

# Centre for Child and Adolescent Health

## Annual Report for Academic Year 2015-2016



CENTRE FOR CHILD &  
ADOLESCENT HEALTH



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## **Introduction**

The Centre for Child and Adolescent Health was established in 2003, as a joint initiative between the University of Bristol (UoB) and the University of the West of England (UWE). Both universities have invested staff and resource into establishing a team of academics, led by Professor Alan Emond from UoB and Dr Julie Mytton from UWE.

The aim of the Centre is to promote the academic study of child health through inter-professional collaboration, and our philosophy is to integrate research with teaching and policy development.

A Service Level Agreement between the two universities has placed the Centre on a sound financial footing and secured its future until 2020.

This report summarises the activities at the Centre for Child and Adolescent Health for the academic year 2015-16.

## **Overview of academic year 2015-16**

### **Progress against strategic plan**

The last cross institutional review of the Centre for Child and Adolescent Health (CAAH) in 2010 set a strategy that 'The Centre's niche for the future is in providing expertise to undertake and evaluate complex interventions for the prevention of ill-health and for complicated chronic conditions of childhood, with clear two-way links with clinical practice: the academic team reflecting the multidisciplinary philosophy of the paediatric service, and the evidence from research being translated into changes in policy and practice for patient benefit'.

This annual report for the academic year 2015-16 summarises continued progress against this strategic plan, and documents the research and teaching activity and outputs of the Centre, and the impact of our work on paediatric practice and child health policy.

The last Centre review also supported the continuing collaboration between UoB and UWE, arguing that 'Keeping the Centre staff co-located will maintain a 'mass' of academic child health which will also have clear benefits for training of academic paediatricians and developing the future leaders of child health'. In 2016, the Service Level Agreement between the two universities was renewed for 4 years, securing the future of CCAH until the next research assessment REF2020. Succession planning for the leadership of the CCAH was further enhanced in July 2016, with the promotion of Esther Crawley to Professor of Child

Health, and of Cathy Williams to Reader in Paediatric Ophthalmology- congratulations to both of them!

CCAH is currently sited in the School of Social and Community Medicine at the University of Bristol, which will amalgamate in August 2017 with the School of Clinical Sciences to form the Bristol Medical School. A proposal has been made to re-unite academic paediatrics and child health from both schools into the same centre in the same administrative section in the new Bristol Medical School. The name of the Centre may change to the Centre for Academic Child Health, but the collaboration with UWE will continue. Although structures and names may change, the advantages of an interdisciplinary hub of academic child health are clear for research, teaching and training, and I hope this will be obvious from reading this annual report.

## Highlights of 2015-16

### Research Funding:

During this academic year the Centre was successful in achieving £2,890,000 of income in new grants, from NIHR, research councils and a wide range of charitable funders.

Some highlights of grants won in 2015-16 include: HTA grant for FitNet trial on CFS/ME (Crawley), Elizabeth Blackwell Institute grant for developing an App for young people with continence problems (Joinson), HTA grant for trial of breastfeeding support (Ingram co-app), Responsible Gambling Trust grant for ALSPAC gambling study (Emond).

Appendix 1 contains a full list of new and active grants in 2015-16.

### New Fellowships and personal awards:

Kate Beckett: NIHR Knowledge Mobilisation Research Fellowship (KMRF). 2016-2019

Amberly Brigden: UoB PhD fellowship 2016-19

Alex Creavin: NIHR Doctoral Fellowship 2015-2018

Maria Loades: NIHR Doctoral Fellowship 2016-2019

Lucy Southby: NIHR Doctoral Fellowship 2016-2020

Caroline Taylor: Wellcome Trust Career Re-entry Fellowship. 2015-2019.

Cathy Williams: NIHR Senior Research Fellowship 2015-2019.

### Doctoral students:

10 students were undertaking a PhD at the Centre during 2015-16 (listed on page 23)

Anna Pease and Blanca Bolea-Alamañac were awarded PhDs in 2016- many congratulations to them.

### Research Outputs:

The Centre team had 87 publications in peer reviewed journals in 2015-16. A full list of publications from the Centre during the academic year is contained in Appendix 2

### Impact and public engagement:

#### **National Conferences organised by CCAH:**

17th March 2016 Child Injury Prevention and Injury Care HIT- one day conference at University Hospital Bristol, organised by Julie Mytton

1<sup>st</sup> July 2016: Children's Burns Research Showcase – a one day conference at @Bristol, organised by Alan Emond

#### **National advisory committees:**

National Institute for Health and Care Excellence: Preventing unintentional injury in under 15s. Quality Standard 107. Jan 2016 [www.nice.org.uk/guidance/gs107](http://www.nice.org.uk/guidance/gs107) .Advisory Committee member J Mytton.

### Teaching

COMP Child health (4<sup>th</sup> year medical students) - 286 4<sup>th</sup> year students

Child Health in the Early Years (2<sup>nd</sup> year Early Childhood Studies BSc)- 33 2<sup>nd</sup> year students

Global Health (Intercalated BSc for medical students)- 26 3<sup>rd</sup> and 4<sup>th</sup> year students

Public health: contributions to UWE MSc in Public health and specialist nurse training in public health.

A more detailed report on teaching activity is on p27.

### Structural changes

**Establishment** During 2015-16, the HEFCE funded academic staff from UoB represented a total of 1.76wte (Emond, Joinson, Ellis, Sheahan), and from UWE was 0.8wte (Mytton).

All other team members at CCAH were externally funded, by fellowships or grants.

A full list of the 37 academic staff members, 9 doctoral students and 6 admin staff working at CCAH during 2015-16 is on page 30.

### ***Staff Changes***

Staff changes during the year included:

Retired: Claire Novak (UWE Research Fellow)

Leaving: Tom Norris (Research Associate in epidemiology); Debbie Johnson (Clinical Studies Officer), Amelia Paget (Academic Clinical Fellow), Puspa Pant (Research Associate).

Arriving: Anna Davies (Senior Research Associate), Sarah Boas (FIT-Net Trial manager, CFS team), Ian Harrowell (Academic Foundation Trainee); Katie De-Loyde (Research Statistician), Genette Ellis (Data Preparation Assistant), Anna Pease (Senior Research Associate)- all UoB. Kate Beckett (UWE Knowledge Mobilisation Research Fellow).

### ***Administration***

The admin support team at the Centre led by Diana Hynam saw the arrival of Maggie Heeley (Research Administrator) UWE and Molly Dexter (Modern Apprentice) UoB; Laura Miller returned from maternity leave and is now job sharing with Julia Andrews, who will split her time with a teaching role. June Johnstone was, as always, our essential backup and worked throughout the year. Many thanks to all of them!



Alan Emond

September 2016

# Research themes

## Infant Health

**Lead: Peter Blair**, with Peter Fleming and Toity Deave, Alan Emond, Jenny Ingram, Jean Golding, Yasmin Iles-Caven, Anna Pease and Caroline Taylor.

### Preparing for Home study

This NIHR funded before/after study started in August 2012 and was completed in April 2015. The study was based in four neonatal units (NNU) in the South-West region and evaluated whether the introduction of family-centred discharge planning pathways (Train-to-Home) increased parental confidence in caring for their baby; reduced the length of stay of babies in neonatal care; and reduced the cost of health care. We recruited families with babies born between 27 and 33 weeks gestation and admitted into NNU to understand how confident parents felt about taking their baby home and their healthcare resource usage after discharge. Following the introduction of the Train-to-Home, parents reported feeling more involved and knowledgeable about their babies' care. There was also a significant reduction in visits to Emergency Departments (ED) and their associated costs following discharge from hospital after introducing the package in our target units.

During the year 2015-16, the results of the study were disseminated at regional and national meetings, and materials made freely available for other neonatal services to use. The materials are now available on the South West Neonatal Network website for units to download and use freely: [www.swneonatalnetwork.co.uk/train-to-home](http://www.swneonatalnetwork.co.uk/train-to-home).

The study was jointly led by Jenny Ingram and Peter Fleming with co-applicants Peter Blair, Sarah Manns, Jane Powell from UWE, David Pontin from University of South Wales and Maggie Redshaw from NPEU, Oxford.



### Bumps and Babies Longitudinal Study (BaBBLeS)

The Baby Buddy app was developed by Best Beginnings to support young mothers through pregnancy and the first six months post-delivery. We are undertaking a prospective mixed methods study to explore the impact of the app on maternal self-efficacy and mental wellbeing, when, why and how mothers use the app and any benefits of the app in relation to their parenting, health, relationships or communication with their child, friends and family members or health professionals. We are leading the study in collaboration with the universities of Coventry, Newcastle, Hertfordshire, Kent, Bath and Kings Health Partners London.

Peter Blair secured funds (£50,000) to try and confirm these findings- although utilising anonymised UK infant hearing data collected shortly after birth proved not to be possible, as personalised data is embedded into the digitalised recordings. Further funding has been achieved from the Lullaby Trust for a more ambitious case-control study design seeking

### Can babies sleep in boxes?

Based on makeshift plastic boxes used to sleep babies in emergency disaster areas, the *pepi-pod* is being trialled in New Zealand and Australia as a safer way to co-sleep with your infant. An alternative woven flax basket is also being trialled by the Maori population in New Zealand. In collaboration with anthropologist Professor Helen Ball at Durham University both Peter Blair and Anna Pease are helping conduct a feasibility study to see whether such a device would be acceptable to UK parents.

### Infant car seats and the risk of bradycardia

This study funded by the Lullaby Trust, in which both Peter Fleming and Pete Blair were investigators with Dr Renu Arya from Swindon, has now been completed. It showed that some infants, both term and preterm, showed significant episodes of blood oxygen desaturation when in an infant car seat in a rig which simulated the effects of travelling in a car at 30mph. This study has potential implications for car seat design and recommendations for the care of infants in the first few weeks after birth as well as the use of car seats.

### Oxytocin, epigenetics and postnatal depression

This project, funded by the Fetzer Foundation in the USA, has used ALSPAC to determine whether exogenous oxytocin (i.e. from induction or acceleration of labour) was associated with postnatal depression. The results were negative, but they did find an association between the methylation of an oxytocin receptor in the mother and postnatal depression at 2 months post-delivery. This epigenetic association was not apparent in depression occurring at other times, including during pregnancy.



### OASIS : Oto Acoustic Signals Investigation Study

Although the numbers of babies dying as a result of Sudden Infant Death Syndrome (SIDS) has fallen considerably in recent years, SIDS remains the largest single group of infant deaths after the first few weeks of life. Funded by The Lullaby Trust, the OASIS study is an innovative new study which could lead to identifying babies and young children at risk of sudden, unexpected deaths, by examining data from the newborn hearing screen. If the results of this initial study prove conclusive, this could have potentially ground-breaking implications for the prevention of SIDS and unexpected deaths of older children in the future.

The study will investigate whether any feature of the routinely collected newborn hearing screen, either alone or in combination with other risk factors, can be used to identify infants at increased risk of unexpected death in infancy. The design also means that the proposed study will be the first case-control study of unexpected infant deaths in England since the end of SWISS study in 2007, and will provide important information about the current risk factors for SIDS.

## Child Development, Disability and Complex health needs

**Lead: Alan Emond** with Tom Allport, Karen Birmingham, Esther Crawley, Toity Deave, Genette Ellis, Matthew Ellis, Pauline Emmett, Alan Emond, Peter Fleming, Jean Golding, Steve Gregory, Linda Hollen, Yasmin Iles-Caven, Louise Jones, Carol Joinson, Raghu Lingam, Julie Mytton, Kate Northstone, Marcus Pembrey, Caroline Taylor and Cathy Williams.

### Transgenerational effects

There are two strands to this programme:

- i) To investigate whether influences early in the parents' lives have a demonstrable impact on the development of the child, in particular assessing whether there are sex-specific effects. The team, previously funded by an MRC project grant, have shown that the son's growth and amount of fat he accumulates in adolescence is, on average, far greater if his father started smoking regularly in the period before puberty (i.e. <11 years). Studies underway are also assessing the possible consequences of stressors in the parents' childhood on their own children. The first of a suite of studies has shown that maternal stress in mid-childhood is linked to poor motor development in the child.
- (ii) In regard to the offspring whose own parents were exposed to the smoking of their own mother in pregnancy, we have published effects on growth in utero and during childhood contingent on whether the mother herself smokes during pregnancy. Funding has been achieved from the Escher Family Fund to assess any effects of grandmaternal prenatal smoking on autistic traits in the grandchild. This programme is masterminded by Marcus Pembrey working with Jean Golding using the ALSPAC database.

### The Exposome

Novel statistical approaches have been developed within CCAH. They are similar in concept to the genome wide association studies (GWAS) in being hypothesis free. They have the aim of identifying associations which have not been previously suspected. We have been using the ALSPAC data to develop a similar hypothesis-free approach concerning measures of the physical and psychological environment – a so-called “exposome”- together with physical and psychological phenotypes – the “phenome”. The exposome techniques were developed initially to identify factors independently associated with outcomes such as motor coordination and cognitive traits by Jean Golding, Colin Steer and Steven Gregory, and the phenome exposures are being developed using various measures of locus of control as exposures by Jean Golding, Steven Gregory, and Genette Ellis.

### Mercury exposures

Although there has been a change in policy concerning the consumption of fish by pregnant women, there is still considerable anxiety in regard to exposure of pregnant women to mercury. Very high levels of mercury in pregnant mothers can result in damage to the growing brain. We have collaborated with American colleagues to show that although much of the mercury in the mother's blood derives from her diet, there are many other sources

including from the dental amalgam in her mouth. Having shown that only half the mercury in the British diet is derived from fish, this project is concentrating now on whether it has any adverse effects on the development and behaviour of the offspring of the pregnancy. The project is funded by the National Oceanic and Atmospheric Administration [NOAA] and the National Institutes of Health [NIH] in the USA, and undertaken by Jean Golding, Caroline Taylor, Steve Gregory and Captain Joseph Hibbeln.

### **Lead levels in pregnancy and childhood development**

Caroline Taylor has been undertaking a series of studies investigating the effects of lead and other heavy metals in pregnancy on child development. The effect of heavy metals on public health has been of increasing concern worldwide, and in particular the effects on growth and development in childhood, which can have life-long consequences for the child. Her work focuses on associations with birth outcomes and other aspects of child health and development, as well as the role of genetics and epigenetics in modifying these relationships. She is funded by a Research Fellowship from the Wellcome Trust.

### **Know Violence in Childhood**

A small scoping project in ALSPAC was commissioned by Know Violence in Childhood (KVIC). This organisation is a global learning initiative seeking to leverage all the available evidence to tell the story of violence against children (its different forms, drivers, impacts and costs) and to elicit what can be done to reduce violence effectively. KVIC is funded by Unicef, the Bernard van Leer, Ikea, Oak and Robert Wood Johnson Foundations and the American Jewish World Service. The project involved detailing all the ALSPAC data relating to exposure to all forms of violence (directly or as a witness); to ascertain risk factors that may indicate or influence violence; to identify possible confounders; to identify features that may determine outcomes to the child; and a description of all the ALSPAC papers published to date relating to violence (49 by March 2016). The project was led by Yasmin Iles-Caven, working with Jean Golding and Genette Ellis.

### **Pioneering ethics in longitudinal studies: the ALSPAC Ethics and Law Committee**

The ALSPAC Ethics Committee was at the forefront of ethical thinking in regards to genetic epidemiology and longitudinal studies. The committee tackled issues not encountered before such as: obtaining genetic material from a population sample; enrolling women when pregnant (rather than at the birth); including partners in the study from the outset. Principles underlying the committee's policies were established initially and the policies then evolved when challenged by practical issues arising from running the Study, described as equivalent to English 'case law' by the lawyers involved. Many of the policies are considered standard practice within medical research now, others remain controversial. The document is enlivened by quotes from committee members that have been interviewed recently (using oral history techniques) who reflect not only on the pioneering work of the committee but also on the unusual style and inspirational leadership of the first committee

Chair, Professor Michael Furmston. Karen Birmingham and Jean Golding are in the process of documenting the early work of the Committee. The University of Bristol Policy Press has provisionally accepted the manuscript for publication.

### **The catalyst for the establishment of the International Federation of Human Genetic Societies**

Karen Birmingham will have a chapter included in a book on the history of human genetics which will be published to coincide with the 50<sup>th</sup> anniversary of the founding of the European Society of Human Genetics. The chapter is based on an interview with Professor Marcus Pembrey in which he describes a WHO 'ambush' that catalysed the establishment of the International Federation of Human Genetic Societies by Marcus and indignant colleagues.

### **ALSPAC Administrative Archive**

The paper and electronic files that show the extraordinarily complex and ground-breaking organisation of ALSPAC is now considered exceptionally valuable. Children of the 90s was the first study of this kind to recruit mothers when they were pregnant, to include genetics in the overall study planning from the very beginning and to have its own ethics committee attached to the study. Funded by a UoB Alumni Donation, Yasmin Iles-Caven and Karen Birmingham collated over 1000 files, and transferred them to the University of Bristol Library's Special Collections in August 2015. The Wellcome Trust, for many years a tremendous supporter of ALSPAC, awarded a 2 year grant to Special Collections to undertake the professional cataloguing of the Archive and this is now well underway. It will create a valuable resource for anyone interested in subjects such as the history of science, the development of DNA banking and genetics or the ethics of cohort studies. Study participants may be interested in aspects of the archive too. Special Collections will be displaying a directory of the archive on their website.

### **Picky eating**

Picky eating is a problem which worries many parents. Caroline Taylor and Pauline Emmett are using data collected in the ALSPAC study to investigate the background to and outcomes of picky eating behaviour in young children. As well as the two PIs the project also employs a database manager (Steve Gregory) and a research assistant (Yasmin Iles-Caven).

### **The antecedents of hyperactivity and attention deficits**

An ALSPAC project, funded by the Waterloo Foundation, aimed to assess the dietary antecedents of motor problems and hyperactive behaviour. The analyses are now complete and writing up is ongoing. The study is led by Raghu Lingam, Jean Golding and Pauline Emmett with assistance from Steve Gregory and Captain Joseph Hibbeln (NIH, USA).

Dr Blanca Bolea-Alamañac completed a part-time PhD in 2016 using the ALSPAC dataset, supervised by Alan Emond and Carol Joinson, to investigate the influence of maternal somatic anxiety in pregnancy on the development of hyperactivity and ADHD in childhood

### **Contenance problems in children and young people**

Carol Joinson is leading an MRC-funded study of continence problems in children and adolescents. This project comprises a quantitative and a qualitative strand. The focus of the quantitative research over the past year has been on deriving developmental trajectories of bedwetting and daytime wetting and on examining risk factors in early childhood that predict atypical development of continence. The team has also investigated the association between childhood continence trajectories and outcomes in adolescence relating to incontinence, bladder and bowel function and psychological impacts.

The qualitative study has been successful in recruiting young people (11-20 years) with continence problems from clinics across the UK. Data analysis is complete and the team is collaborating with the continence charity ERIC to translate these findings into materials for young people.

Carol Joinson and Katie Whale presented the findings at an international incontinence conference in Kyoto, Japan in June 2016, and Carol won a prize for her presentation.

Carol has been awarded funds from the Elizabeth Blackwell Institute and the University of Bristol research Enterprise and Development (RED) to develop an App for young people with incontinence problems, utilising the evidence from this research study.

### **Developmental Co-ordination Disorder**

Ian Harrowell undertook a project using ALSPAC and supervised by Alan Emond and Linda Hollen to investigate the well being, mental health and educational outcomes in late adolescence of children with DCD. This was a follow-on from Raghu Lingham's work on DCD which had shown mental health issues at 11, and confirmed persisting difficulties at age 17. The results were presented at the RCPCH scientific meeting in Liverpool in April 2016, and have submitted for publication.

### **Developmental and behavioural associations of burns and scalds in childhood**

ALSPAC collected detailed information from parents on burns and scalds sustained by their children up to the age of 11, and these data were used to calculate incident rates for burns in the home environment at different ages. Linda Hollen then undertook analyses using the developmental and behavioural profile of the children collected before the burn injury to investigate the individual risk factors for burn injury. Child factors consistently and strongly associated with increased risk of burns were gender, motor development, co-ordination difficulties and problems with emotional regulation.

### **Gambling behaviour in young people**

Alan Emond is leading the ALSPAC gambling study, which is collecting information on gambling behaviour and problem gambling in the transition from adolescence to young adulthood. The 17 year and 21 year sweeps have now been completed, and funding secured for data collection at 25 years in late 2016.

### **Understanding uptake of Immunisations in Gypsy and Traveller communities (UNITING)**

Julie Mytton was co-applicant on this multi-centre qualitative study exploring the barriers and facilitators to immunisation uptake in Gypsy and Traveller children and adults. In total the study interviewed 174 Gypsy, Roma and Traveller participants from six communities across four cities in the UK. In addition, 39 providers of immunisation services were interviewed, and 51 Travellers and 25 service providers co-created a prioritised list of interventions to improve uptake. The project team submitted their final report to the NIHR in January 2016 and are currently writing publications.

## **Children with complex visual impairment**

**Lead: Cathy Williams** with PhD students Jocelyn Cherry, Ed Mountjoy, and Alex Creavin; research manager Dr Anna Pease and clinical academic colleague Dr Denize Atan



### **The CVI Project**

Cathy Williams (supported by an NIHR Senior Research Fellowship) has started a 5-year programme of work investigating the prevalence, impact and support for Cerebral Visual Impairment in Primary School children, called “The CVI Project” . This has workstreams for Prevalence, Impact, Data Linkage and a Feasibility RCT. The CVI project involves two planned data collection sites (Southampton and Gloucester), collaborations with the PenCRU unit in Exeter (Dr Chris Morris and Ms Sharon Blake) and the DECIPHer unit (Dr Ruth Kipping) and the Study Manager is Dr Anna Pease.

### **Visual and Refractive Development**

Work continues on the ALSPAC visual development database and the UK Biobank on the genetic and environmental predictors of myopia /refractive error and of stereoacuity. Jocelyn Cherry is researching prevalence of unintentional injury in children with vision or hearing impairment; Ed Mountjoy is examining genetic predictors affecting both eye and brain development and Alex Creavin is researching the development of the optic nerve and neural retina in both normal and prematurely born children including a systematic review and 13ristol13t ALSPAC data. CW and Dr Atan are developing a programme of research into imaging the layers of the retina in healthy children and those with neurodevelopmental

disorders using Optical Coherence Tomography (OCT) , to evaluate its usefulness as a biomarker of neuronal function in these patients. Collaborators: Prof J Guggenheim (Cardiff); Dr K Luyt and Dr D Atan (Bristol)

### **Visual Outcomes after early life interventions for premature babies**

CW leads the vision data component of the NIHR-funded DRIFT (Draining, Irrigation and Fibrinolysis Therapy) school-age study (PI Dr Karen Luyt), following up children who were born prematurely and suffered bleeding into the fluid spaces of the brain. CW also works with the National Perinatal Epidemiology Unit (NPEU) on the visual outcomes of babies in the study Benefits of Oxygen Saturation Targeting II (BOOST II) .

## **Chronic Fatigue syndrome (CFS/ME)**

**Lead: Esther Crawley** with Simon Collin, Lucy Beasant, Sarah Baos, Amberly Brigden, Maria Loades, Roxanne Parslow and Tom Norris.

### **Epidemiology**

This MRC funded project investigating the epidemiology of CFS/ME in children is nearly complete. This project has described the prevalence of CFS/ME at ages 16 and 18, the chance of recovery from CFS/ME in the population, and the characteristics of children who get CFS/ME in later adolescence compared to those who don't. We have completed causal analyses of CFS/ME in adolescence using Directed Acyclic Graphs (DAGs) and we expect to start disseminating the results in November 2016.

The Recovery Study has closed to recruitment, having recruited over 200 participants with high follow up rates at 6 months. We will examine how and when children recover and what factors predict persistent illness.

We have completed an analysis of trends over the past 12 years in recorded diagnoses of CFS/ME using electronic primary care medical records from the Clinical Practice Research Datalink (CPRD). The findings have been submitted for publication, and include an investigation into differences in rates of diagnosis across the socioeconomic spectrum.

### **Treatment**

The "MAGENTA" trial (comparing Graded Exercise Therapy with Activity Management) had a successful year. We have shown that recruitment is feasible and acceptable and we are therefore progressing to the full trial phase. Recruitment will continue until the end of 2018.

In 2016 we welcomed Sarah Boas as our new trial manager to the FITNET-NHS trial. This will be the largest trial ever conducted in CFS/ME and will use internet-delivered Cognitive Behaviour Therapy (CBT) throughout the UK. Recruitment will start in November 2016.

We have had a successful year in obtaining PhD funding. Amberly Brigden was awarded a highly competitive University of Bristol doctoral studentship, and will be developing an intervention for primary school children with CFS/ME. Maria Loades obtained a prestigious NIHR Doctoral Research Fellowship, and will be developing an intervention for children with CFS/ME and depression.

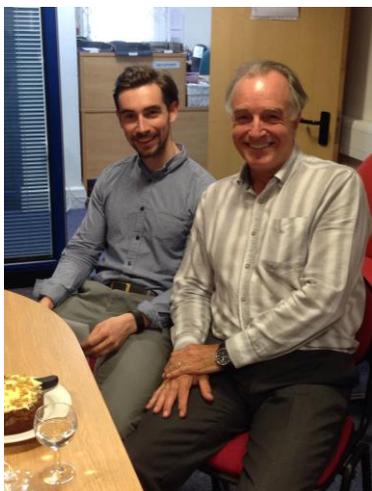
Our research investigating treatments and outcomes for adult CFS/ME patients has recruited 1067 patients over the past year from 10 NHS teams and 1 private provider. Collection of 12-month follow-up is almost complete, with final analysis scheduled for the end of 2016. We continue our work investigating how children express preference for treatment in trials.

### Qualitative Studies

We have completed studies investigating the views of children and their parents on which illness domains are important, for the purpose of developing a Patient Reported Outcome Measure (PROM) to measure treatment outcomes in paediatric CFS/ME. Forty five children with CFS/ME were recruited, and data from qualitative interviews were used to conceptualise, develop and refine questionnaire items. We have completed work on how we should define recovery in children with CFS/ME, and what magnitude of change is important to them. We have also completed a study investigating why some children with CFS/ME become depressed. The findings of a study of adult patients' experiences of NHS specialist CFS/ME services have been submitted for publication, and will be disseminated to patient support groups.

### Systematic reviews

We continue to conduct systematic reviews. In 2015-16 we completed reviews on: treatment of CFS/ME and depression; treatment of CFS/ME and anxiety; a meta-ethnographic review of illness domains in CFS/ME.



We were sad when Tom Norris moved on, and we thank him for his contribution and wish him well in his future career. Here is Tom with Alan at his leaving lunch in July 2016

## Child and Adolescent Injury

**Lead: Julie Mytton**, with Santosh Bhatta, Jocelyn Cherry, Toity Deave, Alan Emond, Trudy Goodenough, Steve Gregory, Linda Hollen, Rebecca Kandiyali, Jenny Ingram, Moses Ikpeme, Claire Novak, Dave Rea and Puspa Raj Pant.

### Children's Burns Research

The Children's Burns Research Centre, funded by the Healing Foundation as part of the Burns Collective, was officially launched in June 2012 and has now entered its fourth year. The academic network for children's burns research is led by the University of Bristol and University Hospitals Bristol NHS Foundation Trust (UHB), in partnership with UWE, the University of Bath and Cardiff University, with support from the Welsh Assembly Government. The burns research programme is based on 3 main themes: clinical, psychosocial and prevention.

Led by Alan Emond, the research team also includes Julie Mytton, Toity Deave, Dave Rea, Linda Hollen, Rebecca Kandiyali, Moses Ikpeme and Steve Gregory from CCAH. CCAH staff are mainly involved in the prevention theme in collaboration with Cardiff University. During 2015-16, an electronic version of the Burns and Scalds Assessment Template (BaSAT) was adopted by the Emergency Department at the Bristol Children's Hospital, providing both a standardised clinical history tool and enabling the development of an epidemiological database of burn and scald cases managed by Steve Gregory. Paper based versions of the BaSAT are in use in Emergency Departments in Cardiff, Manchester and in Denver, Colorado, USA.

The children's burns research team have developed an evidence-based clinical prediction tool (BuRN-Tool) to assess the likelihood of neglect or abuse associated with the burn injury. The BuRN-Tool has now been incorporated into the BaSAT and is being evaluated in clinical practice in Eds in England and Wales.

In 2015, Julie Mytton initiated new strategic collaborations with the Chief Fire Officers Association. Julie Mytton, with Trudy Goodenough and Claire Novak completed a feasibility study to develop and test methods for a qualitative study to explore children's reports of their behaviour and decision making during a fire in their home. This work has been presented at the Fire Service College meeting in Nov 2015 and will be presented at the World Injury prevention and Safety control conference in Finland in September 2016. An application for funding a main study is in progress. A survey of fire safety education across the UK has been completed by Julie Mytton and Puspa Pant and is currently being written up for publication. These projects have been presented to an All Party Parliamentary Group on Fire Safety and Rescue (January 2016), the Chief Fire Officers Association (March 2016) and will be presented to the Fire Federation in October 2016.



Julie Mytton with the research team and colleagues from the Devon and Somerset Fire Brigade.

Toity Deave and Andrea Choules (Community Child Health Partnership, North Bristol Trust) were awarded £14,914 from the Avon Primary Care Research Collaborative Research Capability Fund. Working with Claire Novak and Dave Rea a framework for an intervention package has been developed for health visitors to use with families, after a child has presented to an emergency department or burns unit following a burn or scald, to reduce the risk of a subsequent injury. This has involved discussions with health visitors and parents, including young mothers. The team are currently seeking funding to develop and test the intervention further.

### **SILKIE Study.**

This feasibility study (PI Amber Young, with co-apps Jenny Ingram and Alan Emond) is exploring whether skin grafting success rates in burn patients can be improved by using a low friction environment. Skin grafts are required to ensure healing after burns that are deeper or take longer than 21 days to heal. Each year approximately 1000 skin grafts are undertaken in England and Wales; 75% in adults and 25% in children. Around 20% will fail completely or partially, with some wounds needing re-grafting.

Friction between dressings and bed sheets can cause rubbing or stretching causing graft loss. If dressings and patients were able to slide over the sheet when the patient moves in bed, then the graft may have more chance of 'taking'.

Adult and paediatric patients who are selected to undergo skin grafting to achieve healing after burn injury as part of normal clinical care will be cared for using low friction nursing as standard management and included in the study. We will explore whether it is possible to use the sheets in burn wards, how acceptable the bedding is to patients and staff and whether patients are more or less comfortable. During the 12 month study period, we will collect data on the success or failure (full or partial) of grafts. We will compare this to data

obtained from the national burn injury database (iBID) during which normal friction sheets were in use. The costs of providing the sheets and of graft failure will also be collected. We will also explore the views of staff and patients who use them using semi-structured interviews and focus groups.

### **Child Injury Prevention and Injury Care Health Integration Team (CIPIC HIT)**

This is an inter-agency partnership working to support a reduction in avoidable unintentional injuries in children across the wider Bristol area, to improve the outcome for patients when injuries do happen, and reduce the burden of injuries on families and the NHS. The team is led by Julie Mytton with Toity Deave, Trudy Goodenough, and Claire Novak (UWE), and Alan Emond and Jenny Ingram (UoB). The team aims to integrate primary, secondary and tertiary prevention for child injuries. We hosted a conference called 'Making it happen; integrating prevention and care' for practitioners and students at the University Hospitals Bristol Education Centre on 17<sup>th</sup> March 2016. Over 60 delegates attended to hear a range of presentations on the prevention, care and rehabilitation of children with injuries across the Bristol area. The HIT completed a strategic review on 29<sup>th</sup> June 2016 and is currently preparing a strategic plan for 2016-2019.

The Child Injury HIT, together with the Avoiding Hospital Admissions HIT, was successful in securing funding from the British Red Cross to explore the potential for first-aid education to support patient groups to make informed decisions about when to access urgent care services. This mixed methods exploratory study commenced in March 2016 and runs for 10 months.

### **Keeping Children Safe at Home Programme**

This five year NIHR programme grant was a collaboration of five universities: Nottingham, the West of England Bristol, Newcastle, Norwich and Leicester and the Child Accident Prevention Trust and ended in September 2014. In Bristol, this was led by Elizabeth Towner and Toity Deave from UWE. A key output from the study was an Injury Prevention Briefing to support practitioners working with families with young children. Since completion of the programme work has continued on publicising and disseminating the findings. This includes five papers in journals such as JAMA Pediatrics, Trials and BMC Public Health. Presentations both locally, nationally and internationally have been well received and these are continuing.

Toity Deave, with Mike Hayes of the Child Accident Prevention Trust and Trudy Goodenough were awarded £12,473 by Bristol City Council's Public Health New Investment funding to disseminate the Injury Prevention Briefing (IPB). During 2015-16 a series of training workshops were put on for Bristol-based community staff who work with families with pre-school children. This included 190 early years practitioners, teaching staff, health visitors, children's centre staff, community nurses, academic staff, 185 children's nursing and

Specialist Community Public Health Nurse students within UWE, more than 80 practice teachers/mentors linked to UWE. In addition, more than 50 students and staff outside Bristol also attended a seminar led by Toity Deave about the IPB.

The IPB has been posted on the Institute of Health Visiting, the Community Practitioners, the Health Visitors' Association and 4Children websites, and is available as an interactive pdf (<https://tiny.cc/kcspage>).

### **EPPIC: Enhancing evidence for Post-Injury Psychological Intervention and Care**

There is extensive evidence about the impact of common post-injury psychological problems on the duration and extent of recovery in adults (and on NHS costs) and the best means to mitigate them. Yet this is not evident in practice. Kate Beckett has been awarded an NIHR Knowledge Mobilisation Research Fellowship (KMRF) which aims to develop individuals and means to address this problem. Kate's KMRF draws on Gabbay and Le Mays research which found that practitioner decisions and actions are governed by individual or collective 'mindlines' which combine evidence from multiple sources and go beyond explicit guidelines to provide rich internalised evidence and the 'contextual adroitness' required for real world healthcare. The KMRF will test a new KM approach aiming to purposively influence practitioner mindlines (and hence practice) using the example of post-injury psychological needs and care. In the first phase Kate will systematically combine evidence from 3 sources (patient narratives, practitioner mindlines and research /expert evidence). These will be developed into an interactive performance script. Kate will run 2 joint patient/practitioners workshops using Forum Theatre techniques to help participants engage with these different constructs, consider the implications of current practitioner mindlines and co-create new practice. Kate will evaluate this method as a medium for KM, mindline and practice change and explore potential for future use of the FT workshop within other UK NHS trauma services.

## International Child Health

A global perspective cuts across research themes at the Centre.

### Brazil

Alan Emond is collaborating with colleagues at Universidade Federal do Pernambuco on a prospective study of the effects of exposure to domestic violence on children's emotional and psychological development. A cohort of women and their babies in Recife previously investigated for domestic violence in pregnancy and the post-partum period is being followed up at 6 years of age. This study is funded by the Brazilian Government (CNPq) and Alan has been advising Elizabete Silva on her PhD, which was successfully completed in May 2016.

The emergence of the Zika virus epidemic in North East Brazil has resulted in unexpected numbers of babies being born with microcephaly. Alan Emond is a consultant collaborator on a case-control study of Zika microcephaly being run from Recife, and a co-applicant on a BPSU surveillance study of microcephaly being run in the UK.

### Nepal

During April-July 2016, Puspa Pant carried out an impact assessment of child injury prevention activities in Nepal funded by RoSPA and UWE and implemented since 2013. This project was funded by Higher Education Innovation Funding (HEIF) and conducted in collaboration with Nepali NGOs – MIRA and Swatantratā Abhiyān. In addition to the appraisal of challenges and opportunities for implementing the activities in the communities, an interaction with decision makers on child protection in Nepal was organised in Kathmandu. Puspa Pant was supported by Julie Mytton and Toity Deave. An application for funding has been developed from the findings of the HEIF project and submitted to the Institute of Occupational Health and Safety (IOSH), outcomes awaited. During 2015-16, Puspa has published 6 peer reviewed journal articles and a book section dealing with emerging public health issues in low-income countries and Nepal.

### Bangladesh

The Centre collaborates with the Centre for Injury Prevention and Research, Bangladesh (CIPR-B) on injury prevention studies. Toity Deave is the CCAH lead, and links with Kamran ul Basat, Associate Director at CIPR-B, who undertook his PhD at CCAH from 2010-2013 and Animesh Biswas, Team Leader of the Burns Research Team, CIPR-B.

### USA

*Professor Stephen Nowicki*, a distinguished psychologist at Emory University, Atlanta, USA, visited for 6 weeks June/July 2016 to work with Jean Golding on investigating locus of control (LOC) within the ALSPAC cohort. This work is funded by the John Templeton

Foundation. Steve has worked with ALSPAC over many years and was instrumental in introducing a LOC scale into the study. LOC refers to the connections individuals perceive between their behaviour and what happens to them. Over the past 30 years the average locus of control score for adults and children has become significantly more external. Captain Joseph Hibbeln, a research scientist based at the National Institutes of Health (NIH) in the National Institute on Alcohol Abuse and Alcoholism (NIAAA), has been closely involved with analysing the ALSPAC study, particularly in regard to the influence of prenatal diet, especially seafood, on offspring development. His current work with Jean Golding is related to the influence of mercury and selenium on child behaviour and development, funded by an award to Jean from the NIH; the analyses are undertaken by Steve Gregory.

### **ELSPAC in the Isle of Man**

A cohort study was undertaken on the Isle of Man at the same time as ALSPAC, using similar methodology. After the retirement of the study director on the island, the data were officially transferred to the University of Bristol in 2014. Supervision of the data is undertaken by the Isle of Man Data Governance Committee which meets quarterly. A dedicated web site, aimed at both researchers and participants, gives the background to the study and the link to the study manual gives information on the data collected [<http://www.bristol.ac.uk/social-community-medicine/projects/isleofmanstudy/>]. Interested researchers are invited to contact the Committee [[elspanc-iom@bristol.ac.uk](mailto:elspanc-iom@bristol.ac.uk)].

### **International Childhood Cancer Cohort Consortium**

This is a group of birth cohort studies which collaborate and link data in order to increase the power to identify factors that may influence the development of cancer in childhood. The first of the results was published last year. It concerned birthweight, and showed that the children who went on to develop cancer were on average heavier at birth, and that this was not attributable to an increase in maternal weight. Jean Golding is the representative of ALSPAC on this consortium which includes cohorts from Australia, Scandinavia, China and Israel.

### **Resilience in migrant youth: a cross-cultural comparative study**

A consortium of partners have been collected through the World Universities Network (WUN) to investigate how to promote positive wellbeing and educational outcomes in 13-15 year olds exposed to the adversity of migration. Alan Emond has piloted materials in the City Academy in Bristol with both migrant and local youth, and the findings are being collated and compared with similar measures used in Canada, South Africa, Australia, New Zealand and China.

## Public and Patient Involvement at CCAH

**Lead: Jenny Ingram**

Public and Patient Involvement (PPI), a cross-cutting theme for the CCAH. Involving relevant patients or members of the public in designing, advising and managing research projects improves the quality of studies, and it is important to ensure that this PPI is timely, active and meaningful. Jenny Ingram is the lead for PPI across the School of Social and Community Medicine and advises researchers in the best ways to achieve meaningful participation. INVOLVE ([www.involve.org.uk/](http://www.involve.org.uk/)) also produces literature, guidance about participation and payments for participants, and a website to find people to involve in their research ([www.peopleinresearch.org/](http://www.peopleinresearch.org/)). The expertise of running PPI available at CCAH has been used to support the work of some Health Integration Teams (HITS) across Bristol including CIPIC and BoNEE. Jenny is also a member of the People in Health West of England Learning and Development Group ([www.phwe.org.uk](http://www.phwe.org.uk)) which works across the CLAHRC and AHSN network to support groups providing PPI with young people and parents across the Universities and Hospitals in Bristol and also provides workshops on public involvement in research.

### Young People's Participation in Research

**Leads: Claire Novak**, with support from Mike Bell (People in Health West of England) and additional input from: Simon Collin, Katie Whale, Trudy Goodenough and Amberly Bridgen.

The Young Peoples Advisory Group (YPAG) ran at Redland Green Post 16 Centre during 2015-16. This is the sixth year that this school has worked with us to host a YPAG. They provide access to young people as “experts” on being young people rather than a specific condition or disease. The YPAGs have provided high quality critiques and helpful advice which have been incorporated into research study design and ethics applications. During 2015-16 the facilitators were contacted by 11 researchers, resulting in the YPAG advising directly on four research studies.



In addition, the YPAGs study research methods and undertake their own research with guidance from the CCAH team, which they present to staff and colleagues of the CCAH.

*Redland Green YPAG Group  
presenting their research in March  
2016*

## Higher Degrees Associated with the Centre in 2015-16

### **Lucy Beasant**

Title: *Treatment preference in paediatric randomised controlled trials.*

Start date: 1<sup>st</sup> October 2014 – Full time

Lucy is in the second year of a PhD funded by the MRC and supervised by Prof Esther Crawley. Her aims are:

- a) Explore how and when paediatric treatment preference influences trial participation by investigating the preferences of young patients and their parents after recruitment to different paediatric RCTs, (surgical and complex interventions).
- b) investigate management approaches shown to be effective in adult RCTs
- c) develop guidance methods for researchers/health professionals to use when recruiting to paediatric RCTs.

### **Santosh Bhatta**

Title: *Community-Based study of Home Injury Risk Assessment in Rural Nepal*

Start date: 1<sup>st</sup> October 2013 – Full-time.

Santosh is in the third year of his PhD exploring the home injury risks associated with unintentional injuries among the children under 5 years of age in a rural district of Nepal. This UWE funded study collected both quantitative and qualitative information in order to best understand the problem of child injuries in Nepal. Information is collected through a community-based household survey to identify household risks for child injuries and the focus groups for community views. In addition, a systematic review is conducted to evaluate the effectiveness of environmental change interventions to prevent child injury in Low and Middle Income Countries (LMICs). These findings can be used as a basis for future studies and interventions in the field of injury prevention and control in Nepal as well as other similar LMICs.

### **Blanca Bolea-Alamañac**

Title: *Prenatal and perinatal factors and hyperactivity outcomes in children in the ALSPAC cohort*

Start date: 1<sup>st</sup> August 2009 – Part-time. Completed July 2016

Blanca's part-time PhD project is using ALSPAC to investigate the relationship between anxiety and stress in pregnancy and subsequent hyperactivity and ADHD in later childhood. She is supervised by Alan Emond and Carol Joinson. Her PhD was submitted in February 2016 and she passed the viva in July. She has written and published two research papers and has established collaborations with other cohort based research groups in Canada and Japan.

### **Jocelyn Cherry**

Title: *Are Children with Impaired Vision or Hearing at Greater or Differential Risk of Unintentional Injury?*

Start date: 11<sup>th</sup> February 2013 – Part time

Jocelyn is carrying out a PhD on the prevalence, predictors, and associations of unintentional injury in children with hearing and/or vision impairment. She is an ophthalmologist and has won a UoB PhD scholarship prize in order to carry out her studies.

She is being supervised by Cathy Williams, Amanda Hall and Julie Mytton. Her first year's work was accepted for oral presentation at Safety 2016, the World Injury Prevention Conference. Over the last year she has been looking at these issues using data from the Children of the 90s study.

### **Alex Creavin**

Title: *Childhood visual impairment and abnormalities of the optic disc: clinical phenotypes and associations with early life and genetic factors.*

Start date: 1<sup>st</sup> October 2015 – full time

Alex is a trainee paediatric ophthalmologist who is funded by an NIHR doctoral fellowship to undertake analysis of children's visual impairment using ALSPAC. Her lead supervisor is Cathy Williams.

### **Moses Ikpeme**

Title: *Epidemiology of burns and scalds of children and young people in the UK.*

Start date: 18<sup>th</sup> Dec 2014- Full time

Moses is funded by a Healing Foundation studentship to undertake an epidemiological study on children's burns and scalds, supervised by Alan Emond and Julie Mytton. In his first year, he undertook a structured review of the epidemiology of thermal injury in children which resulted in the development of PhD research questions related to inequalities. In his second year he has started analysing Hospital Episode Statistics (HES) data sets to examine some of these questions.

### **Anna Pease**

Title: *Factors influencing infant care practices in the sleep environment amongst families at high risk of SIDS.*

Start date: 1st December 2012 – Full time. Completed March 2016

Anna completed her PhD funded by the Lullaby Trust investigating families with infants at high risk of SIDS to determine their knowledge of current risk prevention advice and exploring their decision making behind chosen infant care practices. She conducted a survey of 400 mothers asking about their knowledge surrounding safe infant care practices as well as visiting their homes to conduct in-depth qualitative interviews. It is hoped that the findings from her work will help inform future risk reduction strategies in the UK. Anna is

supervised by Peter Blair, Peter Fleming and Jenny Ingram and she was awarded her PhD in 2016.

### **Roxanne Parslow**

Title: *Developing a Patient Reported Outcome Measure (PROM) for Children with Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME).*

Start date: 30<sup>th</sup> September 2013 – Full time

Roxanne is in the last year of her PhD, supervised by Esther Crawley. The aim of her research is to develop a child specific Patient Reported Outcome Measure (PROM) in CFS/ME. This will assess the impact of the condition on children and any changes from treatment. The first stage involved a systematic review to identify any important outcomes from the literature and qualitative studies with health professionals, children with CFS/ME and their parents to help identify the most important areas of life to include in a new outcome measure. The new measure has been developed and reviewed and refined through an expert clinical group as well as cognitive interviews with children to make sure the new questions are clear and understandable. The next steps are to test the PROM on a large sample of children with CFS/ME.

### **Julia Sarginson**

Title: *Differentiating Between the Inflammatory Response and Sepsis in Small Paediatric Burns.*

Start date: 4<sup>th</sup> Feb 2013- Full time

Julia is a Healing Foundation clinical fellow who is undertaking a UoB PhD on children's burns, supervised by Alan Emond, Amber Young and Ian Mackie. Following an extensive retrospective case notes review, she has undertaken a prospective observational cohort study aiming to characterise the normal physiological response to burn injury in pre-school children with small-to-moderate sized burns, called The MISTIC Study: Morbidity in Small Thermal Injury In Children. Julia is currently writing up, to submit in autumn 2016.

### **Lucy Southby**

Title: *Speech processing in children born with cleft palate and its relationship to speech articulation at age 5.*

Start date: June 2016- Part-time

Lucy is a speech therapist working with the Cleft Collective who has obtained an NIHR Doctoral Fellowship to undertake a PhD at the University of Bristol, co-supervised by Carol Joinson and Yvonne Wren.

## Clinical academic trainees based at the Centre in 2015-16

### **Loretta Ziegler**

Loretta is an MSc Health Psychology student from UWE who undertook a placement at CCAH during 2015-16. She carried out a literature review as well as drafting a methodology, interview schedule and ethical review application for a qualitative study of Somali parents' experience of childrens' play, and of their own adaptation to the UK.

### **Ian Harrowell**

Ian is an Academic Foundation Trainee in Paediatrics who has spent 2015-2016 looking at the psychosocial outcomes of children diagnosed with Developmental Coordination Disorder in the ALSPAC cohort. He was supervised by Alan Emond and Linda Hollén. The work has been presented at the Royal College of Paediatrics and Child Health, with the abstract published in Archives of Disease in Childhood. He is in the process of submitting two manuscripts for peer review.

### **Amelia Paget**

Amelia is an Academic Clinical Fellow in paediatrics who started her 3 year rotation in October 2012. During 2014-15 she had a research attachment with the Centre, supervised by Alan Emond and Tamsin Ford (University of Exeter), on a project investigating developmental disorders and mental health problems in children excluded from school. In 2016 she wrote a leading article with Alan Emond on school exclusion for a special edition of the journal Emotional and Behavioural Difficulties.

## TEACHING ACTIVITY

### Undergraduate

#### Intercalated BSc in Global Health (UoB medical students)

The 2015/2016 academic year saw our ninth cohort of students working towards an intercalated BSc in Global Health. The demand remains stronger than ever for this course both amongst internal Bristol students and external students from all over the UK who fill 8 of our 28 places. For the first time this year's intake included veterinary students, which will further cross-fertilise the learning group. Academic staff from both UoB and UWE contribute to this course.



Marissa Worsford won the David Baum Prize for the best student on the Global Health course in 2014-15. Here she is receiving her prize of books from the course director, Matthew Ellis, in September 2015

#### Child Health in the Early Years (UoB Early Childhood Studies BSc)

Cathy Williams is the unit lead for Child Health in the Early Years, a compulsory Year 2 unit on the Childhood Studies BSc, run by the School of Policy Studies. The overall aim of the unit is to give the students a firm grounding in key topics related to child health and well-being. These include how to promote children's health in childcare and early years settings; how to identify a child who is failing to meet their potential; and how to contribute to assessments and arrange support for the child in a multi-agency framework. Lecturers on the unit come from a range of professional backgrounds, including mental health specialists, paediatricians, health visitors and nurses, all directly involved in working with children's health.

#### Child Health for Medical Students (UoB COMP 1 course)

The Centre team contribute to the community aspects of the child health course for 4<sup>th</sup> year medical students: giving lectures, running workshops and leading on the inter-professional learning (IPL) opportunities.

Alan Emond led on the development of educational burn care resources for medical students through the Children's Burns Research Centre Education Group. In 2015-16, an e-learning module 'Introduction to Children's Burns' was piloted with children's nursing

students at UWE and medical students at UoB. Matthew Ellis is contributing to the global health theme in the new MB21 curriculum.

### **Children's Nursing and Paramedic Science (UWE)**

Julie Mytton contributed to Year 2 and Year 3 programmes for Children's Nursing students this year on children's public health and the role of research. Toity Deave and Julie Mytton both supervised Year 3 students with their dissertations. Children's Nursing curriculum review has been put on hold until 2016-17 when Julie and Toity will support the integration of research into the new curriculum. This year, Julie contributed a new session to the Year 2 Paramedic Science programme on child injury prevention.

### **Postgraduate**

#### **Postgraduate short courses UoB**

Peter Blair runs the School for Social and Community Medicine postgraduate short course on basic epidemiology; Pauline Emmett, Cathy Williams, Anna Pease and Tom Norris from the CCAH contributed to this course in January 2014.

Alan Emond, Esther Crawley, Julie Mytton and Matthew Ellis contribute to postgraduate training of paediatricians and general practitioners through the Severn Deanery.

#### **Masters in Public Health, UWE**

The MSc Public Health at UWE is now in its 13<sup>th</sup> year and utilises a large multidisciplinary team to deliver contemporary public health theory, practice and research to students from culturally, professionally and demographically diverse backgrounds. Julie Mytton and Toity Deave contribute to specific taught modules and supervise students undertaking their dissertation module.

#### **Specialist Community Public Health Nursing, UWE**

Toity Deave and Julie Mytton teach on this postgraduate diploma course for practitioners wishing to register with the Nursing and Midwifery Council as Specialist Community Public Health Nurses; Health Visitors, School Nurses or Occupational Health Nurses. They both teach on the Principles of Evidence Based Public Health module, Julie teaches on the SCPHN 1 core module and Toity on the final Synoptic Module.

#### **Evaluation and Research in Practice**

Toity Deave contributes to this Continuing Professional Development core module for Nurses and Social Workers based at the Glenside campus, supporting teaching of three cohorts of students.

## Seminars and conferences

### Seminars

Inter-disciplinary seminars run by CCAH in collaboration with other academic groups in 2015-16:

Migrant health – 11<sup>th</sup> November 2015

Behaviour change in young people- 17<sup>th</sup> March 2016

### Conferences

National Conferences organised by CCAH in 2015-16:

17<sup>th</sup> March 2016: Child Injury Prevention and Injury Care Health Integration Team, a one day conference at University Hospitals Bristol Education Centre on Integrating Child Injury Prevention and Care, organised by Julie Mytton

1<sup>st</sup> July 2016: Children's Burns Research Showcase – a one day conference at @Bristol, organised by Alan Emond

## Academic staff at the CCAH during 2015-16

<i>Dr Sarah Baos (UoB)</i>	<i>Senior Research Associate/Trial Manager</i>
<i>Ms Kate Beckett (UWE)</i>	<i>Knowledge Mobilisation Research Fellow</i>
<i>Ms Karen Birmingham (UoB)</i>	<i>Research Fellow</i>
<i>Dr Pete Blair (UoB)</i>	<i>Reader in Medical Statistics</i>
<i>Ms Amberly Brigden (UoB)</i>	<i>Research assistant</i>
<i>Dr Simon Collin (UoB)</i>	<i>Research Fellow</i>
<i>Prof Esther Crawley (UoB)</i>	<i>Professor of Child Health</i>
<i>Dr Toity Deave (UWE)</i>	<i>Associate Professor in Family and Child Health</i>
<i>Miss Katie De-Loyde (UoB)</i>	<i>Research Statistician</i>
<i>Dr Matthew Ellis (UoB)</i>	<i>Senior Clinical Lecturer in Child Health</i>
<i>Ms Gennette Ellis (UoB)</i>	<i>Data Preparation Assistant</i>
<i>Dr Pauline Emmett (UoB)</i>	<i>Senior Research Fellow</i>
<i>Prof Alan Emond (UoB)</i>	<i>Professor of Community Child Health</i>
<i>Prof Peter Fleming (UoB)</i>	<i>Professor of Infant Health &amp; Developmental Physiology</i>
<i>Prof Jean Golding (UoB)</i>	<i>Emeritus Professor of Paediatric and Perinatal Epidemiology</i>
<i>Dr Trudy Goodenough (UWE)</i>	<i>Research Fellow</i>
<i>Mr Steve Gregory (UoB)</i>	<i>Data Preparation Assistant/Data Manager</i>
<i>Dr Amanda Hall (UoB)</i>	<i>Honorary Research Fellow</i>
<i>Dr Ian Harrowell (UoB)</i>	<i>Academic Foundation trainee</i>
<i>Dr Linda Hollén (UoB)</i>	<i>Research Statistician</i>
<i>Mrs Yasmin Iles-Caven (UoB)</i>	<i>Research Assistant in Child Health/ELSPAC Archiving</i>
<i>Dr Jenny Ingram (UoB)</i>	<i>Senior Research Fellow</i>
<i>Dr Carol Joinson (UoB)</i>	<i>Senior Lecturer in Developmental Psychology</i>
<i>Dr Rebecca Kandiyali (UoB)</i>	<i>Research Health Economist</i>
<i>Dr Peter Lunt (UoB)</i>	<i>Honorary Research Fellow</i>
<i>Dr Mariusz Grzeda (UoB)</i>	<i>Research Associate</i>
<i>Dr Julie Mytton (UWE)</i>	<i>Associate Professor in Child Health</i>
<i>Dr Tom Norris (UoB)</i>	<i>Research Associate</i>
<i>Dr Claire Novak (UWE)</i>	<i>Research Fellow</i>
<i>Dr Amelia Paget (UoB)</i>	<i>Academic Clinical Fellow</i>
<i>Dr Puspa Pant (UWE)</i>	<i>Research Associate</i>
<i>Prof Marcus Pembury (UoB)</i>	<i>Visiting professor</i>
<i>Dr Anna Pease (UoB)</i>	<i>Senior Research Associate</i>
<i>Dr Clare Sheahan (UoB)</i>	<i>Teaching Fellow</i>
<i>Dr Caroline Taylor (UoB)</i>	<i>Senior Research Associate</i>
<i>Dr Katie Whale (UoB)</i>	<i>Senior Research Associate</i>
<i>Miss Cathy Williams (UoB)</i>	<i>Reader in Paediatric Ophthalmology</i>

**Postgraduate Students**

*Miss Lucy Beasant (UoB)*

*Mr Santosh Bhatta (UWE)*

*Dr Blanca Bolea-Alamañac (UoB)*

*Ms Jocelyn Cherry (UoB)*

*Dr Alex Creavin (UoB)*

*Mr Moses Ikpeme (UoB)*

*Miss Roxanne Parslow (UoB)*

*Miss Julia Sarginson (UoB)*

*Mrs Lucy Southby (UoB)*

**Administration**

*Miss Julia Andrews (UoB)*

*Mrs Maggie Heeley (UWE)*

*Mrs Diana Hynam (UoB)*

*Mrs June Johnstone (UoB)*

*Miss Pauline Lowrey (UoB)*

*Miss Laura Miller (UoB)*

## Steering Group Members 2015-16

The joint steering group between University of Bristol and University of the West of England meets annually, and is co-chaired by the Head of School of Social and Community Medicine from UoB and the Associate Dean (Research and Innovation) from UWE.

Professor Jenny Ames (UWE) (co-chair)  
Professor Jonathan Sterne (UoB) (co-chair)  
Professor Esther Crawley (UoB)  
Professor Alan Emond (UoB)  
Professor John MacLeod (UoB)  
Dr Melanie Merricks (NBT)  
Dr Julie Mytton (UWE)

## APPENDIX 1: Active grants and fellowships 2015 - 2016

### Newly awarded grants in 2015-2016

APCRC - Research Capability Funding. (PI) **Tom Allport**. £28,977.00 (2016-2017)

NIHR – EPPIC (Enhancing Post-Injury Psychological Intervention & Care, Knowledge Mobilisation Research Fellowship. (PI) **Kate Beckett**. £186,652.00 (2016 – 2019)

NIHR - Conservative treatment of appendicitis in children – a randomised controlled trial – CONTRACT (Feasibility Study). (CoA) **Esther Crawley** with (PI) Nigel Hall. £444,985.63 (2016 – 2019)

NIHR - Health Technology Assessment. Investigating the effectiveness and cost effectiveness of using FITNET to treat paediatric CFS/ME in the UK. (PI) **Esther Crawley**, (CoA) Elise Van de Putte, Sanne Nijhof, Hans Knoop, Gils Bleijenberg, Paul Stallard, David Kessler, Harriet Downing, John Macleod, Simon Price. £999,977.80 (2016-2021)

Action for ME – Severe Paediatric Chronic Fatigue Syndrome/Myalgic Encephalopathy (CFS/ME): British National Surveillance Study (PI) **Esther Crawley**. £6,000.00 (2016 – 2018)

RNHRD – Severe Paediatric Chronic Fatigue Syndrome/Myalgic Encephalopathy (CFS/ME): British National Surveillance Study. (PI) **Esther Crawley**. £6,000.00 (2016-2018)

Big Lottery Fund via Best Beginnings – Evaluation of a Baby Buddy App (Funded Extension). (PI) **Toity Deave**. £70,000.00 (2016 – 2018)

Responsible Gambling Trust - A longitudinal study of problem gambling in late adolescence and early adulthood. (PI) **Alan Emond**. £73,566.00 (2016 – 2019)

Scar Free Foundation - Development of a campaign to prevent hot drink scalds. (PI) **Alan Emond**. £35,000.00 (2016 – 2018)

Lullaby Trust and other charities – OASIS – (Oto-Acoustic Signals Investigation Study) - Newborn hearing screening and the risk of unexpected infant death: feasibility study. (PI's) **Peter Fleming & Pete Blair**, (CoA's) **J Ingram**, D Rubens A Davies, A Ewer, M Cohen and **A Pease**. £152,549.00 (2016 – 2017)

Know Violence in Childhood Global Learning Initiative– Scoping project on availability of ALSPAC data and frequencies of violence in childhood. (PI) **Jean Golding** with **Yaz Iles-Caven** US\$ 8,000.00 (Feb - April 2016)

Bailey Thomas Charitable Fund - Population-based studies to understand depression, anxiety, suicidality and self-harm as adolescent and early adulthood outcomes of autism. (CoA) **Jean Golding**, (PI) Dheeraj Rai, with C Magnusson and R Pearson. £74,096.00 (2016-2018)

Above & Beyond (Bristol UHB NHS Trust) - Risk factors for the development of paediatric chronic middle ear pathology: A prospective longitudinal cohort study. (CoA) **Steve Gregory** with (PI) Philip Clamp and (CoA) **Amanda Hall**. £13,691.00 (2016-2017)

Wellcome Trust Institutional Strategic Support Fund (Elizabeth Blackwell Institute TRACK Award) and Enterprise & Impact Development Fund (EIDF). User-centred development of a prototype smartphone application to support the management of daytime urinary incontinence in young people. (PI) **Carol Joinson**. £42,011 [£24,511 from TRACK and £17,500 from EIDF]. 1st Jan 2017 – 31st Dec 2017.

NIHR - Systematic review of Physical Activity & Substance/Alcohol Use Disorders. (CoA) **Rebecca Kandiyali**. £149,946.00 (Sept 2016 - Sept 2017)

NIHR - Multicentre randomised controlled trial in immune thrombocytopenia. (CoA) **Rebecca Kandiyali** with Jenny Ingram. £350,000.00 (Jan 2017 - Jan 2020)

Avon Primary Care Research - Intervention for children with speech sound disorder. (CoA) **Rebecca Kandiyali**. £19,254.00 (Sept 2016 - 15 months)

British Red Cross – Supporting Attendance in A&E through First Aid Education. (PI) **Julie Mytton**. £59,913.00 (2016 – 2017)

NERC - Gene-environment and gene-gene interactions in myopia. (CoA) **Cathy Williams** with (PI) Prof J Guggenheim. £59,823.00 (2016 – 2019)

Nestle Nutrition. Extension of grant to investigate picky eating in children enrolled in ALSPAC. PIs **CM Taylor and PM Emmett**. £35,604 (2016-17)

#### [Fellowships awarded in 2015-2016](#)

NIHR Knowledge Mobilisation Research Fellowship (KMRF) for **Kate Beckett** £190,000. 2016-2019

UoB Faculty of Medicine PhD fellowship for **Amberly Brigden** £60,000 (2016-19)

NIHR Doctoral Fellowship for **Alex Creavin**: Childhood visual impairment and abnormalities of the optic disc: clinical phenotypes and associations with early life and genetic factors. £315,738. 2015-2018.

NIHR Doctoral Fellowship for **Maria Loades** (2016-2019)

HEE/NIHR Clinical Doctoral Fellowship for **Lucy Southby** (2016-2020)

Wellcome Trust Career Re-entry Fellowship for **Caroline Taylor** £280,000. 2015-2019.

NIHR Senior Research Fellowship for **Cathy Williams**: Cerebral visual impairment in primary school age children: prevalence, impact and effectiveness of support. £ 883,839. 2015-2019.

### Ongoing grants in 2015-2016

NIHR – HTA . Children’s drops for ear pain in acute otitis media, the CEDAR randomised Controlled trial: PI. Hay A K. Primary Health Care UoB. Co.app **PS Blair**. £1,377,900. 2015-2017

NIHR – Public Health Grant. Plan-A: Interventions to Maintain or Increase Physical Activity in Adolescents. PI. Sebire S, Centre for Exercise Nutrition and Health Sciences UoB . Co-App **PS Blair**. £527,571. 2015-2017

NHS England. (Healthcare Quality Improvement Partnership). National Learning Disability Mortality Review Programme. PI P.Heslop, with **PJ Fleming**, D. Steer, R. Mallett, D. Needleman, A. Marriott, **P S Blair**, M. Hoghton,L. Russ. £2,300,000. 2015-2018

NIHR – EME. Reducing pathology in Alzheimer’s disease through Angiotensin TarGeting – The RADAR Trial. Kehoe P (PI). **Blair PS** (Co-applicant) £2,038,791 (2012-2016)

NIHR - Programme Grant. TARGET: feasibility study to test an algorithm predicting hospitalisation for upper respiratory tract infection in children. PI **PS Blair**, co app **J Ingram** £457,196 (2013 - 2015)

NIHR – HTA. RAFT – Reducing Arthritis Fatigue £1,157,768 PI S Hewlett (UWE) with co-app **PS Blair** (2013 – 2017)

NIHR – HTA. UPSTREAM - Invasive urodynamic testing for male Bladder Outlet Obstruction. PI M Drake (UoB) with co-app **PS Blair** £1,224,219 (2014 - 2018)

NIHR RfPB. Can skin grafting success rates in burn patients be improved by using a low friction environment – a feasibility study (SILKIE)? PI Dr Amber Young, with **Jenny Ingram** and **Alan Emond** as co-applicants. £250,000. 2015-17

NIHR – SDO Grant. Preparing For Home: A neonatal discharge package to increase parental confidence in caring for their infant. £408,485. **Fleming PJ** (PI) and **Ingram, J, Blair PS M Redshaw, D Pontin, J Powell, H Burden, K Pullen, S Wain, C Rose, S Manns** (2012-2015)

NIHR- Research Design Service – South West. £5,000,000. **Ingram J** Co-applicant and lead for Bristol site ( £120k/year for UoB) 2013 - 2018 (5 years)

NIHR – RfPB. Early Intervention in adults: Pilot Randomised Controlled Trial. (PI) Hazel O’Dowd. (Co- applicants): **Esther Crawley, Jenny Ingram**, William Hollingworth, John Macleod, Alan Montgomery, Jonathan Sterne £249,000 (2012 – 2015)

NIHR- HTA. Understanding the barriers and facilitators to immunisation uptake in Traveller communities to inform interventions to promote uptake: An ecological approach. PI: C

Jackson (University of York), with co-applicants from 5 universities including L Condon and **J Mytton** £358,115 (2013- 2016)

NIHR- HTA. Surgical drainage, irrigation, and fibrinolytic therapy (DRIFT) in premature infants with post-haemorrhagic ventricular dilatation: Brain function and structure at school age. PI K Luyt (UoB) Co-apps include **C Williams, PS Blair**. £292,682.60 (2014-2016)

Medical Research Council (MRC). Increasing understanding of risk factors and outcomes associated with continence problems in children and adolescents. £420,064,. **Carol Joinson** (PI), with co-apps Jon Heron, **Alan Emond**, Jeremy Horwood, Kate Tilling, Anne Wright. (2014-2017)

Medical Research Council. Epidemiology of Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME) in adolescence. (PI) **Esther Crawley** with Co-applicants: Andy Ness, Charlotte Clarke, Glyn Lewis, Jon Tobias, Jonathan Sterne, Julian Hamilton Shields, Kate Tilling, Paul Gringras, **Pete Blair, Carol Joinson**, Stephen Stansfeld. £ 305,242 (2013-2015)

Wellcome Trust Population Pilot Awards: £29,870 Genetic Predictors of Myopia. PI Prof J Guggenheim (Cardiff), co-apps **Ms C Williams**, Prof J Bailey-Wilson. (2015-2016)

ESRC IAA: – Development of an App for eye training. Co-PI **C Williams** with I Gilchrist £14,190. ( 2014- 2015)

Big Lottery Fund via Best Beginnings. Evaluation of Best Beginnings' 'Baby Buddy' Phone App. PI **T Deave** with J Coad (Coventry), R Lingam (Newcastle), S Kendall (Herts), C Day (King's Health Partners, London) . £192,000. 2015-2017.

Nestle Nutrition. Grant to investigate picky eating in children enrolled in ALSPAC. PIs CM Taylor and PM Emmett £150,370. (2014-16)

Healing Foundation: programme grant. UK Children's Burns Research Centre. PI **A Emond**, Co-apps A Young , E Towner. £1,776,102 (2012-17).

Nestec Ltd. Extension of grant for picky eating project PIs **CM Taylor** and PM Emmett £36,400. (2015-16)

Action Medical Research: Control of accommodation and eye movements in children with Down's syndrome; the effect of bifocals. PI JM Woodhouse; Co-Apps Prof J Erichsen, **C Williams**, K Saunders, JA Little, P Watts £169,053. ( 2015-2018)

Templeton Foundation. Internal Locus of Control: Origins, Determinants, and Benefits (PI - **Jean Golding**) Co-app A Emond. £294,042 (2015-17)

Escher Foundation. Grandmaternal smoking and autism (PI **Jean Golding**) US\$25,000 (2015-16)

## APPENDIX 2: Centre publications 2015 - 2016

### PEER REVIEWED PUBLICATIONS 2015-16

\*joint UoB/UWE authors

Harris S, Gilbert M, **Beasant L**, Linney C, Broughton J, **Crawley E**. A qualitative investigation of eating difficulties in adolescents with chronic fatigue syndrome/myalgic encephalomyelitis. *Clin Child Psychol Psychiatry*. 2016 May 23. pii: 1359104516646813. [Epub ahead of print] PubMed PMID: 27215228.

**Bhatta S, Raj Pant P, Mytton J**. Usefulness of hospital emergency department records to explore access to injury care in Nepal. *International Journal of Emergency Medicine* 2016 9:21DOI: 10.1186/s12245-016-0120-9

Thornton HV, **Blair PS**, Lovering AM, Muir P, Hay AD. Clinical presentation and microbiological diagnosis in paediatric respiratory tract infection: a systematic review. *Br J Gen Pract*. 2015 Feb;65(631):e69-81.

**Brigden A, Beasant L**, Hollingworth W, Metcalfe C, Gaunt D, Mills N, Jago R, **Crawley E**. Managed Activity Graded Exercise in Teenagers and pre-Adolescents (MAGENTA) feasibility randomised controlled trial: study protocol. *BMJ Open*. 2016 Jul 4;6(7):e011255. doi: 10.1136/bmjopen-2016-011255

**Collin SM**, Granell R, Westgarth C, Murray J, Paul E, Sterne JA, John Henderson A. Pet ownership is associated with increased risk of non-atopic asthma and reduced risk of atopy in childhood: findings from a UK birth cohort. *Clin Exp Allergy*. 2015 Jan;45(1):200-10. doi: 10.1111/cea.12380.

**Collin SM**, Granell R, Westgarth C, Murray J, Paul ES, Sterne JA, Henderson AJ. Associations of Pet Ownership with Wheezing and Lung Function in Childhood: Findings from a UK Birth Cohort. *PLoS One*. 2015 Jun 10;10(6):e0127756. doi: 10.1371/journal.pone.0127756.

Ben-Shlomo Y, **Collin SM**, Quekett J, Sterne JA, Whiting P. Presentation of Diagnostic Information to Doctors May Change Their Interpretation and Clinical Management: A Web-Based Randomised Controlled Trial. *PLoS One*. 2015 Jul 6;10(7):e0128637. doi: 10.1371/journal.pone.0128637.

Lucero E, **Collin SM**, Gomes S, Akter F, Asad A, Kumar Das A, Ritmeijer K. Effectiveness and safety of short course liposomal amphotericin B (AmBisome) as first line treatment for visceral leishmaniasis in Bangladesh. *PLoS Negl Trop Dis*. 2015 Apr 2;9(4):e0003699. doi: 10.1371/journal.pntd.0003699. eCollection 2015

Velleman S, **Collin SM, Beasant L, Crawley E**. Psychological wellbeing and quality-of-life among siblings of paediatric CFS/ME patients: A mixed-methods study. *Clin Child Psychol Psychiatry*. 2015 Sep 22. pii: 1359104515602373. [Epub ahead of print] PubMed PMID: 26395764.

**Collin SM**, Nuevo R, van de Putte EM, Nijhof SL, **Crawley E**. Chronic fatigue syndrome (CFS) or myalgic encephalomyelitis (ME) is different in children compared to in adults: a study of UK and Dutch clinical cohorts. *BMJ Open*. 2015 Oct 28;5(10):e008830. doi: 10.1136/bmjopen-2015-008830.

**Collin SM**, Nikolaus S, Heron J, Knoop H, White PD, **Crawley E**. Chronic fatigue syndrome (CFS) symptom-based phenotypes in two clinical cohorts of adult patients in the UK and The Netherlands. *J Psychosom Res*. 2016 Feb;81:14-23. doi:10.1016/j.jpsychores.2015.12.006

**Collin SM, Norris T**, Nuevo R, Tilling K, **Joinson C**, Sterne JA, **Crawley E**. Chronic Fatigue Syndrome at Age 16 Years. *Pediatrics*. 2016 Feb;137(2):e20153434. doi: 10.1542/peds.2015-3434.

**Crawley E**, Jenkins H. Non-specific abdominal pain in childhood. *Arch Dis Child*. 2016 Apr;101(4):299. doi: 10.1136/archdischild-2015-309383. Epub 2015 Nov 26.

**Davies A**, Spickett-Jones F, Brock P, Coy K, Young A. Variations in guideline use and practice relating to diagnosis and management of infection in paediatric burns services in England and Wales: A national survey. *Burns* 2016; S0305-4179(16)30275-3. doi: 10.1016/j.burns.2016.07.032. [Epub ahead of print]

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Hindmarch P, Hawkins A, McColl E, Hayes M, Majsak-Newman G, Ablewhite J, **Deave T**, Kendrick D. Recruitment and retention strategies and the examination of attrition bias in a randomised controlled trial in children's centres serving families in disadvantaged areas of England. *Trials*, 2015; 16:79. (7 March 2015) DOI 10.1186/s13063-015-0578-4.

Watson MC, Mulvaney C, Timblin C, Stewart J, Coupland C, **Deave T**, Hayes M, Kendrick D. Missed opportunities to keep children safe? National survey of injury prevention activities of children's centres. *Health Education Journal* 2016; 1-10. DOI: 10.1177/0017896916629816.

Hayes M, Kendrick D, **Deave T**. Injury Prevention Briefing. preventing unintentional injuries to the under fives: a guide for practitioners. Child Accident Prevention Trust, 2014. Endorsed by *National Institute of Clinical Excellence* (E0079) April 2016.

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Niels Straub, Philipp Grunert, Kate Northstone and **Pauline Emmett**. Economic impact of breast-feeding-associated improvements of childhood cognitive development, based on data from the ALSPAC. *Br J Nutr*, 2016 doi:10.1017/S0007114515001233

M. Gispert-Llaurado, Miguel Perez-Garcia, J. Escribano, R. Closa-Monasterolo, V. Luque, V. Grote, M. Weber, F.J. Torres-Espínola, J. Czech-Kowalska, E. Verduci, F. Martin, M.J. Piqueras, B. Koletzko, T. Decsi, Cristina Campoy, **P.M. Emmett**. Fish consumption in mid-childhood and its relationship to neuropsychological outcomes measured in 7-9 year old children using a NUTRIMENTHE neuropsychological battery. *Clinical Nutrition* 2016, doi: org/10.1016/j.clnu.2016.02.008.

C. Berti, I. Cetin, C. Agostoni, G. Desoye, R. Devlieger, **P. M. Emmett**, R. Ensenauer, H. Hauner, E. Herrera, I. Hoesli, S. Krauss-Etschmann, S. F. Olsen, U. Schaefer-Graf, B. Schiessl, M. E. Symonds & B. Koletzko (2016) Pregnancy and Infants' Outcome: Nutritional and Metabolic Implications, *Critical Reviews in Food Science and Nutrition*, 2016, 56:1, 82-91, DOI:10.1080/10408398.2012.745477

Suzana Almoosawi, Victoria Cribb, **Pauline Emmett**, Alison Lennox. Temporal trends in energy and macronutrient distribution in meals eaten by children from the Avon Longitudinal Study of Parents and Children. *Longitudinal and Life Course Studies* 2016 7; 25– 40

A. Oliveira, L. Jones, B. de Lauzon-Guillain, **P. Emmett**, P. Moreira, M. A. Charles and C. Lopes. Early problematic eating behaviours are associated with lower fruit and vegetable intake and less dietary variety at 4–5 years of age. A prospective analysis of three European birth cohorts. *Br J Nutr.* 2015 114, 763–771 doi:10.1017/S0007114515002287

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