Results 32 children (18 boys, 14 girls) were identified who required PN for intestinal failure for combined total of over 12,500 PN days. 9 children had no positive blood cultures. There were 126 positive blood cultures (27 organisms isolated) in the remaining 23 children. Of the 21 children who used a heparin-saline based catheter lock, 86% had one or more CRBSI. 11 children used a taurolidine-based catheter lock, with only 45% having one or more CRBSI.
Conclusion There was a significant reduction in the incidence of CRBSIs in those children using taurolidine-based catheter locks (TauroLock™) compared to heparin locks. There was an absolute risk reduction of 40.3% (95% CI 7.25 – 73.3%) with a numbers needed to treat (NNT) of 3 (95% CI 1.4–13.8). The use of taurolidine locks on all children on long-term home PN could reduce morbidity and morality, and have a significant impact on the associated costs of CRBSIs. Taurolidine-based catheter locks should be considered for all children on long-term PN.

G205(P) STOOL SHORT CHAIN FATTY ACID CONCENTRATIONS IN A COHORT OF PRETERM VERY LOW BIRTH WEIGHT INFANTS WITH AND WITHOUT NECROTISING ENTEROCOLITIS

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[1]LM Beattie, [2]K Gerasimidis, [2]CA Edwards, [2]AR Barclay, [1]JH Simpson, [2]DJ Morrison. *[1]Neonatal Unit, Royal Hospital for Sick Children, Yorkhill, UK; [2]Department of Child Health, University of Glasgow, UK*

Introduction Diagnostic markers of necrotising enterocolitis (NEC) remain evasive. Stool short chain fatty acids (sSCFAs) are a product of bacterial fermentation of undigested carbohydrate and protein noted to alter in animal models of NEC. According to the Lawrence Hypothesis, they may be causative of NEC. We sought to correlate changes in sSCFAs over the first month of life in a cohort of preterm, very low birth weight infants with and without NEC.
Methods 56 sequentially recruited infants <32 weeks and <1.5Kg birth weight within week 1 of life. Stool samples taken once weekly for the first 4 weeks, analysed by gas chromatography-mass spectrometry (mcg/g wet weight). 11 individual acids were measured: acetate, lactate, isobutyrate, butyrate, isocaproate, caproate, isovalerate, valerate, octanoate, heptanoate and lactate. NEC was diagnosed by consultant, external collaborator and radiologist, using Bell's Criteria.
Results N = 56 infants (83% recruitment). 20 developed ≥Bell's 2a. 8 required surgery (5 ileostomy). Further clinical/demographical information can be found in abstract BEAT82431. There were no correlations between gestation, feed, NEC and sSCFAs. No significant differences were observed in weekly totals. Wide interquartile ranges were noted (Week 1: 20.9 ± 26; Week 2: 15.8 ± 19.1; Week 3: 13.2 ± 20.8; Week 4: 12 ± 22.9). Acetate and lactate dominated each sample, regardless of gestation, feed or NEC ($p < 0.05$). Subgroup analysis revealed significant differences in stage 2a and 3b NEC. Stage 2a showed higher concentrations of propionate in week 4 than week 3 (0.74 ± 6.45 Vs 0.15 ± 0.17, $p = 0.05$ MWU), and lower valerate in week 4 than 2 (0.00476 ± 0.012 Vs 0.0129 ± 0.028, $p = 0.02$ MWU). Stage 3b isobutyrate and heptanoate concentrations were significantly lower in week 4 than 3 (I: 0.007 ± 0.026 Vs 0.053 ± 0.09, $p = 0.03$; H: 0.011 ± 0.013Vs 0.023 ± 0.043, $p = 0.03$).
Conclusion Despite a wide variation in clinical status, the levels of sSCFAs remained remarkably consistent. Small yet significant differences in minor sSCFAs were seen in subgroup analysis in those with stage 2a and 3b NEC. Reasons for the high incidence of NEC require further investigation.

G206(P) THE IMPACT OF ESPGHAN GUIDELINES ON THE INVESTIGATIONS FOR COELIAC DISEASE

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[1]M Bhardwaj, [1]H Banoub, [2]N Sumar, [1]M Lawson, [1]S Chong. *[1]Paediatric Gastroenterology, Queen Marys Hospital for Children, Carshalton, UK; [2]Immunology, St Heliers Hospital, Carshalton, UK*

Background Coeliac Disease (CD) is an immune-mediated systemic disorder elicited by gluten and related prolamines in genetically susceptible individuals.[1] The diagnosis of CD depends on gluten dependant symptoms; CD-specific antibodies – against TG2, endomysial antibodies (EMA), and deamidated forms of gliadin peptides (DGP); the presence of HLA-DQ2/HLA-DQ8 and characteristic histological changes in duodenal biopsy. ESPGHAN guidelines suggest histological assessment may be omitted where clinical symptoms may be attributed to CD in addition to a high IgA anti-tTG levels (>10 times the upper limits of normal for the reference laboratory), verified by EMA positivity and HLA DQ2/DQ8 positivity.[1]
Aim Review the possible impact of ESPGHAN guidelines on the number of patients requiring histological assessment for CD.
Methods 3 year retrospective review of serology and histology of children screened for CD.
Results January 2009 – January 2012, 729 children screened. 32 positve with normal IgA levels.
Conclusion All but 1 patient with high anti-tTG levels (>10 X) had characteristic histological changes. Anti-tTG levels <10 X normal range in all samples from January 2010 – 2012 and 68% of all positive samples. Our results suggest that in most cases histological assessment will continue to play an important role in the diagnosis of CD. A multicentre prospective study on CD is currently underway.

Abstract G206(P) Table 1

Group 1 (January 2009–2010) anti-tTG <12U/ml			
anti-tTG (U/ml)	N = 19	Histology positive	Histology negative
12–18	2	1	1
18–60	4	2	2
60–100	3	3	0
>120	10	8	1
Group 2 (January 2010–2012) anti-tTG <10U/mL			
	N = 13		
7–10	3	3	0
10–50	6	4	0
50–100	4	4	0

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Young Persons Special Interest Group/Child Public Health Interest Group

G207 IS THERE A LINK BETWEEN ADHD AND SOCIAL DEPRIVATION?

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L Apperley, R Mittal. *Department of Community Paediatrics, Countess of Chester Hospital NHS Foundation Trust, Chester, UK*

Aim Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder that affects approximately 4–6% of school-aged children. Research into the aetiology of ADHD has focussed on genetic and biological factors, with much less information on environment and social aspects. There is a general perception that

ADHD is linked to deprivation, but there are not enough studies in literature to prove or disprove this assumption. The aim of this study was to investigate the relationship between social deprivation and ADHD.

Method We included all patients diagnosed with ADHD by the community paediatric department (only those on medications). Postcodes of these patients were used to produce deprivation scores, which included overall deprivation and sub-scores for income, social and housing factors. Indices of Deprivation 2010 are available for 32,482 small geographical areas (Lower Super Output Areas, LSOAs) in England, ranked from 1 (most deprived) to 32,482 (least deprived). These are further divided into fifths to produce English deprivation quintiles. Each postcode was then allocated to a quintile based on their deprivation score, where quintile 1 represents the most deprived.

Results A total of 144 patients diagnosed with ADHD were being treated with medication. The male to female ratio was 4.5:1 (M: F). The deprivation scores were calculated and it showed that 64 patients (44.4%) were in the most deprived quintile (quintile 1), and followed in a relatively linear pattern. A similar pattern was seen for income, crime, employment, education, skills and training domain and health deprivation and disability, where 69, 57, 74, 69 and 59 patients were placed in quintile 1, respectively.

Conclusion Our study shows an association between the prevalence of ADHD in children and deprivation index. Also there is clear link between sub scores for income, crime, employment, education, skills and training domain and health deprivation and disability and prevalence of ADHD.

Indices of deprivation could be used to predict the expected prevalence of ADHD within the community and thus plan allocation of resources. Ours is a small sample size, but results support further investigation with a larger study.

G208 DISTINCT HEALTHCARE PRIORITIES IN EARLY ADOLESCENCE

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[1]RJ Bensted, [2]DS Hargreaves, [3]J Lombard, [4]U Kilkelly, [5]RM Viner. *[1]Endocrinology, Barts and the London NHS Trust, London, UK; [2]Institute of Child Health, UCL, London, UK; [3]University College Cork, Cork, Ireland; [4]University College Cork, Cork, Ireland; [5]Institute of Child Health, UCL, London, UK*

Aims To investigate differences in healthcare priorities between children (<12 years), adolescents (13–15 years) and young adults (16–18 years).

Methods Data were analysed from the 2010 Council of Europe survey into child-friendly healthcare. 2023 respondents under the age of 18 from 8 European countries rated the importance of 9 healthcare factors.

Having your parent/family with you
Knowing the name of the doctor/nurse
Having treatment explained in advance/being prepared
Being able to understand what the doctor is saying
Being able to ask questions
Being listened to
Not being afraid
Not being in pain
Not feeling rushed

The relative importance of items was compared within each age group using mean score differences and between age groups using logistic regression.

Results All age groups rated being listened to as the most important item. Children rated being with parents more important than understanding the doctor (mean difference (x) = 0.47 (95% Confidence Interval 0.21,.72)). This finding was reversed among adolescents (x = –0.74 (–0.97, –0.50)) and young adults (x = –1.67 (–1.95, –1.38)). Similarly, being with parents was rated more important than being able to ask questions for children (x = 0.91 (.62, 1.21)) but the reverse was found for adolescents (x = 0.36 (–0.62, 0.11)) and young adults (x = –1.44 (–1.75, –1.14)).

Among children, pain control scored higher than understanding doctors (x = 0.31 (.07, 0.54)) and asking questions (x = 0.80 (.51, 1.08)). There was no significant difference between these items for adolescents (x = –0.09 (–0.32, 0.13)) and x = 0.24 (.00, 0.48)) respectively. Among young adults, pain control was less important than understanding doctors (x = –0.38 (–0.61, –0.14)) and equally important to asking questions (x = –0.22 (–0.48, 0.03)).

The changes in relative priorities between childhood and adolescence remained significant in the logistic regression models after adjusting for sex, long standing illness and nationality (all $p < 0.001$).

Conclusion Healthcare priorities differ significantly between childhood and early adolescence. However, being listened to was rated the most important priority at all ages.

G209 MANAGING SUBSTANCE MISUSE IN YOUNG PEOPLE – WHAT WORKS?

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J Beckmann. *Northwick Park Hospital, North West London Hospitals NHS Trust, London, UK*

Alcohol and Drug use in Young People is a current national topic of great curiosity which occasionally, junior doctors manage with less interest during busy A&E shifts and pressing admission beds. A taboo subject infrequently discussed in the Paediatric/Adolescent patient history, health professional competence in assessing risk may also be variable, but could be improved by a strong presence of multi-departmental teaching, publicity of accessible intranet management guidance and on-site service information-specific patient and parent leaflets.

A retrospective analysis of attendance data for 9–17 year-olds to a busy District General Hospital Accident and Emergency Department during a peak festive and school holiday season was conducted. Young persons presenting with potential substance misuse risk factors were identified from diagnosis codes and filtered for specific substance misuse concerns. Highly suspected cases were then audited for management and discharge outcome at point of departure from the department.

A total of 334 young persons between the age of 9–17 years presented to our A&E Department between December 2011-January 2012. Forty (12%) had diagnosis coding for alcohol intoxication, alcohol withdrawal, deliberate drug overdose, head injury, alleged assault, faint, road traffic accident injuries undetermined, psychiatric problem, hyperventilation, collapse and injury to face. Of these, 9 (22.5%) were young persons between 15–17 years-old and identified as high risk for substance misuse. Only 1 case was referred to the Adult medical team, and was admitted, but none of the remaining patients were referred to a Paediatric team and were discharged home or had absconded. Only 1 patient had a documented use of a "Substance Misuse Assessment Tool", and none had Psychiatric or CAMHS input nor were referred to a Young Person-specific Substance Misuse service.

Health professionals who regularly manage young people in A&E, including A&E nursing staff need essential training in assessing Young People for Substance Misuse. Young Person-specific Substance Misuse clinical guidelines would be useful to increase case management confidence for Paediatricians, junior A&E doctors and Adult Physicians. A valuable resource to the NHS, referral to Young Person-specific services in Substance Misuse should be considered in these guidelines. Multi-departmental, multi-disciplinary agreement is imperative for successful implementation.