey rating their confidence in 13 areas before and after taking part in the programme. They rated their confidence from one (not confident) to five (highly confident.) They were also asked their views on the programme and learning points.

Results Prior to completing the programme, students were least confident in prescribing emergency medications for children and recognising and managing a child with seizures and shock. Self-assessed confidence in recognising a sick child increased from 2.1 to 3.3 after completing the programme. In all areas, students reported a statistically significant increase in their confidence, particularly in working as a multi-disciplinary team to manage a sick child. Students left comments that the sessions were hugely helpful especially in learning a systematic approach to assess and manage a sick child, prescribing for children, communication and teamwork. Paediatric trainees who facilitated the programme gained skills in leadership, management and facilitation.

Conclusion A paediatric simulation programme run *in-situ* on a paediatric ward increases medical student's confidence in recognising and managing paediatric emergencies, and helps prepare them for working as a foundation doctor. It can also help to develop paediatric trainee's skills in leadership, education and facilitation.

G120(P) 2 YEAR NEURODEVELOPMENTAL FOLLOW UP, A QUALITY IMPROVEMENT PROJECT: MEETING METRICS VS DELIVERING QUALITY ASSESSMENTS

¹M Parmar, ¹N Merchant, ²S Beasley, ¹P Southernwood, ¹B Sivakumar, ¹S Narayanan.
¹Department of Paediatrics and Neonatology, West Hertfordshire NHS Trust, Watford, UK;
²Physiotherapy Department, Peace Children's Centre, Watford, UK

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Introduction Neurodevelopmental outcome assessment is a critical aspect of care for high-risk infants and provides basis for benchmarking, early intervention, and endpoints for research studies. Validated tools are recommended to assess neurodevelopment. National Neonatal Audit Programme data (2013) showed 2 year impairment free survival for <30 weeks was 44% but data was available for only 44%.

Aim To improve 2 year neurodevelopmental assessments and correlate developmental scores with risk factors.

Methods Local data(2013) showed 69% compliance to 2 year appointments with zero formal assessments. Using Quality Improvement Tools we planned to improve formal developmental assessments by 50% and 2 year attendances. Appointments were given on discharge, reminders and alerts set up for 18–30 months range. Real time data monitoring with zero latency feedback was used to drive improvement. Bayley Scales of Infant and Toddler Development III (BSID) was used for the assessment. Moderate delay was defined as composite score –2 to –3SD and severe delay <–3SD in any of the domains. Parental feedback was obtained through an anonymous questionnaire using Likert Scale. Questionnaire asked about pre-clinic communication, staff attitude, parent understanding and communication of BSID outcomes. Data analysed using Microsoft Excel.

Results Average age at assessments was 24.9 months. Table 1 shows steady improvement in 2 year assessments. DNA rates increased initially in 2015 on introduction of BSID assessments but using iterative PDSA cycles this was brought down to 3% in 2017. Mean(SD) composite scores for cognitive domain was 91.9 (14), motor 86.6 (13.7) and language 86.4 (24.8). 14.8% of children had moderate delay and 8.5% had severe delay. There appears to be a significant correlation with birth weight ($p=0.03$) and oxygen days ($p=0.01$) with cognitive domain.

Abstract G120(P) Table 1 2-year assessments over years 2013–2017

Year (July-June)	Eligible babies	2 year form completed(%)	BSID (%) [*]	DNA (%)	Died	Moved out of area
2013	16	69	0	31	0	0
2014	25	80	0	23	0	3
2015	29	100	35	65	0	3
2016	19	89	73	27	1	7
2017	32	100	97	3	0	1

^{*}Excluding moved out area/died

Parental feedback was excellent rating the service as 'very good' (5.5/6 on Likert scale).

Conclusion Dedicated administrative services, timely reminders and active management of DNA's improved the attendance and clinic assessments. Identifying key issues, streamlining service efficiency, potentiated an increase in the neurodevelopmental assessments with excellent parental feedback. Correlation with outcomes will allow for improved support in early infancy and facilitate anticipatory guidance and targeted interventions.

G121(P) THE NEW (2016) JUNIOR DOCTORS CONTRACT: EXPERIENCES OF YORKSHIRE-BASED PAEDIATRICS TRAINEES

¹F Payne, ^{1,2}M Redman. ¹Department of General Paediatrics, Sheffield Children's Hospital, Sheffield, UK; ²Department of Oncology and Metabolism, University of Sheffield, Sheffield, UK

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Aims This project aims to explore the experiences of Yorkshire-based paediatrics trainees of all grades following the recent transition of some trainees to the new (2016) terms and conditions of service (TCS)¹ for junior doctors in England. The authors intend to identify areas which can be addressed to improve the experience of paediatrics trainees in Yorkshire.

Methods An electronic survey was designed and circulated to paediatric trainees of all grades in the Yorkshire School of Paediatrics between 17th–31 st July 2017.

Results Ninety (25%) out of 361 trainees responded (including those on maternity leave, excluding those out of programme). Sixty-six respondents (73%) were full time trainees. The respondents were equally split between those on the 2016 TCS and those on the old (2002) TCS. Thirteen (30%) of those on the new TCS had exception reported, with five of the 13 trainees (38%) having experienced exception reports being actioned within two weeks, and two respondents (5%) having experienced a work schedule review. Nineteen (44%) of respondents were either dissatisfied or very dissatisfied with the new contractual limits on working hours.

The main positive experiences identified were: rest rostering, pay, exception reporting, awareness of rest entitlements.

The main negative experiences identified were: swapping shifts more difficult due to safe working hours limits, rota gaps, pay disparity, lower morale.

Conclusion Work is ongoing to begin to address some of these issues in Yorkshire. The results highlighted both contractual and extra-contractual issues. More work is needed to address concerns identified by paediatrics trainees, particularly around morale and rota gaps. Trainees should be encouraged to exception report and exception reports should be actioned within the appropriate timeline. Further work can be pursued to explore if these results are comparable across England, and across other specialty training programmes.

REFERENCE

1. Junior Doctors Terms and Conditions of Service. NHS Employers. <http://www.nhsemployers.org/case-studies-and-resources/2016/05/junior-doctors-terms-and-conditions-of-service> [Accessed: 14/10/17].