

CENTRE FOR CHILD AND ADOLESCENT HEALTH



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ADOLESCENT HEALTH

Annual Report 2008 – 2009



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Director's report



The Centre for Child and Adolescent Health has continued to grow and develop during 2008-9, and this annual report summarises our activity and achievements.

During this academic year, the challenge has been to integrate together groups of researchers on 3 sites in Bristol- at Hampton House, Barley House and St Michael's Hospital. We are now much more one 'Centre', but have to face further moves and re-organisation in the summer of 2010.

This year we said goodbye and thank you to Nicola Eaton, who had been with us since the opening of the Centre in 2003, and celebrated the promotion of Esther Crawley as a new Consultant Senior Lecturer on an NIHR Clinician Scientist award, and Julie Mytton as Senior Research Fellow and Consultant in Child Public Health. Cathy Williams was also successful in obtaining an NIHR Career Development Award and will be starting as a CSL in January 2010. John Henderson was promoted to a chair in paediatric respiratory medicine and will be taking an increasing role at the Centre.

In research, members of the Centre contributed to successful returns in RAE 2008, for both University of Bristol and University of the West of England. These returns were two different units of assessment, (epidemiology and public health, health services research, psychiatry and neurology, and nursing and midwifery), so it was difficult to package our collective research contribution and excellence. However, our research income and output has again increased this academic year, and our main research themes are now self- sustaining.

In teaching, the International Health BSc course continues to be very popular, attracting a very high calibre of students, and an exciting development this year was the production of an e-learning tutorial in international development, which has been piloted and evaluated and will be made more widely available in the next year. Jo Brooks has become the '3D' lead (disadvantage, diversity and disability) for the MB medical course and she started work at the Centre in April 2009.

In translation and policy development, members of the Centre are contributing to government policy at the Departments of Health, Children Schools and Families and Transport, and to NHS practice through NICE and JCVI.

I am particularly grateful for the continuing support of Elizabeth Towner, the deputy director of the Centre, and was very pleased that her international contribution to child health was recognised by the awarding of an honorary fellowship of the Royal College of Paediatrics and Child Health in April 2009.

I hope you enjoy reading the report, and will visit our website for more information

Alan Emond, September 2009

Background

The Centre for Child and Adolescent Health was established in 2003, as a joint initiative between the University of Bristol and the University of the West of England. The Centre is managed by a steering group, with representation from both Universities and our NHS partners North Bristol Trust and University Hospitals Bristol Trust

The aim of the Centre is to promote the academic study of child health through inter-professional collaboration.

Our philosophy is to integrate research with teaching and policy development.

Our priorities are:

- to improve our understanding of the complex interaction between genetic and environmental factors on child health
- to initiate the development and evaluation of new multi-disciplinary initiatives in community child health
- to build up the evidence base for clinical activity and encourage nurses and professionals allied to medicine to undertake independent research
- to undertake innovative research into the interface areas between paediatrics and child mental health which are an important part of the chronic morbidity of childhood today
- to give undergraduates a broad view of the multiple factors affecting children's health
- to promote inter-professional learning for postgraduate health workers

Research

Our research programme is structured into four main themes:

- 1) Child Development and Disability
- 2) Nutrition and Development
- 3) Child and Adolescent Injury and Safeguarding
- 4) Children with Complex Health Needs
 - a) Palliative Care
 - b) Chronic Fatigue Syndrome (CFS/ME) in Children and Young People

There are two cross-cutting themes:

- 1) Children and Young People's Participation
- 2) International Child Health

RESEARCH THEMES

Child Development and Disability

Lead: Alan Emond, with Jean Golding, John Henderson, Peter Fleming, Peter Blair, Cathy Williams, Carol Joinson, Toity Deave, Raghu Lingam, Tom Allport, Matthew Ellis, Maria Bredow, Jane Heraghty.

Collaborators: Jon Pollock, Bhupinder Sandhu, Nichola Rumsey and Sue Roulstone (UWE), Jon Heron and Kate Northstone (ALSPAC), Oliver Stanley and Peta Sharples (UHBristol), Kapil Sayal (University of Nottingham), Dido Green (Guys and St Thomas', London), Eileen Birch (USA), Jez Guggenheim (Cardiff), Gordon Dutton (Glasgow), Mike Burdon (Birmingham), Robyn Tapp (London), Seang Mei Saw (Singapore)

Our main interests are:

- Evaluating methods to promote the early identification of developmental problems in childhood
- Investigating the trajectories through childhood leading to developmental impairments
- Building up the evidence base for clinical practice with disabled children in community child health

1. Hospital admissions for disabled children

Tom Allport is leading a multi-agency team that has been studying disabled children admitted to hospital in Bristol Royal Hospital for Children since 1999, establishing demographics, auditing quality of care, assessing nurse confidence and training needs, surveying parent experience, and investigating factors that lead to prolonged or delayed discharges. They have demonstrated that disabled children make up a significant part of the hospital workload: 6.5-6.8% of all children admitted, with length of stay nearly twice the hospital average despite similar profiles of referral and admission other than inter-hospital transfer, and 15% admitted to Intensive Care during their stay. Studying long-stay admissions in more detail during a single month, delayed discharge (for non-medical reasons) was identified in 8 patients (30% of those inpatient for more than 7 days), representing >£50,000 opportunity cost for the hospital and £95-150,000 additional (post-tariff) cost to commissioners. Further work is planned to look at patterns of delay across a larger group of patients, in a whole-hospital population, including disabled children.

2. Developmental Coordination Disorder (DCD)

Raghu Lingam is undertaking a PhD involving quantitative analysis of ALSPAC data looking at the prevalence, impact and associations of DCD in primary school aged children and a qualitative analysis, to explore health care provision and the experience of disability through interviews of teenagers with DCD. In collaboration with Dido Green, Senior Occupational Therapist at Guys Kings and St Thomas' they are using the same dataset to investigate the relationship between motor coordination and at 7 years and physical activity at 11 years.

3. Autistic spectrum disorders

A major MRC grant to Jean Golding and Alan Emond has resulted in a large number of studies concerning the aetiology of the disorder and the autistic traits. These include: (a) the prevalence of the disorder; (b) the relationship between head growth in infancy and the disorder; (c) the bowel habits in early childhood of children later diagnosed with the disorder; (d) delineation of the traits making up the disorder; (e) the relationship with parental and grandparental age; (f) relationship with maternal infection, especially influenza, in pregnancy; (g) middle ear disease in early life and autistic spectrum disorder

4. Children with visual impairment

Cathy Williams and colleagues work on the epidemiology of problems in visual development: myopia (with Dr Jez Guggenheim and George McMahon in Cardiff); stereopsis (with Dr EE Birch in Cardiff) and cerebral visual impairment (with Prof G Dutton in Glasgow). Ongoing research is looking at the impact of different vision problems on different aspects of children's lives, including educational attainment, self-esteem and social interactions. Planned future work involves using new tests designed to help identify children with visual processing problems, to estimate their usefulness in assessment and to monitor the effect of supportive strategies .

5. Speech development

We are collaborating on a series of studies on stammering and speech development using the ALSPAC data, led by Prof Sue Roulstone of the Speech Therapy Research Unit at UWE

6. Melatonin in disabled children

Tom Allport, Matthew Ellis and Alan Emond are local investigators on a national multi- centre trial funded by the HTA, called MENDS: The use of Melatonin in children with Neuro-developmental Disorders and impaired sleep; a randomised, double-blind, placebo-controlled, parallel study. This trial is being co-ordinated through the SW Medicines for Children Network, and recruitment is underway at Southmead Hospital and Tyndall's Park Children's Centre.



7. Depression and puberty

Carol Joinson is PI on an ESRC funded project examining the development of depressive symptoms from late childhood into adolescence. The overall aim is to increase understanding of the impact of gender, pubertal status and environmental adversities on the emergence of depressive symptoms. In particular, the project investigates the link between onset of puberty and depressive symptoms and examines differences in risk factors for pre-pubertal versus post-pubertal depressive symptoms. Carol is main supervisor to a PhD student (from October 2009) who will be examining the role of interpersonal stress in the link between early pubertal maturation and depressive symptoms in females.

8. Parenting and child development

Toity Deave is working on ways to help first time parents prepare for the challenges of parenthood. She is also collaborating on the evaluation of the parenting intervention in the Flying Start programme in Wales.

9. Respiratory function

Jane Heraghty is measuring respiratory muscle endurance in children with disabling neuromuscular disease. John Henderson is undertaking a series of studies using ALSPAC on the epidemiology and life course trajectories of respiratory function through childhood and adolescence, funded by the MRC. He is part of the development of the Study Team for Early Life Asthma Research (STELAR), sponsored by Asthma UK, and recently the recipient of an MRC award. He is the Bristol lead researcher for the EU funded GABRIEL study of asthma and allergy genetics, collaborating with 26 other research groups across Europe.

10. South West Congenital Anomaly Register

SWCAR aims to provide an accurate picture of the incidence of birth anomalies across the South West of England from Cornwall to Wiltshire. Since January 2002 we have been collecting data on all suspected and confirmed congenital anomalies identified in utero, at birth or in childhood. We collect any anomaly newly diagnosed up to a child's 18th birthday, and include stillbirths, terminations and miscarriages where an anomaly is present.

We aim to provide an accurate source of data on congenital anomalies to aid surveillance of birth defects and to act as a resource for research, audit and service planning. We have had over 54 requests for data over the past 4 years. Some of the projects we have participated in include audits into antenatal screening, terminations due to anomalies, exomphalos, fetal echocardiography referral and Folic Acid in neural tube defects, service planning and supporting an increase in NICU cots, Down's syndrome rates and when detected plus an on-going study relating to landfill sites.

Our website (www.swcar.org.uk) provides information on regional and hospital data by anomaly group, maternal age, outcome and when detected. SWCAR also feeds data to the National Congenital Anomaly System run by the Office for National Statistics.

Nutrition and Development

Leads: Jenny Ingram and Pauline Emmett, with Debbie Johnson, Alan Emond, Jean Golding, Cathy Williams, Colin Steer, Vicky Cribb and Zia-ud Din.

Associate researchers: Marcus Pembrey, Richard Jones

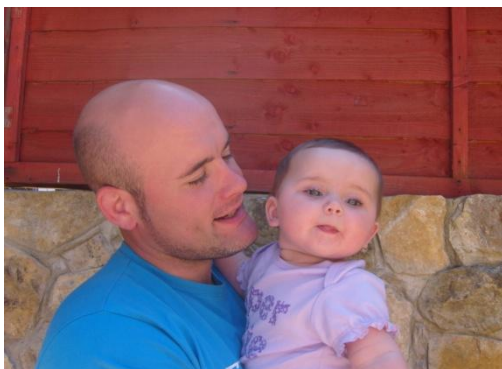
Collaborators: Ken Ong (Cambridge), Imogen Rogers (Brighton), Joe Hibbeln, John Davis, Kirstin Newby, Eileen Birch (USA), Alex Richardson, Silvia Parracchini (Oxford), Patrick Bolton (London), Dieter Wolke (Warwick), Alison Lennox and Susan Jebb (Cambridge) and colleagues in Dept of Social Medicine, Bristol (George Davey-Smith, Kate Northstone, David Gunnell, Louise Jones, Jackie Bishop, Karen Birmingham) and Jeff Holly.

Our main interests are:

- Nutrition in pregnancy, childhood and adolescence
- Breastfeeding
- Nutrition and neuro-cognitive development
- Growth faltering (Failure to thrive)
- Growth and obesity
- Intergenerational studies
- Gene environment interactions

1. Breastfeeding support.

i) The UNICEF Baby Friendly Initiative (BFI) programme supporting breastfeeding has been rolled out to all community settings in *NHSBristol*. Jenny Ingram and Debbie Johnson have been evaluating the effects of BFI training on breastfeeding rates, staff knowledge attitudes and confidence, and mothers' perceptions before and after staff training. Statistically significant increases in breastfeeding attitudes, knowledge and self-efficacy for both health visitors and nursery nurses were seen after attending the course and these improvements were maintained 6 months later.



ii) An action research project exploring ways that Children's Centres in Bristol can support breastfeeding women and encourage the involvement of fathers used action research methods to involve parents and staff. Children's Centres can play a crucial role in providing information, hosting classes and support groups and helping to improve breastfeeding continuation rates.

2. The antecedents and the outcome of growth faltering in infancy

A series of studies, funded by the Wellcome Trust, is using the Avon Longitudinal Study of Parents and Children (ALSPAC) to investigate the factors behind poor growth in infancy, and to identify any long-term effects on development and behaviour.

- i) Zia-ud Din is using ALSPAC to analyse the long-term effects of poor growth in infancy, with growth and developmental outcomes at 7, 10 and 13 years.
- ii) Alan Emond is collaborating with Julie Farrer and Dieter Wolke from Warwick to investigate the long-term consequences of early feeding problems on behavioural development

3. Nutrition in Pregnancy

Pauline Emmett, Jean Golding, Cathy Williams, Vicky Cribb, Colin Steer and Alex Richardson are using data collected by ALSPAC in a series of projects including:

- i) Cognitive development in children up to 12 years in relation to fish eating in pregnancy and childhood and the modifying effects of genetic variants. (Nutrimenthe – an FP7 European collaboration);
- ii) Fish eating in pregnancy in relation to omega-3 fatty acids in maternal and cord blood, and their modification by genetic variants in the FADS2 gene with Joe Hibbeln and John Davis (USA) (Funded by the Waterloo Foundation)

4. Nutrition in infancy, childhood and adolescence

Projects using dietary data collected in ALSPAC

- i) Pauline Emmett with colleagues in Birmingham has published an investigation of diet at age 7 years in relation to timing and type of complementary foods introduced in the first year of life.
- ii) A new collaboration has been funded by Europe (FP7 Habeat). This will look into weaning practices in ALSPAC and later outcomes in more depth.
- iii) Pauline Emmett and nutritionist Vicky Cribb are working on a collaborative project with HNR Cambridge, funded by NPRI to look at the way people eat in relation to obesity and heart disease outcomes. The likely patterns to investigate include missing meals, eating late in the evening, eating 5-6 meals a day, eating 3 or less meals a day and so on. This uses food records collected from children in ALSPAC and from adults in a national birth cohort followed since 1946. The first analysis has focused on breakfast eating and its benefits.
- iv) WCRF have funded a new collaboration between Pauline Emmett, Kate Northstone and Susan Jebb in HNR Cambridge to look at energy density of the food eaten by ALSPAC children at age 10 and 13 years in relation to obesity outcomes

5. Nutrition and neuro-cognitive development

- i) Jean Golding and Colin Steer have been investigating mercury exposure in fetal life in relation to neurocognitive development in ALSPAC (in cooperation with CDC and NIAAA, and funded by NOAA, USA).
- ii) Jean Golding, Colin Steer and Pauline Emmett have published a study with Joe Hibbeln and John Davis looking at maternal depression in relation to fish intake
- iii) They have submitted a paper investigating a genetic variation of 2 SNPs in the FADS2 gene in relation to cognitive outcome and breastfeeding. This work has been supported by the Waterloo Foundation and is continuing (see 3i above).
- iv) Current work includes the investigation of a vegetarian diet on adult depression (with Alex Richardson).
- v) Colin Steer and Jean Golding are collaborating with Silvia Parrachinni and Dorothy Bishop in Oxford and Patrick Bolton at the Institute of Psychiatry to look at environmental influences on reading, speech and language and the ways in which such effects interact with genetic variants (funded by the MRC)

vi) Colin Steer and Jean Golding are collaborating with Dr Carrie Salafia (USA) to determine whether there are any differences between the vasculature of placentas of children with autistic spectrum disorder, other children with special educational needs and controls.

6. Growth and obesity

i) The WCRF funded project looking at diet and growth in relation to the age of menarche in girls has been completed with one paper published and another submitted.

ii) The American Diabetic Association study into the relationship between obesity development and the consumption of dairy products using ALSPAC diet data has completed its first year. Pauline Emmett has worked on this in collaboration with Kirstin Newby (Boston USA), Kate Northstone and colleagues from Exercise, Nutrition and Health Science

7. Intergenerational Studies

i) Prof. Marcus Pembrey is working with Jean Golding on several studies of intergenerational genetics

ii) The WCRF funded study looking at IGF levels between generations (mother-child) in ALSPAC in relation to cancer in the mother and her parents led by Pauline Emmett in collaboration with Kate Northstone, Jeff Holly and David Gunnell is nearing completion.

iii) Jean Golding and Pauline Emmett with Kate Northstone and Jackie Bishop have been funded by the Arthritic Association to investigate diet in parent and child in relation to the development of Arthritis and limb pain. This includes investigating the use of complementary medicines.



Child and Adolescent Injury and Safeguarding

Lead: Elizabeth Towner, with Peter Blair, Toity Deave, Alan Emond, Gail Errington, Peter Fleming, Jenny Ingram, Richard Kimberlee, Kamel Mansi, Julie Mytton and Kate Northstone.

Collaborators: Jonathan Benger, Paul Pilkington, Jane Powell, Kiron Chatterjee, Charles Musselwhite (UWE), Heather Ward and team (University College London), Denise Kendrick and team (University of Nottingham), Ronan Lyons and team (University of Swansea), Sarah Jones (University of Cardiff), Nicola Christie and team (University of Surrey), Mariana Brussoni, (University of British Columbia, Canada), Richard Reading and Robin Haynes (University of East Anglia), Elaine McColl and team (University of Newcastle), Mike Hayes (Child Accident Prevention Trust), Roger Bibbings (ROSPA), Margie Peden (WHO Geneva), Dinesh Sethi, Christian Schweitzer (WHO Rome), Shumona Shafinaz (UNICEF Bangladesh), Julia Verne and team (SW Public Health Observatory)

Our main interests are:

- Building up the evidence base in quantitative and qualitative reviews of what works in child injury prevention
- Understanding the link between deprivation and childhood injuries
- Mixed method approaches in the evaluation of injury prevention programmes
- Translating evidence into practice

1. Keeping Children Safe at Home Programme

This five year programme has been funded by the National Institute of Health Research and is a collaborative study involving the Universities of Nottingham, West of England, Newcastle, East Anglia and Leicester and primary care trusts in the different centres. The programme includes a series of linked projects: Systematic reviews of the literature, case control studies of injured children, studies of the costs of injuries, surveys of Children's Centres, interviews with Children's Centre staff and the development of guidance materials: Injury Prevention Briefings. The focus of the research is on home injuries – burns and scalds, poisonings and scalds in pre-school children. The programme also includes a randomised controlled trial of the implementation of an Injury Prevention Briefing in Children's Centres and modelling and decision analysis for different types of injury.

2. ALSPAC and Childhood Injuries

Dr Julie Mytton is exploring the epidemiology of childhood injuries in primary school aged children using the ALSPAC database. Injury data were collected at 4 time points between 5 and 11 years. The project will explore the additional influence of environmental and home risk factors for injury over those associated with the child or their family. Richard Reading and Robin Haynes from the University of East Anglia worked on environment risk factors for injury in the cohort during their preschool years. This study funded by the Department of Health has now been completed and published.

The Department for Transport has funded two studies relating to road safety in the ALSPAC cohort, one where the young people were aged 13/14 and the second when they are aged 16/17 years. The aims of the two projects are to explore the relationships between a range of risk factors with reported road traffic injuries and exposure to risk in the road environment.

3. Impact of Injuries

This study, funded by the NIHR CLAHRC programme, is being undertaken in four centres: Nottingham, Bristol, Surrey and Loughborough/Leicester. Injured people recruited in Emergency Departments and Wards are followed up to assess the physical, psychological, social and occupational outcomes post injury. Samples of participants and service providers will be involved in a qualitative study which aims to inform service development and maximize recovery post injury.

4. Evaluation of the Neighbourhood Road Safety Initiative

The five year evaluation of the NRSI project was completed in the Autumn of 2008 and a report submitted to the Department for Transport.

5. The Moving from Observation to Intervention Study

The five year MOI study was completed in Autumn 2008 and a report was submitted to the Department of Health. This included three component studies – the Burden of Injury Study, a longitudinal prospective hospital based study, a randomised controlled trial of an advocacy package related to pedestrian injuries and a randomized controlled trial of the use of the use of Thermostatic Mixer Valves.

6. Centre for Maternal and Child Enquiries

The CMACE regional office for the South West is based within this unit and has been part of the University of Bristol since 1995 when it was known as CESDI. With the amalgamation of CESDI and CEMD in 2003 resulted in the creation of CEMACH that extended its remit to include children. This year we became CMACE. CMACE's aim is to improve the health of mothers, babies and children by carrying out confidential enquiries and related work on a nationwide basis and by widely disseminating our findings and recommendations.

The elements of the national confidential enquiry programme carried out by CMACE are: Maternal death enquiry, National perinatal and maternal mortality surveillance, Maternal and perinatal enquiry projects and Child health enquiry projects. Our current projects are Obesity in pregnancy, Head injuries in children and on-going perinatal and maternal death surveillance and review.

In 2006, CEMACH established a project to review all child deaths. This project was initiated from the South West and Northern Regions, from the work carried out by Professor Peter Fleming on Sudden Unexpected Deaths in Infancy. The Child Death Review project was rolled out to 5 other regions in England, Wales and Northern Ireland. The study and resulting report on Why Children Die helped direct the work of the Department of Children, Schools and Families to establish a process to review all childhood deaths.



Dr Peter Blair was one of 3 candidates to be awarded a fellowship by the out-going president of UNICEF UK Lord David Puttnam. Peter has been advising UNICEF with their Baby Friendly Initiative campaign in regard to infant care practices stemming from his work relating to risk reduction messages associated with Sudden Infant Death Syndrome.

Dr Peter Blair receiving his award from Lord David Puttnam

7. South West Child Death Enquiries

The Children Act 2004, which came into effect on the 1st of April 2008, requires that Local Safeguarding Children Boards (LSCBs) investigate and collect standard information on all deaths of children and young people from birth up to (but not including) their 18th birthday. The LSCBs in Wiltshire, Swindon, Gloucestershire, South Gloucestershire, North Somerset, Bristol and Bath & Northeast Somerset have commissioned the University of Bristol to collect the information on child deaths required under the Children Act.

We have established a support mechanism for the Child Death Overview Panels for Swindon & Wiltshire, Gloucestershire and West of England. Each overview panel covers a population greater than 500,000 and may include more than one LSCB. The SWCDE office also provides a regional collection point for the notification of all deaths occurring in the South West region for regional reporting.

Each child death, whether or not it is unexpected, is investigated and anonymously reviewed by the CDOP of residence. The resulting output from these panel meetings are collected and annually reported back to the Department of Children, Schools and Families. The role of the chair is to identify any case that gives rise to the need for a serious case review, any area of concern affecting the safety and welfare of children in the local area and any wider public health or safety concerns from a particular death or pattern of deaths.

8. Safeguarding Children

The safeguarding of children born to substance misusing mothers in a locally recruited cohort has been investigated when children were aged 5 years. Despite early maternal intentions and multiple supportive interventions, 27% of children born to women with significant substance abuse problems required child protection during the pre-school years. As a result recommendations have been made that child protection risk assessment procedures need to weight problematic maternal drug use heavily and this message is actively propagated locally.

Children with Complex Health Needs

a) Palliative Care

Lead: Nicola Eaton, with Antonia Beringer and Trudy Goodenough

Collaborators: The Lifetime Service (Bristol/ Bath/ Wiltshire), Maggie Whittle (UWE), Association for Children's Palliative Care (ACT), Children's Hospices UK, Nicola Harris (Children's Hospice South West).

Our main interests are:

Multi-professional care for children with complex health needs, life threatening and life limiting conditions

1. Avon Palliative Care Partnership Evaluation

This study, to evaluate the local children's palliative care partnership was funded by the Children's Palliative Care Partnership (Avon). An inter-agency operational group representing the services being evaluated worked with the research team during the course of this project. This has been very positive to ensure both the sustainability of data collection over a 3- year period as well as enabling the research team to pilot the tools which were used for the National Study. Data have been collected on 70 children and families who have been involved with palliative care services over a 3-year period.

2. Children with life limiting disorders: The Impact on fathers

This study received funding from the Avon Primary Care Research Collaborative for 12 months and is now complete. Dr Nicola Eaton led on this project with Antonia Beringer, Mary Lewis and Ann O'Brien. Thirteen fathers who have children with life limiting disorders were interviewed and a questionnaire developed to facilitate a future national study on this topic.

3. Negotiating Services for Children with Complex Health Needs: Exploring Parents' Perceptions

Mary Lewis was principal investigator for this project, funded by the Pan Bath and Swindon Primary Care Research Consortium, with Ann O'Brien working as the research associate. The purpose of the study was to understand better how services are negotiated for children with complex health needs, from the parent's perspective, in order to improve how services are delivered.

4. Service improvement programme to support an integrated children's palliative care pathway

Antonia Beringer led this project commissioned by the Children's Palliative Care Partnership Group (Avon). Its purpose has been to improve the delivery of children's palliative care through developing a local application of the ACT care pathway. The project began with a launch event in Sept 07 and multi-agency project groups met during 2008 to work on practical ways of embedding the ACT Pathway into practice.

5. A facilitated action research programme to improve coordination of children's inpatient care

Antonia Beringer led this research programme at the Bristol Children's Hospital, which aimed to improve the coordination of specific activities, chosen by staff themselves, using an action research methodology.

The multi-disciplinary staff groups involved addressed a range of activities- including the coordination of x-rays, information for parents in admission letters and discharge planning communication. In addition to the planned publication and presentation of this work, learning from the process and outcomes of the programme will be applied to the NHS 'Productive Ward' initiative which the hospital is taking forward. The results were presented as a symposium at the RCN International Nursing Research Conference 2008 in Liverpool.



6. 'Information Matters'

Mary Lewis is collaborating with University of Cardiff and University of Bangor on a NIHR Service Delivery and Organisation Programme 'Health, medicines and self-care choices made by children, young people and their families: information to support decision-making'. Mary is collaborating with Professor Jane Noyes from Bangor and two clinical facilitators from the Department of Health on an evaluation of the pilots for the new decision-making framework for children's continuing care.

7. FRIPP Evaluation. The Jessie May Trust commissioned this study to evaluate the Framework for Respite in Partnership with Parents (FRIPP) which was completed by Dr Eaton and Dr Trudy Goodenough. Parents and staff were interviewed to ascertain their views on the effectiveness and transparency of the tool which is used with parents to allocate respite care in the home.

b) Chronic Fatigue Syndrome (CFS/ME) in Children and young people

Lead: Esther Crawley, with Andrew Haig-Ferguson, Sarah Boon, Helen Bould, Avril Missen, Debbie Johnson, Hanne Pederson, and Rodney Saunders

Collaborators: Alan Emond, Nicola Eaton, Margaret May, Jonathan Sterne, Peter Tucker, Linda Hunt, Peter Shiarylly and Paul Stallard.

Our main interests are:

- The epidemiology of paediatric CFS/ME
- Comparison of service models
- Prevention of CFS/ME
- Impact on families

Current research includes:

1. The Epidemiology of paediatric CFS/ME

We have used the ALSPAC cohort to look at the prevalence of fatigue at age 13 (over 4%). We are currently working on looking at factors associated with and predictors of fatigue (Sarah Boon & Helen Bould) in this age group. We also have a longitudinal cohort from the clinical service of nearly well characterised 600 children who are followed up at 6 weeks, 6 months and annually. This cohort has enabled us to look at the different types of CFS/ME in children, the types of anxiety experienced and associations with school attendance. Findings generate hypotheses that we study using a variety of approaches such as a qualitative study (Hanne Pederson) looking at the development of anxiety in children with CFS/ME.

2. National Outcomes Database

Andrew Haig-Ferguson has now recruited 22 teams nationally (adult and paediatric) to contribute data to a National Outcomes Database. We have collected qualitative data about service models and will shortly be able to benchmark services whilst correcting for demographic and severity factors.

3. Preventing CFS/ME in children

As a follow up to a school screening project finished last year we are now developing school nurse screening and an early intervention to be delivered in schools with the aim of investigating whether early intervention can prevent the development of long term fatigue.

4. Impact on families

Avril Missen has nearly completed a mixed methods project to evaluate the impact of CFS/ME on parents and siblings of children with CFS/ME. This study is the first to demonstrate the financial and emotional impact this devastating illness has on the families of children with CFS/ME.

Cross Cutting Themes

Children and Young People's Participation

Lead: Jane Coad with Trudy Goodenough, Jenny Ingram and Raghu Lingam

Collaborators: Professor Bernie Carter (University of Central Lancashire); Rachel Northfield (Cambridge University NHS Foundation Trust); Upali Nanda (American Arts Resources, Texas); Dr Hugh Davies (National Research Ethics Service, NRES); Professor Sue Roulstone (UWE); Saskia Prahud de Mortanges (Somawathi Orphanage, Sri Lanka); Joy Grech (Birmingham City University); Pamela Barnes (Action for Sick Children Chair); Linda Partridge (WellChild); Sue Hatton (Health Authority, W.Mids) and Dr John Powell (University of Warwick).

The cross cutting theme has developed through the drive for public engagement in terms of children and young people. Consequently, we have undertaken many innovative projects involving children and young people in consultations, using more collaborative approaches and where they were trained them to lead on projects.

Current projects include:

1. Department of Health. Transforming Children's Services in the Community.

This national study has been commissioned by the DH in two phases. Findings will be released in early 2010. Jane Coad works on the project in collaboration with Dr Trudy Goodenough and Professor Bernie Carter (Professor of Children's Nursing Families, Children and Life Transition Research Group; University of Central Lancashire), using innovative participatory methods with Appreciative Inquiry (AI) to explore stakeholder views of CCN services.

2. Addenbrookes Hospital. Cambridge University NHS Foundation Trust.

Jane Coad is leading a project aiming to evaluate a NHS Foundation Trust *Involvement Strategy* which has sought to engage and consult with children and young people users. To date, a literature review and a staff/user evaluation has taken place. Following on a training package will be developed and evaluated during 2009/10.

3. CliC Sargent

Jane Coad is lead on a project aiming to evaluate CliC Sargent's participation work with children aged 7 – 12 years views of living with cancer. National activity workshops will take place with children on and off cancer treatment and an evaluation will take place of the work.

4. FamilyTalk. Communication across families genetic information

With Dr Alison Metcalfe (University of Birmingham) this national Department of Health project funded was completed June 2009. It sought to understand how children, young people and their families communicate and make sense about genetic conditions. Dissemination will take place of findings including presentations and papers during 2009/10.

5. Memories of Paediatric Intensive Care Unit (PICU), Birmingham Children's Hospital

This project seeks to understand children aged between 7 and 12 years memories of Paediatric Intensive Care Unit (PICU). Methods employed include a combination of story telling, visual prompts, draw and write and workshop activities with children who were patients in PICU.

6. Wider Participation

Jane Coad leads the theme and is also actively involved on a number of local and national participation service initiatives and research committees including The Royal College of Nursing (RCN); Action for Sick Children; The Royal College of Paediatrics and Child Health; Making Space 4 Children and Wellchild.

Jane Coad is chair of the UWE Service User and Involvement Committee for the Faculty of Health and Vice-chair of NHS Research Ethics Committee. Such links help to support participation of users in the Faculty work across research and education and nationally. For example, ALSPAC; Royal College of Paediatrics; National Research Ethics Service and Royal College of Nursing. During 2009/10 Jane will lead on an initiative for CCAH in order to develop a Young People Advisory Group (YPAG).

Jane has also developed international projects and links during 2008/9. These include an invited visit to USA to present in New York and Buffalo, US (Society of Arts in Healthcare) and undertaking project work in Sri Lanka (see photo below).

Jenny Ingram has been working with Debra Salmon and Judy Orme in the Faculty of Health and Social Care at UWE for several years evaluating enhanced sexual health services for young people in Bristol and North Somerset.



Jane and team doing project work in Sri Lanka!

International Child Health

1. Neonatal Resuscitation by Traditional Birth attendants (TBA)

Matthew Ellis is a Principal Investigator in a controlled trial of community based bag-valve-mask resuscitation for newborn infants who do not breathe at birth in Bangladesh in collaboration with the Perinatal Care Programme of Bangladesh, a local NGO hosted by the Diabetic Association of Bangladesh and colleagues from University College London. This follows up his doctoral research in Nepal demonstrating the importance of birth asphyxia as a cause of perinatal mortality and morbidity in low income settings. The study surveillance system has ascertained over 30,000 births which are now being analysed. Birth asphyxia and ensuing resuscitation efforts are common. TBAs are effective resuscitators but the device does not appear to add significantly to survival chances in this setting. We are now hoping to build on the University of Bristol LINK with Mbarara, Uganda to continue our work on neonatal survival and preventable causes of neurodisability.

2. Child injury prevention

Elizabeth Towner worked on a consultancy project funded by UNICEF Bangladesh from August 2008 to January 2009 to help with an independent evaluation of a community-based programme of child injury prevention in Bangladesh working with a local research company, SURCH. The 'Prevention of Child Injuries through Social-Intervention and Education' (PRECISE) programme is one of the largest community-based child injury projects being conducted in a low-income country. There are some interesting emerging findings about the acceptability and impact of community crèches, which have been set up across a range of rural and urban areas. These crèches have been designed to promote both injury prevention and early learning opportunities for pre-school children.



A village injury prevention committee in Bangladesh

She has also been invited by The Alliance for Safe Children (TASC) to act as a consultant on the 'Safe Danang project', a community based child injury prevention project, in Vietnam. This work will take place in October 2009.

Elizabeth Towner is a co-author of the overview chapter of the WHO/ UNICEF's 'First World Report on Child Injury Prevention' and an editor and author of the 'European Report on Child Injury Prevention. Both reports were published in December 2008. She was an invited speaker at the European Academy of Paediatrics Congress in Nice in October 2008 where she spoke about child injuries in Europe and at the Royal College of Paediatrics and Child Health Conference in York in April 2009 where she discussed child injuries as an emergent issue in international child health



Children playing in the streets in Dhaka, Bangladesh

3. Outcome of low birthweight at term

Alan Emond is collaborating on a research project with Universidade Federal do Pernambuco (UFPE) in Recife, Brazil, and Prof Ann Ashworth from the London School of Hygiene. The study is investigating the developmental, growth and behavioural outcome at 8 years of children born at term weighing less than 2500g, using a cohort enrolled in 1992-1993. Analysis has shown the worst outcomes in growth and development are found in those low birthweight (LBW) babies who are exposed to environmental and nutritional deprivation in the first 6 months of life. A comparative analysis of the Pernambuco cohort with ALSPAC showed, in these very different settings, that head growth in the first 6 months was the most important determinant of cognitive outcome in LBW infants, rather than head size at birth. These results will be presented at the Developmental Origins of Health and Disease (DOHaD) conference in November 2009 in Chile.

4. Aquatest 2

The Centre for Child and Adolescent Health is part of the team at the University of Bristol developing and evaluating a low cost method of testing water quality for the developing world, funded by the Bill and Melissa Gates Foundation. CCAH and the School for Policy Studies at the University of Bristol are collaborating with the University of California, Berkeley and the Aquaya Institute in planning a field trial of the impact of giving information on water quality at the village level in India. This trial will inform the eventual use of the Aquatest device, when it becomes available.

This work is part of the developing Water and Health Research Centre at the University of Bristol

5. Longitudinal studies

i) Jean Golding, Karen Birmingham and Richard Jones have produced a journal supplement describing in detail how to run longitudinal cohort studies at the invitation of WHO and NIH. This is aimed at a worldwide audience and should be particularly helpful to those in developing countries planning to set up new cohorts. Sections have been written by experts in particular aspects, many who had worked with ALSPAC over the years. Jean has drawn on experience gained in Jamaica as well as Britain. The supplement was launched at an international conference in South Korea in June 2009 and has been extremely well received.

ii) Dietary assessment methods and their use in nutritional epidemiology.

Pauline Emmett has ongoing involvement in several projects that provide information and discussion regarding dietary assessment methods for use in longitudinal studies. Her paper in the WHO funded journal supplement edited by Jean Golding has been published, as well as her paper in a supplement in the European Journal of Clinical Nutrition. Each year she hosts international students who have come to gain experience in dietary assessment methods.

6. Community Child Health in New Zealand

In November 2008, Alan Emond was awarded the ASB Visiting Professorship at the University of Auckland, and spent 3 weeks visiting academic and clinical centres around New Zealand, giving lectures and workshops, contributing to health policy debates (a new government had just been elected) and meeting a range of provider organisations in the community- including a full Maori welcome from the Ngati Hine Health Trust, a Maori health provider in North Island.



Alan Emond at the Ngati Hine Health Trust

Higher Degrees Associated with the Centre

Tom Allport

Tom is undertaking an MD at Bristol, with a study which aims to evaluate functional outcomes after amputation, and investigate what factors may explain the variation in these outcomes. A cohort of 20 children & young people (<18 years at onset of disease), admitted over a 5 year period to St Mary's Hospital Paediatric Intensive Care Unit, who have had amputations following meningococcal septicaemia, have been visited at home, at least 3 years after admission. The research procedure includes a standardised observational measure of functional ability (Assessment of Motor and Process Skills (AMPS), a functional health status/quality of life questionnaire (SF-36 or Child Health Questionnaire), and a semi-structured interview on current health and everyday routine. Qualitative analysis of semi-structured interviews is with Interpretative Phenomenological Analysis. His supervisors are Alan Emond and Nicky Rumsey.

Hilary Beach

Hilary Beach, a specialist health visitor working with the Avon Traveller Health Project, is undertaking a PhD at UWE to investigate circumstances surrounding injuries to pre-school aged Gypsy and Traveller children and their access to and use of primary care. Using a semi-structured interview schedule based on the ALSPAC questionnaire, she has interviewed parents from Gypsy and Traveller families and is currently analysing the results. The research has been informed by an advisory group, which includes members of the Gypsy Traveller community. Her doctorate is being supervised by Nicola Eaton, Selena Gray and Jenny Ingram.

Zia-ud Din

A lecturer in nutrition from Peshawar in Pakistan, Din is supported by a prestigious bursary from the Government of Pakistan to undertake a PhD at the University of Bristol on the outcome of early growth and nutritional problems in infancy, using ALSPAC. During 2008-9 he completed his analysis of the data and wrote a first draft of the findings. He presented papers at conferences in Norway and the UK. Din is supervised by Alan Emond and Pauline Emmett.

Raghu Lingam

Raghu is undertaking a PhD at the University of Bristol funded by a Personal Award Scheme Researcher Development Award from the National Institute for Health Research. His PhD involves an analysis of ALSPAC data looking at the prevalence, impact and associations of Developmental Coordination Disorder in primary school aged children and a qualitative analysis, to explore health care provision and the experience of disability through interviews of teenagers with DCD. This year Raghu won the CHILD Prize for best academic presentation at the British Association of Community Child Health and presented his work at a Plenary session at The Royal College of Paediatrics and Child Health Spring Meeting. His work looking at the prevalence of DCD has been recently published in Pediatrics. He is supervised by Alan Emond, Jean Golding and Jane Coad.

Julie Mytton

Unintentional injury remains one of the leading causes of childhood death and disability for children over the age of 1 year in the UK. We know that certain features of children (such as male sex and over-activity) and features of the child's family (such as having a young, single mother) are associated with increased risk of injury, but we know less about the role that the child's environment has on their risk of injury. Julie is currently writing up her PhD at UWE which has used the ALSPAC cohort to explore the role of environmental factors in injury risk for primary school aged children, and has used multivariable analysis techniques. Her doctorate is supervised by Selena Gray, Alan Emond, Elizabeth Towner and Jon Pollock.



Research Seminars 2008 – 2009

Date	Speaker	Title
19 th September	Alice Edwards Kathryn Boyd Lucie Potter	Resilience to post traumatic stress disorder in child victims of war. Child labour in the garment industry. The impact of asylum policy on the mental health of asylum seekers.
24 th October	Jon Pollock	Evaluating the Primary Mental Health (Under 5s) Specialist Service in Bristol
28 th November	Liz Mozdiak	Why do young girls have babies – A decision making model
20 th March	Sarah Manns	Catch-Up: What does it mean to mothers of prematurely born children?
24 th April	David Odd	Poor Condition at Birth and Cognitive Outcome
15 th May	Randy Comfort	Understanding and Helping Adopted and Looked After Children with Attention Difficulties.
19 th June	Nichola Rumsey and Alan Emond	Joint seminar with Centre for Appearance Research UWE
24 th July	Pauline Emmett	Infant feeding in the ALSPAC study

Presentations 2008-9

Blair PS. *Bed-sharing & dummy use - the latest advice.* UNICEF Baby Friendly Initiative Conference, The Scottish Exhibition & Conference Centre, Glasgow (October 2008)

Blair PS. *Proposal for an International Classification of SUDI.* International Society for the Prevention of Infant Death (ISPID) meeting Oslo Norway (October 2008)

Blair PS. *Dangerous co-sleeping practices amongst deaths categorised as SIDS.* Developmental Physiology Meeting, Leicester. (June 2009)

Coad J. Invited keynote *Listening to children and young people.* RCN Children and Young People 's annual conference. Cheltenham. September 19th and 20th 2008.

Coad J. Concurrent. *Family Talk. Listening and learning from children and young people with long term genetic conditions.* RCN Children and Young People 's annual conference. Cheltenham. September 19th and 20th 2008.

Coad J. Invited Keynote. *What is it like for them? Hearing and responding to the voice of children and young people using health care services.* Action for Sick Children. November. University of Warwick 2008.

Coad J. Invited keynote. *Look forward, think together – a conference for children's hospice services.* The Association of Children's Hospices national conference. 20 & 21 November, Conference Centre Aston, Birmingham 2008.

Coad J. Symposia. *Talkin' about our generation.* RCN Research Society conference. Cardiff. 24 - 27 March, Cardiff, Wales, UK 2009.

Coad J. Symposia. *A spectrum of participation: Research with children and young people.* RCN Research Society conference. Cardiff. 24 - 27 March, Cardiff, Wales, UK 2009

Nanda U, **Coad J** *Different approaches to research with children's art preferences* Society of Arts in Healthcare. Buffalo. USA. April 21st to 25th 2009.

Coad J. Symposia. Family Talk. *What do children and young people from families affected by genetic conditions know?* British Society of Human Genetics. Warwick University. August 31st – 2nd September 2009

Crawley E. *The NICE way to manage children with CFS/ME – what clinicians need to know.* Key note speaker. Great Ormond Street Hospital National training day May 2008.

Crawley E, Emond A and May M. *Chronic fatigue syndrome is heterogenous in children with 3 latent factors and 5 distinct clusters of children.* IACFS conference Reno Nevada March 2009.

Crawley E, Furnell C and **Haig-Ferguson A**. *Characteristics and recovery of children housebound with CFS/ME*. IACFS conference Reno Nevada. March 2009.

Deave T. *Families: including fathers*. Plenary presentation at conference, 'Getting it Right for Families?', Children in Wales, Wales, 2008.

Ellis M. *Epidemiology of Birth Asphyxia In Rural Bangladesh*. Plenary presentation at Royal College of Paediatrics and Child Health, York, April 2009

Emond A What can longitudinal studies show us about child development? ASB Visiting professor public lecture, University of Auckland, New Zealand. November 2008

Emond A, Steer C, Emmett P Feeding symptoms, dietary patterns and growth in young children with autistic spectrum disorders. Plenary presentation at RCPCH annual scientific meeting, York, April 2009.

Salmon D and **Ingram J**. *Evaluation of a new school-based sexual health drop-in service for young people living in areas of high deprivation*. RCN Sexual Health Conference, London, 2008.

Ingram J and **Johnson D**. *Raising breastfeeding rates: Action research in Children's Centres*.

Joinson C, Heron J, Araya R, Lewis G. Relationship of early menarche to depressive symptoms in adolescent girls from a UK cohort. 4th International Conference on Child and Adolescent Psychopathology. 13-14 July, 2009, Roehampton University, London, UK.

Lingam R, Hunt L, **Golding J**, Jongmans M, **Emond A**. Prevalence of Developmental Coordination Disorder within the ALSPAC Cohort. British Association of Community Child Health, Annual Scientific meeting September 2008 (**Child Prize best presentation**).

Lingam R, Golding J, Jongmans M, Hunt LP, **Ellis M, Emond A**. DCD and it's association with other developmental traits. Plenary at the Royal College of Paediatrics and Child Health Spring Meeting, York, 2009

Lingam R, Hunt L, **Golding J**, Jongmans M, **Emond A**. Prevalence of Developmental Coordination Disorder using DSM IV: a UK study. VIII International Conference of DCD research Baltimore, USA.

Lingam R, Golding J, Jongmans M, Hunt LP, **Ellis M, Emond A** DCD and associated developmental traits: more than just an expression of IQ. VIII International Conference of DCD research Baltimore, USA.

Mytton J. Insight into injury: Family risk factors for school-age injuries. Community Practitioner and Health Visitor Annual Professional Meeting, Harrogate, November 2008

Mytton J. Unintentional injuries in children aged 5-11 years from Avon, England. Oral presentation. 9th World Conference on Injury Prevention and Control. Merida, Mexico, 15-18 March 2008.

Mytton J. Invited speaker. Childhood injury in Europe: tackling inequity together. Europaediatrics Conference. Istanbul 16 June 2008.

Towner E, Whelan K, Errington E. Can a national field trial of a child pedestrian training programme replicate pilot findings? Oral presentation. 9th World Conference on Injury Prevention and Control. Merida, Mexico, 15-18 March 2008.

Towner E. Invited speaker. Childhood Injury: the way forward in Europe. European Academy of Paediatrics Congress. Nice 26th October 2008.

Towner E. Translating child injury research evidence into practice. 2nd European conference on injury prevention and safety promotion. Paris, 10th October 2008.

Towner E. Invited speaker. What works in reducing childhood injuries in high income countries? In Symposium: Child Injuries and Global Public Health: A Call for Action, organised by WHO Geneva. 9th World Conference on Injury Prevention and Control. Merida, Mexico, 15-18 March 2008.

Towner E. Invited speaker. Why are children from poorer families more likely to die or be harmed than their poorer counterparts? Child poverty and under achievement Conference. London, 6th February 2009.

Towner E. Invited speaker. Injury prevention: an emerging priority for child health? International Group, Royal College of Paediatrics and Child Health Conference. York, 1st April 2009.



Palliative Care Conference organised by the Centre in Bristol October 2008

Publications 2008-9

Beringer AJ and Fletcher ME Who does what? How staff in England and Denmark perceive process A practical framework, *Children and Society*. January. Volume 2: Pp 41-52

Mitchell EA, Thompson JM, Becroft DM, Bajanowski T, Brinkmann B, Happe A, Jorch G, **Blair PS**, Sauerland C, Vennemann MM. Head covering and the risk for SIDS: findings from the New Zealand and German SIDS case-control studies. *Pediatrics*. 2008 Jun; 121(6): e1478-83

Church DN, Modgil R, Guglani S, Bahl A, Hopkins K, Braybrooke JP, **Blair P**, Price CG. Extended survival in women with brain metastases from HER2 overexpressing breast cancer. *Am J Clin Oncol*. 2008 Jun; 31(3): 250-4.

Lyons R, Goldsmid JM, Kibel MA, Mills AE, Fleming PJ, **Blair P**. Accidents, poisonings and SIDS. In : *Textbook of Pediatrics*. Eds McIntosh, Helms, Smyth & Logan. Pubs Forfar & Arneil, Seventh Edition 2008; Chapter 6: 55-71. [Chapter in a book]

Blair PS. Putting co-sleeping into perspective. *J Pediatr (Rio J)*. 2008 Mar-Apr;84(2): 99-101. [Editorial]

Foot J, Panchoo K, **Blair P**, Bannister G. Length of stay following primary total hip replacement. *Ann R Coll Surg Engl*. 2009; 91(6): 500-4.

Blair PS, Byard RW, Fleming PJ. Proposal for an International Classification of SUDI. *Scand J Forensic Science* 2009; 15(1): 6-9.

Blair PS, Sidebotham P, Evason-Coombe C, Edmonds M, Heckstall-Smith EMA, Fleming PJ. Case-control study of SIDS in Southwest England – dangerous co-sleeping environments and risk factors amenable to change. *BMJ* 2009 [In press].

Coad J; Coad N Children and young people's preference of thematic design and colour for their hospital environment. *British Journal of Child Health*. 2008 March edition. Pp 33-48

Metcalfe A, **Coad J**, Plumridge G, Gill P, Farndon P. Family communication between children and their parents about inherited genetic conditions: a meta-synthesis of the research. *European Journal of Human Genetics*. 23rd April 2008

Coad J, *Chapter 3*. Bringing together child health and social care provision: challenges and opportunities for multi-agency working in Social work and multi-agency working. Making a difference. Editor Kate Morris. 2008 Pp29-46

Coad J, Flay J, Aspinall M, Bilverstone B, Coxhead E, Hones R. Evaluating the impact of involving young people in developing children's services in an acute hospital trust. *Journal of Clinical Nursing*. 2008 17: 3115-3122.

Coad J, Shaw, K Is children's choice in healthcare rhetoric or reality? A scoping review. *Journal of Advanced Nursing*. November edition.2008. Vol 64, Nos 4, Nov. : 318-327(10).

Coad J, Metcalfe A, Plumridge G. FamilyTalk. *Linchpin*. April 2009 Vol 12: Issue 1:12 – 14.

Coad J, Plumridge G, Metcalfe A. Involving children and young people in the development of art-based roles in the coordination of children's inpatient care: a comparison of questionnaire survey data.. *Journal of Clinical Nursing* 2008; 17: 3217-3225.

Coad J, Evans R, Children and young people's engagement in the data analysis. ed research tools. *Nurse Researcher*: July 2008. Volume 16: Number 4

Crawley E and Sterne J. Association between school absence and physical function in paediatric CFS/ME. *Arch. Dis. Child* 2008; doi: 10.1136/adc.143537.

Crawley E and Majundar A. Self Assessment. *Paediatrics and Child Health* 2008; 18: 12 576-581.

Crawley E, Hunt L, Stallard P. Anxiety in children with CFS/ME. *Eur Child Adolesc Psychiatry* May 2009 PMID: 19452195.

Deave T, Heron J, Evans J, Emond A. The impact of maternal depressive symptoms in pregnancy on child development. *British Journal of Obstetrics and Gynaecology* 2008: 115: 1043-1051.

Eaton N. 'I don't know how we coped before': a study of respite care for children in the home and hospice. *Journal of Clinical Nursing* 2008; 17: 3196-3204.

Street K, Whitlingum G, Gibson P, Cairns P, **Ellis M**. 'Is adequate parenting compatible with maternal drug use? A 5-year follow-up'. *Child Care Health Dev* 2008; 34(2): 204-6.

Coulthard H, Harris G and **Emmett P**. Delayed introduction of lumpy foods to children during the complementary feeding period affects child's food acceptance and feeding at 7 years of age. *Maternal and Child Nutrition* 2009; 5: 75-85

Emmett P. Dietary assessment in the Avon Longitudinal Study of Parents and Children. *European Journal of Clinical Nutrition*. 2009; 63: S38-S44

Johnson L, van Jaarsveld CHM, **Emmett PM**, Rogers IS, Ness AR, et al. Dietary Energy Density Affects Fat Mass in Early Adolescence and Is Not Modified by FTO Variants. *PLoS ONE* 2009; 4(3): e4594. doi:10.1371/journal.pone.0004594

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Emmett P. Assessing diet in birth cohort studies. *Paediatric and Perinatal Epidemiology* 2009; 23 Suppl. 1:154-173

Reading R, Jones A, Haynes R, Daras K, **Emond A**. Individual factors explain neighbourhood variations in accidents to children under age 5 years. *Social Science and Medicine* 2008 doi:10.1016/j.socscimed.2008.05.018.

Haynes R, Jones AP, Reading R, Daras K, **Emond A**. Neighbourhood variations in child accidents and related child and maternal characteristics: does area definition make a difference? *Health and Place* 2008; 14: 693-701

Emma Williams, Kate Thomas, Helen Sidebotham, **Alan Emond**. The prevalence and characteristics of Autistic Spectrum Disorders in the ALSPAC cohort. *Developmental Medicine and Child Neurology* 2008; 50: 672-677

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David Skuse, William Mandy, Colin Steer, Laura Miller, Robert Goodman, Kate Lawrence, **Alan Emond**, Jean Golding. Social communication competence and functional adaptation in a general population of Children. *Journal of the American Academy of Child and Adolescent Psychiatry* 2009; 48: 128-137.

Sayal K, Heron J, Golding J, Alati R, Gray R, Davey Smith G, and **Emond A**. Binge pattern of alcohol consumption during pregnancy and childhood mental health outcomes: longitudinal population-based study. *Pediatrics* 2009; 123: e289-96

Groenewald C, **Emond A**, Sayal K. Recognition and referral of girls with Attention Deficit Hyperactivity Disorder: case vignette study. *Child Care Health Dev.* 2009 Jun 15. [Epub ahead of print]

K. Chandramouli, **C. D. Steer, M Ellis, A M Emond** . Effects of early childhood lead exposure on academic performance and behavior of school age children. *Archives of Disease in Childhood* on line first 2009. doi:10.1136/adc.2008.149955

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Golding J, Jones R. Sources of data for a longitudinal birth cohort. *Paediatric and Perinatal Epidemiology* 2009; 23 (Supp 1): 51-62.

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Golding J. Measuring outcomes in a longitudinal birth cohort. *Paediatric and Perinatal Epidemiology* 2009; 23 (Supp 1): 185-200.

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Williams C, L L Miller, K Northstone, JM Sparrow. *The use of non-cycloplegic autorefraction data in general studies of children's development* Br. J. Ophthalmol., May2008; 92: 723 – 724

Current grants 2008-9

PS Blair (Co PI with PJ Fleming). £72,812 from the Foundation for the Study of Infant Death (FSID). A study of the antecedents, short-term & long-term effects of bedsharing, room sharing or separate sleeping by mothers and infants in the ALSPAC cohort. (2007-2009).

PS Blair (Co-app with **P Emmett**: PI = Karen Bonuck). \$230,555 from NIH (US). Sleep Disordered Breathing and Growth in Children. A longitudinal Cohort Study (2008-2010)

J Coad (Co-app with Professor Bernie Carter) Dept of Health (DH) £59K A national appreciative review of stakeholder perspectives on what is working well and the potential development of future services. 2008-2009.

J Coad (PI with Professor Bernie Carter.) £31,978K. DH A national appreciative review of stakeholder perspectives on what is working well and the potential development of future services.

J Coad (PI) £18K Developing the strategy of Participation of Children and Young People in Addenbrookes NHS Trust 2009-10.

J Coad (PI with Professor Bernie Carter). CliC Sargent (DH funded grant. 30K. Personal £6,741K). An appreciative evaluation of the CLIC Sargent participation strategy for school aged children with cancer. 2009-2010.

J Coad (co-app) (Grant for Dept of Children, Schools and Family. Approx £1.5 million) DCSF with (Professor Geoff Lindsay¹ Professor Julie Dockrell² Professor James Law³ and Professor Sue Roulstone⁴ National study of speech, language and communication needs (SLCN) of children. Cost-Effectiveness Research Programme (2009-2010. Year 1 of 3 year programme)

J Coad (co-app: PI=Joy Grech) £10,000 Birmingham Children's Hospital Foundation Award. School children's memories of Paediatric Intensive Care (2008-9)

J Coad (co-app: PI=Dr A Metcalfe) £315,000 from Department of Health. FamilyTalk - Communicating genetic information across children and their families (2006-2009)

J Coad (PI) £25,000 from Birmingham Repertory Theatre to evaluate early years arts activity programme (completed 2008).

E Crawley (PI) £12,000 from Bath Unit for Research in Paediatrics (BURP). Memory and concentration/attention problems in children with CFS/ME (2007-2008).

E Crawley (PI) £150,000 from The Linbury Trust. Chronic fatigue syndrome (CFS/ME) in young people (2007 – 2008).

E Crawley (PI) £5,000 from the RNHRD charitable funds. The impact of CFS/ME on families (2008 to 2009)

E Crawley (PI) £49,650 from Action for ME (AfME). Creating a National Outcomes Database for adults and children with chronic fatigue syndrome or ME (CFS/ME) (2009-2010)

E Crawley (collaborator, PI Prof Lewis) £648,184 from Wellcome “Depression at 17: ALSPAC” (2008-2009) *not started yet*

E Crawley (PI) £873,579. NIHR Clinician Scientist Fellowship “Evidence based prevention identification and treatment of CFS/ME” (2009 – 2014)

T Deave (co-consultant with UWE colleagues) PI: IPSO-MORI and SQW, £300,000 from the Department of Education, Lifelong Learning and Skills, Welsh Assembly Government. National Evaluation of Cymorth and Flying Start (2007-2010).

T Deave (co-app) PI: KM Research & Consulting Ltd, £50,000 from the Welsh Assembly Government. Evaluation of the Caring Dads Cymru Pilot Programme (2008-2009).

T Deave (co-app) PI: KM Research & Consulting Ltd, £14,115 from Wokinghamshire County Council. Review of Domestic Violence and Abuse perpetrator programmes (2009).

T Deave (co-app) PI: KM Research & Consulting Ltd, other co-apps: F Sassi (LSE), M Carpenter (Warwick), A Perry (York), from NHS Institute. NHS Institute’s new Framework Agreement for Research and Evaluation. (2009 onwards).

T Deave (co-app) PI: Single Parent Action Network, other co-app: D Salmon (UWE) from Big Lottery Fund, £398,713. Single Parent Advancement and Learning Opportunities – Participatory Research (2009-2012).

T Deave (co-app) PI: CRG Research Ltd from Booktrust, £29,498. Bookstart in Wales, Impact Evaluation (2009-2010).

P Emmett (co-app: PI Kirstin Newby, University of Boston, USA) American Diabetic Association. \$351,952 Milk, dairy products, and calcium intakes in children: prospective associations with body mass composition measured using dual-energy X-ray absorptiometry. 2008-2011

P Emmett (co-app: PI Alison Lennox HNR Cambridge) NPRI £64,000 Tracking of diet in several longitudinal birth cohorts. 2008-2010

P Emmett (PI Workpackage 2) European Union Framework 7 programme. 100,546 Euro. Nutrimenthe - Effect of Diet on the Mental Performance of Children WORKPACKAGE 2: Interaction of fish intake and genetic variation in determining child behaviour - the Avon Longitudinal Study of Parents and Children (ALSPAC). 2008- 2012

P Emmett and **J Golding** Joint PI: Waterloo Foundation £43,884 FADS2 SNPs, Omega-3 Fatty Acids and Children's Mental Development. 2008-9

P Emmett (Co-app: MRC Cambridge Centre Grant sub-contract). £150,000 Diet diaries and follow-up in men with prostate cancer. 2006-2010

P Emmett (co-app) £166,771 Euro European Union Framework 7 programme. HabEat - Determining factors and critical periods in food habit formation and breaking in early childhood: a multidisciplinary approach. (2010- 2014)

A Emond (co-app PI= Prof G Davey-Smith) £4,471,052 from Medical Research Council. (jointly with Wellcome Trust) ALSPAC: consolidation of a two generation cell line backed resource (2006-2010)

A Emond (co-app PI= Prof G Davey-Smith) £4,471,052 from Wellcome Trust (jointly with MRC) ALSPAC: consolidation of a two generation cell line backed resource (2006-2010).

A Emond (co-app. PIs=Drs P Gringras and R Appleton)£ 350,000 from NHS R&D National Coordinating Centre for Health Technology Assessment (HTA). The use of Melatonin in children with Neuro-developmental Disorders and impaired sleep; a randomised, double-blind, placebo-controlled, parallel study (2007-2010)

A Emond (co-app: PI =Prof S Roulstone) £187,000 from Medical Research Council for: The Origins, outcomes and impact of persistent phonological impairment. (2006-2009)

A Emond (co-app: PI = Prof S Roulstone) £112,337 from BUPA research foundation: Profiling children who stutter in the Avon Longitudinal Study of Parents and Children (co-app: PI= Prof S Roulstone) (2006-2008)

A Emond (PI, with E Towner and J Mytton) £74,996 from Department for Transport: Exposure to injury risk in the road environment and reported road traffic injuries in 16-17 year olds. (2008 – 2011)

A Emond (PI) £114, 216 from Responsibility in Gambling Trust. The antecedents and consequences of gambling behaviour in adolescence: a prospective population study (2009-2011)

J Golding (PI) \$300k over 3 years. National Oceanic and Atmospheric Administration, USA.: The contribution of fish consumption in pregnancy to the long-term development and behaviour of the offspring (2007-10)

J Golding (PI) £200k over 5 years. Arthritic Association. To investigate the relationship between diet, lifestyle and the use of supplements on the development of joint pain and arthritis reported by children and parents within the Avon Longitudinal Study of Parents and Children (2006-2010)

J Golding (PI). £28k over 2 years. NIH, USA and WHO, Geneva. Commission to write a guide concerning how to undertake a longitudinal birth cohort study(2007-9)

J Henderson co app: PI = J Macleod, G Davey Smith, M Hickman, AW Boyd, D Darvill, JAC Sterne, C Salisbury, P Gregg, AR Ness, M Hillsdon, G Lewis, R Lyons,

B Delaney, F Sullivan, R Hobbs, S Purdy, A Taweel, R Campbell, C Stoltenberg, H Annett, D Ford, P Snell, PR Burton, B Maughan £1,686,000, Wellcome Trust: Influences on psychosocial and physical health in early adulthood: phenotypic enrichment of the ALSPAC cohort through linkage to primary care electronic patient records and other databases 2009-2013

J Henderson co app: PI= J Gulliver, D Briggs, J Molitor, P Elliot £405,763, Medical Research Council: Effects of early life exposure to particulates on respiratory health through childhood and adolescence: ALSPAC birth cohort study 2008-2010

J Henderson co app: PI= A Simpson, G Devereux, P Cullinan, J W Holloway, S H Arshad, S John, G Roberts, A Woodcock, A Custovic, S W Turner £794,678 Medical Research Council: Gene and environmental influences on childhood asthma: STELAR (Study Team for Early Life Asthma Research) collaboration 2008-2012

J Henderson co app: PI= GH Koppelman, JC de Jongste, DS Postma, AJM van Oosterhout, MC Nawijn, M Kerkhof, EJLE Vrijlandt, , C. Thys, M. Hoekstra, A Wijga, HA Smit, AH Maitland van der Zee, B Brunekreef €500,228 Astma Fonds (Netherlands), Predicting asthma phenotypes: characterisation of IL1RL1 in asthma 2009-15

C Joinson (PI with J Heron and G Lewis) £98,490 'Developmental trajectories of depressive symptoms from late childhood to early adolescence: impact of gender, puberty and adversity'. Economic and Social Research Council, Reference: RES-000-22-2509:(2 years: Jan 2008-Dec 2010)

C Joinson (co-app PI= G Lewis.) circa £600,000 'Depression at 17: ALSPAC'. Wellcome Trust: (2008-2012).

C Joinson (co-app. with J Reilly et al). £78,150 on 'Paradigm shift in use of physical activity in treatment and prevention: associations between objectively measured physical activity and cognition in 11-13 year olds in ALSPAC. BUPA Foundation Medical Research Grant. 18 months.

P Pant & E Towner The scale and impact of child injuries in Nepal (funding for PhD studentship). £64,750 from the Royal Society for the Prevention of Accidents (2009-2012).

C Steer (co-app) **J Golding** Collab: PI Silvia Paracchini Oxford) Gene x gene and gene x environment interactions underlying speech, language and reading development (1/1/2009-31/12/2010)

E Towner (co-app, PI= D.Kendrick, University of Nottingham. £2,000,000 from National Institute for Health Research. Keeping Children Safe at Home: a multi-centre collaborative research programme to reduce childhood injuries (2009-2014).

E Towner. Priority review on local child Safety. £2,163 from the Department for Transport (2008).

E Towner (PI). £20,000 from UNICEF Bangladesh. Independent Evaluation of the Prevention of Child Injuries through Social Intervention and Education (PRECISE) project. (Aug – Dec 2008).

E Towner (PI) USD 9,000 WHO Regional Office for Europe, Rome. European Report on Child Injury Prevention (June – Sept 2008).

E Towner, (PI, with **A Emond and J Mytton**) £74,848 from Department for Transport Road traffic injuries in 13-14 year old adolescents in an English longitudinal study. (2008 –2010).

E Towner (co-appl, PI H.Ward, University College London) £950,000 from the Department for Transport. Evaluation of the Neighbourhood Road Safety Initiative (2004-2008).

E Towner (co-appl, PI R.Lyons, University of Wales, Swansea) £651,155 from the Department of Health. Moving from Observation to Intervention to reduce injury risk (2004-2008)

C Williams (PI, co-PIs Dr Paul Spry, Mr JP Diamond). £58,774; NERC 2007 - 2009 (awarded 2006 but start delayed thus runs 2008 - 2010). What is a normal optic nerve in childhood?

J Guggenheim (PI ,co-apps **C Williams**, K Northstone). £63,035: NERC August 2007 - July 2010. Genetic and environmental risk factors for myopia in the ALSPAC study cohort.

TEACHING ACTIVITY

Undergraduate

Intercalated BSc in International Child Health

The overall aims of the International Health programme are to raise awareness and knowledge of important global health issues whilst promoting skills of critical evaluation and strategic thinking. This year our third cohort of students graduated all achieving an upper second class degree, with one outstanding first class pass. Matthew Ellis, with expert help from our teaching fellow, Liz Anderson, once again led a cross-faculty team of academics who collectively have worked in most parts of the world. Students come from all parts of the UK to supplement the majority of Bristol based students as there are only 5 such courses in the UK..



The fascinating range of dissertation themes chosen by our students – ‘HIV: an issue of Gender’, ‘Approaches to tackling the Global Kidney Trade’ and ‘Climate Change; a Manmade Problem with a Female Solution’ to give three random examples – underlines the breadth of issues that arise from this course. Our continuing popularity (we have to turn candidates away) suggests we are meeting a strong demand amongst the next generation of doctors who will be more than ever before global citizens in need of a global perspective.



Luke Allen receiving the David Baum prize for International Health 2009, with Matthew Ellis and Alan Emond

Early Childhood Studies BSc [Aspects of Child Health Unit]

Aspects of Child Health is a popular and well-evaluated unit taught to third year students on the Early Childhood Studies programme in the School for Policy Studies. The unit provides a stimulating, dynamic and topical look at child health, growth and development, enabling students to understand current approaches and policies in this area. The unit lead is Carol Joinson, and the



lecturers come from a range of professional backgrounds, including paediatricians, psychologists, health visitors, and nurses, all directly involved in working with children, and/or academics working in the area of child health and development. The unit is taught through a series of lectures and interactive seminars. Following successful completion of the unit students are expected to be able to:

- Access and critically appraise information on child health from a range of sources.
- Show an understanding of the pathways of child growth, health and development and common conditions and circumstances impacting on development.
- Describe the normal process of child health surveillance and explain its importance in promoting child health and development.
- Understand some of the causes of childhood disability and how disability impacts on the child and family.
- Explain how factors in the child's environment (both pre-natal and post-natal) can impact on health.
- Explain the impact of health and development in the early years on subsequent health, development, educational attainment and well being throughout childhood, adolescence and adulthood.
- Be able to describe factors associated with childhood disadvantage and how they lead to inequalities in children's health.

Medical Students (COMP course)

The Centre team contribute to the community aspects of the child health course for 4th year medical students: giving lectures, running workshops and leading on the interprofessional learning (IPL) opportunities. The two IPL initiatives have been successfully incorporated into the mainstream curriculum: the paediatric disability case study for medical students and children's nursing students, and the paediatric prescribing workshop for medical students and pharmacy students.

Postgraduate

South West Paediatric Trainees

The Paediatric SpR training programme was a series of six days for year 3,4,5 senior registrars (ST years 6-8) from the South West rotation. The aims of the study days are to provide skills needed by the trainees to function as a consultant. The morning sessions are based on clinical subjects and are of general paediatric interest, whilst the afternoons are non-clinical, targeting knowledge, skills and attitudes required as a consultant. Each day was co-ordinated by a different trainee, with special thanks to Dr A Yee Than as overall co-ordinator. The course was directed by Alan Emond, and received excellent evaluation. These results, together with suggested topics from the trainees, will be used to develop the future programme.



Centre Team Members in 2008-09

Tom Allport	Senior Clinical Lecturer (UoB)
Liz Anderson	Teaching Fellow (UoB)
Pat Baldwin	Secretary (UoB)
Hilary Beach	PhD student (UWE)
Antonia Beringer	Research Fellow (UWE)
Pete Blair	Senior Research Fellow (UoB)
Joanne Brooks	Senior Clinical Lecturer (UoB)
Julie Chamberlain	Information Administrator (UoB)
Jane Coad	Senior Research Fellow (UWE)
Jo Coffee	Administrative Assistant (UoB)
Esther Crawley	Senior Clinical Lecturer (UoB)
Victoria Cribb	Research Nutritionist (UoB)
Toity Deave	Research Fellow (UWE)
Zia-Ud Din	Postgraduate Student (UoB)
Deborah Dooley	Information Assistant (UoB)
Nicola Eaton	Principal Lecturer (UWE)
Matthew Ellis	Senior Clinical Lecturer (UoB)
Pauline Emmett	Senior Research Fellow (UoB)
Alan Emond	Professor of Child Health (UoB)
Peter Fleming	Professor of Infant Health and Developmental Physiology (UoB)
Jean Golding	Emeritus Professor of Paediatric and Perinatal Epidemiology (UoB)
Trudy Goodenough	Research Associate (UWE)
Steven Gregory	Data Preparation Assistant (UoB)

Andrew Haig-Ferguson	Research Associate (UoB)
Jane Heraghty	Clinical Research Fellow (UoB)
Linda Hunt	Senior Lecturer Medical Statistics (UoB)
Diana Hynam	Executive Assistant to Professor Emond (UoB)
Jenny Ingram	Senior Research Fellow (UoB)
Debbie Johnson	Research Midwife (UoB)
Carol Joinson	Lecturer (UoB)
Jaspal Kang	Information Assistant (UoB)
Mary Lewis	Research Associate (UWE)
Raghu Lingam	Lecturer in Child Health (UoB)
Sarah Manns	PhD student (UWE)
Kamel Mansi	Research Fellow (UWE)
Pilar Munoz	Research Secretary (UWE)
Julie Mytton	Senior Research Fellow (UWE)
Ann O'Brien	Research Associate (UWE)
Sheila Preece	Research Editor (UoB)
Colin Steer	Research Associate (UoB)
Sally Sterland	Secretary for BSc in International Health (UoB)
Rosemary Thompson	FSID Research Unit Manager (UoB)
Elizabeth Towner	Professor of Child Health (UWE)
Linda Wilson	PPE Secretary, Librarian (UoB)
Cathy Williams	Research Fellow (UoB)
Ben Wreyford	SWCAR Information Assistant (UoB)

TEACHING AND RESEARCH ASSOCIATES in 2008-09

Many colleagues from the NHS and other organisations support teaching and research at the Centre.

Ros Bennet	University Hospitals Bristol Foundation Trust (UHBristol)
Maria Bredow	NBT
Tare Biu	North Bristol Trust (NBT)
Randy Comfort	Our Place, Bristol
Fiona Finlay	BANES PCT, Bath
Margaret Fletcher	UWE/UHB
Mary Gainsborough	NBT
Tom Hutchinson	BANES PCT, Bath
A Yee Than	NBT
Simon Lenton	BANES PCT, Bath
Dan Magnus	UHBristol
Pat Richards	North Somerset PCT
Gareth Roberts	NBT
Jane Schulte	NBT
Oliver Stanley	UHBristol
Peta Sharples	UHBristol

Steering Group Members 2008-9

The joint steering group between University of Bristol and University of the West of England is co-chaired by the Deans of the Faculty of Clinical Medicine and Dentistry at Bristol and the Faculty of Health and Life Sciences at UWE.

Professor John Duffield (UWE) (co-chair)

Professor Peter Mathieson (UoB) (co-chair)

Dr Nicola Eaton (UWE)

Professor Alan Emond (UoB)

Professor Peter Fleming (UoB)

Professor Jean Golding (UoB)

Professor Selena Gray (UWE)

Dr Jenny Ingram (UoB)

Professor Robin Means (UWE)

Professor David Nutt (UoB)

Ms Judy Orme (UWE)

Professor Tim Peters (UoB)

Professor Elizabeth Towner (UWE)

CONTACT US

Address: Centre for Child and Adolescent Health
Hampton House
Cotham Hill
Bristol
BS6 6JS

Telephone: 0117 331 0892/3

Fax: 0117 331 0891

Email: D.Hynam@bristol.ac.uk

Website: www.bris.ac.uk/ccah



Group of International students in the grounds of Hampton House relaxing after handing in their dissertations.