G416(P) A HOSPITAL-BASED SURVEY OF ORAL HEALTH KNOWLEDGE AND PRACTICES OF PARENTS AND CARERS IN DERBYSHIRE

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Background Tooth decay is largely a preventable disease. It affects almost a quarter of 5-year-olds and was the most common reason for hospital admission for children aged 5–9 years in 2014–2015 in England. There is a huge financial burden of tooth decay on the NHS.

The aim of our survey was to ascertain the oral health knowledge and practices of parents and carers of children attending the Derbyshire Children's Hospital.

Method Parents or carers of children attending our hospital were surveyed between August and October 2017 using an anonymised paper-based questionnaire. It was developed using the 'Delivering Better Oral Health' document, which is an evidence-based toolkit published by Public Health England. The questions assessed knowledge, oral hygiene regime and dietary habits. Oral health information leaflet was provided after completion of the questionnaire.

Results Derbyshire Children's hospital is a busy District General hospital with ~87 000 visits in 2016. A total of 800 surveys were completed representing about 1% of our expected attendance per year.

Most, 414 (52%) were ≥7 years old, whilst 217 (27%) were 0–3 years and 166 (21%) were 4–6 years old. Only 187/800 (23%) of children were reported to be brushing their teeth correctly. Additionally, 114/383 (30%) of children ≤6 years of age do not regularly receive appropriate help with brushing. This was significantly worse amongst 4–6 year olds, $p=0.006$. Although 711 (89%) of parents/carers were aware of free NHS dental care for children, only 246 (31%) visited or planned to visit a dentist at the earliest opportunity i.e. as soon as teeth erupt. Parents/carers reported that 172 (22%) of children had unhealthy snacking habits.

Conclusion To our knowledge, this is the first hospital based survey in England. There appears to be gaps in the knowledge of parents/carers regarding good oral health. Our survey also highlighted unhealthy dietary habits with potential implications on oral health and wider impact on health. Oral health should remain in everyone's agenda to enable every child grow up free from tooth decay and have the best start in life. We propose oral health promotion and education for parents, carers and children. Hospital visits provide an excellent opportunity.

G417(P) THE IMPACT OF NON-24 HOUR BLOOD CULTURE INCUBATION AND REPORTING ON THE NEONATAL UNIT

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Introduction A plan to centralise microbiology services in the region has led to a proposal to instal a local incubator near NICU or Paediatric ward. This due to the general consensus that 24 hour blood culture incubation and reporting will

improve our clinical care and shorten the duration of antibiotic therapy and hospital stay of patients. Currently, laboratory staff will incubate blood culture samples only during working hours of 8–12 hours. Negative blood culture at 36 hours, with normal infection markers will allow us to stop antibiotic therapy where a baby is not septic.

Aim To assess the implication of non-24 hour blood culture incubation and reporting on clinical management of babies on the neonatal unit.

Method This was a retrospective audit carried out over 3 weeks. Information was sourced from Laboratory reports, prescription charts and medical notes. Babies admitted from other hospitals, whose blood cultures had already been taken were excluded.

Results 28 babies were audited from NICU, HDU and SCBU. 22 were screened for early onset sepsis, and 6 babies screened for late onset sepsis. 1 positive blood culture result found. 22 babies had normal CRP at the time of screening and 12–24 hours after the start of antibiotics.

- Time of blood culture taken to start of incubation-

Range: 1 hour 16 min – 13 hours 10 mins

Average: 7 hours 13 mins

- Time of blood culture taken to 36 hours incubation-

Range: 36 hours 50 mins – 49 hours 18 mins

Average: 43 hours

- Duration of antibiotics therapy:

- 5 or more days for 7 babies

- 60 hours for 4 babies

- 36 hours for 2 babies

- 48 hours for 14 babies

Conclusion Non-24 hour incubation and reporting of blood cultures affect the duration of antibiotic therapy. It has no significant impact on the hospital stay on the neonatal unit. However, a similar audit on the postnatal and paediatric ward will show a significant effect of antibiotic duration on hospital stay and its cost to the trust. A local incubator will be essential to the neonatal and paediatric unit.

British Academy of Childhood Disability and British Association for Child and Adolescent Public Health

G418 THE CLINICAL SPECTRUM OF DORSAL STREAM DYSFUNCTION IN AUTISM – A RETROSPECTIVE COHORT STUDY OF 13 CHILDREN

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Aims Bilateral dysfunction of the parieto-occipital cortex, linked to the visual cortex by the dorsal stream, variably produces simultanagnosia (SIM), optic ataxia (OA), and gaze apraxia. This triad, rarely reported in childhood, comprises 'Balint syndrome'. 'Dorsal stream dysfunction' (DSD) describes milder degrees of this disorder.

This study aimed to determine the character and severity of DSD in a cohort of autistic children and to identify possible prognostic indicators for targeting specialist support.

Methods 13 able children with autism, sequentially receiving a tertiary neuro-ophthalmic diagnosis of DSD, were followed up over 6 years. Records were retrospectively reviewed for neuro-developmental and neuro-ophthalmic examination results.

Age-inappropriate configural disruption of elements of drawings was identified in the Beery-VMI Test of Visual-Motor Integration (VMI) as evidence of SIM and standard VMI scores (VMIS) were used to measure the severity of SIM. Still-frame analysis of video was used to confirm diagnoses of OA using the criterion of impaired terminal grip size relative to the target grasped. Severity of visual functional impairment was rated on mean individual Cerebral Visual Impairment Inventory scores (MCVIS) using as reference the 90th percentile cut-off MCVIS of 0.74 for the typically developing population.

Correlation between MCVIS and VMIS was determined by linear regression analysis. Method agreement analysis for OA in central vision and motor coordination impairment (MCI), measured by the Beery Motor Coordination assessment, was determined by Cohen's weighted Kappa statistic (K).

Results Significant correlation was found between MCVIS and VMIS: $r = -0.77$ [95%CI: -0.93 to -0.83], $p = 0.002$. Five children required specialist visual impairment (VI) support. The MCVIS for this group (3.05) differed significantly from the MCVIS for the non-support group (1.91) [difference 95% CI 0.74–1.55], $p < 0.0001$. Agreement for severe MCI (≤ 5 th percentile) with central OA was significant: $K = 1$ [95% CI: 0.46 to 1.54], $p = 0.0002$.

Conclusions SIM may account for the visual perceptual impairment seen in ASD and OA may underpin motor impairment. MCVIS and VMIS may be useful indicators of the need for specialist VI support.

G419(P) DEVELOPMENTAL DECODING: NOVEL METHODS TO TACKLE THE MENACE OF CHILDHOOD NEURODISABILITY IN NORTHERN INDIA

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Background There is a lack of integrated services for childhood neurodisability in Northern India.

Methods A Child Development Centre was set up by UK-trained Paediatricians to understand existing problems, plan new interventions and compare outcomes. Children with a diagnosis of neurodisability (developmental delay, behaviour issues and learning problems) were eligible. Children with blindness, deafness, severe quadriplegia and progressive neurological disorders were excluded.

This study was conducted in 2 phases (table 1). In phase 1 (November 2014–November 2016) children were treated using existing interventions led by therapists. Problems were identified and an intervention programme based on developmental decoding and home-based environmental modification was developed and piloted in Phase 2 (December 2016 onwards).

Problems: phase 1

- Lack of integrated services.

- Delayed diagnosis and lack of individualised support after diagnosis.
- Independent therapists working in isolation.
- Inadequate parental counselling and support. Parents expecting 'magic cure'. High drop out rate.

Changes for phase 2

- Interventions based on Griffith's 3 developmental assessment and modified based on diagnosis and individual profile. An interventional algorithm (software) was developed which provided individualised intervention plans, monitored child's progress and parental compliance.
- All children work towards functional goals. Final (long-term) goals broken into levels (short-term goals).
- Use of multimedia for parental counselling.
- Parental training for home environment modification.

Results

Abstract G419(P) Table 1

Total (n=468)	Phase 1 (n=357)			Phase 2 (n=111)		
	No of children	Target progress achieved	Drop outs	No of children	Target progress achieved	Drop outs
Autism Spectrum Disorder(ASD)	138	24 (17.4%)	114 (82.6%)	37	19 (51.4%)	18 (48.6%)
Cerebral Palsy	108	18 (16%)	90 (83.3%)	40	26 (65%)	14 (35%)
Global development delay	50	12 (24%)	38 (76%)	17	12 (70%)	5 (29%)
Intellectual disability	47	9 (19%)	36 (76%)	10	7 (70%)	3 (30%)
Dyslexia	14	3 (21%)	11 (78.5%)	7	4 (57%)	3 (43%)

Phase 2

- Marked improvement in target progress and decline in dropout rate was noted.
- Parents felt motivated and empowered.

Conclusion

- Developmental decoding and environmental modification have shown promising results in the management of childhood neuro-disability across a diaspora of diagnosis.
- Information technology was useful in implementation.

G420(P) BEHAVIOURS THAT CHALLENGE: IMPORTANT PROMPTS FOR COMPREHENSIVE PAEDIATRIC ASSESSMENT?

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Aim To determine the incidence of previously unrecognised chromosomal, neurodevelopmental (e.g. autism spectrum and attention deficit, learning disability) and other conditions in