

# Centre for Child and Adolescent Health



## Annual Report For Academic Year 2016-2017



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## Our Story

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. The work at the Centre for Child and Adolescent Health is overseen by a joint steering group, with senior representatives from UoB UWE and the NHS.

This report summarises the activities at the Centre for Child and Adolescent Health for the academic year 2016-17.

## Overview of academic year 2016-17

The academic year 2016-17 was a successful one for the multidisciplinary team, with several large grants obtained, a variety of outputs, and external recognition of our work.

The front cover of this report shows Julie Mytton and Puspa Pant discussing child injury prevention with Princess Eugenie at a Royal Garden Party in Buckingham Palace. This special event in May, was to celebrate the centenary of the Royal Society of Prevention of Accidents. Toity Deave was also invited to attend an earlier event in recognition of her work for the Community Practitioners and Health Visitors Association.

From January to March 2017 we suffered disruption due to building works at Oakfield House, but the re-furbishment was worth waiting for. To celebrate the opening of the new offices, we invited Bristol artist Angela Baum, whose work is displayed within the newly refurbished area of the Centre. Her paintings were originally displayed in the office of her late husband David Baum, Professor of Child Health, who died in 1999 from a heart attack whilst taking part in a sponsored cycle ride to raise money for child



*'Butterfly with Razorblade Wings' by Angela Baum*

health services in Kosovo and Gaza. Today, the David Baum prize is awarded each year for the best student on the Global Health course.



*Anna (centre) receives PhD*

Congratulations to Anna Pease, who received her PhD titled, 'Factors influencing infant care practices in the sleep environment amongst families at high risk of SIDS'. All three CCAH supervisors supported her at the ceremony to celebrate her success: Prof Peter Fleming (right), Dr Pete Blair and Dr Jenny Ingram.

## Highlights of 2016-17

Two large research grants obtained in 2016-17 deserve to be highlighted – Julie Mytton's award of £1.9m from the Global Research Fund to establish an Injury Research Centre in Nepal (p18).

Jean Golding's grant from the Templeton Foundation of US\$1.3m to investigate transgenerational non-genetic pathways to human development (p9).

Carol Joinson obtained a well-deserved promotion to Reader in Developmental Psychology. Esther Crawley gave a memorable professorial inaugural lecture in February 2017.

### Research Funding

New funding led by the CCAH awarded in 2016-7 totalled £4.4m: £2.4m with a PI from the UoB, and £2m with a PI from UWE. Centre staff were co-applicants on >20 other grants worth more than £16m. The details of all new awards, and grants active in 2017, are contained in Appendix 1.

### New Fellowships

Two new doctoral fellowships were awarded in 2017 to members of the CFS/ME group- to Maria Loades and to Amberley Brigden. Anna Pease was awarded a launching fellowship from APCRC.

## Research outputs

The Centre team had 90 publications in peer reviewed journals in 2016-17. A full list of publications from the Centre during the academic year is contained in Appendix 2.

## Inter-disciplinary seminar with the University of Bath

*“Using digital tools in research with Children and Young People”*

An excellent special seminar was held on 24<sup>th</sup> Nov 2016, with contributions from:

Dr Lukasz Piwek, University of Bath School of Management

Prof Paul Stallard, Child and Family Mental Health, University of Bath

Toity Deave, Cathy Williams and Sarah Boas, CCAH

## Teaching

Members of the CCAH contributed to the following courses:

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

Child Health in the Early Years ( Module on 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 page 27.

## Staff Changes

Staff changes during the year included:

**Leaving:** Sarah Boas (FIT-Net Trial manager, CFS team); Simon Collin (Research Fellow), Ian Harrowell (Academic Foundation Trainee) and Katie De-Loyde (Research Statistician).

**Arriving:** Roxanne Parslow (Research Associate for FITNET-NHS); Emma Anderson (Senior Research Associate/Trial Manager Paediatrics CFS/ME); Anya Gopfert and Nisreen Khambati (Academic Foundation Trainees); Rose Watanabe (Administrator – CVI Project) all UoB. Mr Santosh Bhatta Research Associate (UWE).

A full list of staff working at the Centre in 2016-17 is on page 29.

As always, the admin team at CCAH was led and inspired by Diana Hynam - my special thanks to her, and to all who helped make the Centre a happy and productive place to work - Pauline Lowrey, Laura Miller, Julia Andrews, Maggie Heely, Rose Watanabe, Molly Dexter and June Johnstone.



Prof Alan Emond

November 2017

## Research themes

Interdisciplinary research undertaken with infants, children and young people at CCAH is very diverse, and is structured into 3 main themes: Infant health, Child development, disability and complex health needs, and child and adolescent injury.

### 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.

#### **ABA (Assets-based feeding help Before and After birth) study for improving breastfeeding initiation and continuation.**

This two year feasibility study funded by the NIHR Public Health programme is taking place in two areas (South Gloucestershire and Birmingham) with low breastfeeding rates. Women in their first pregnancy are invited to take part at an antenatal appointment and randomised to receive additional support from a 'feeding helper' or to usual support for feeding available locally. Existing breastfeeding peer supporters have been trained to become 'feeding helpers' and using a proactive, assets-based, woman-centred, non-judgemental approach help mothers identify the feeding experiences of people they know, provide information about social, postnatal and breastfeeding support groups and offer a 'listening ear' when mothers have had their baby.

We aim to include 100 first time mothers. The intervention ABA group will have an antenatal meeting with the feeding helper and daily texts or calls postnatally for 2 weeks, followed by less frequent texts until their babies are 5 months old. At 3 days, 8 weeks and 6 months after birth, we will collect information about how all the women are feeding their babies. We will interview women about their experiences of the feeding help; and feeding helpers and health care professionals about how the feeding helpers fit in with the health service. The costs of providing the new service will be measured and we will produce recommendations about whether a larger RCT of feeding helpers in the UK is possible.

The study is led by Prof Kate Jolly in Birmingham and Jenny Ingram in Bristol with co-applicants in Cardiff, Stirling and Central Lancashire.



### **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 King's Health Partners London. This project will run until 31<sup>st</sup> January 2018.



### **Hearing Screening SIDS Project**

Findings from the US suggest that hearing test results taken shortly after birth were different amongst SIDS infants compared to age-matched surviving controls, although it is unclear what the relationship is with maternal smoking during pregnancy. Peter Fleming and Peter Blair have secured funds from the Lullaby Trust (£170,000) to try and confirm these findings. The Oto Acoustic Signals Investigation Study (OASIS) is in its 16th month and will continue till December 2017. Recruitment of families who have lost infants since 2010 (the time from which hearing data is in a form that is analysable) is on target, 94 families have contacted the Lullaby Trust and we have so far interviewed 82 of them (87%). With the help of Anna Pease we have also recruited 210 control families (83% of those approached) and interviewed 177 to date. Part of our remit was to capture data on children who die suddenly between the ages of 1-4 years; this is a relatively rare event and a group we know very little about. As far as we know, the 25 included in this study is the largest data set in existence. Anna Pease and Jenny Ingram have led a nested qualitative study recruiting families from the controls to investigate decision making for infant care and maternal attitudes towards sleep deprivation and SIDS risk reduction messages. We now plan to include health professionals in this work, namely health visitors and community midwives and investigate their perspectives on safe sleep conversations with families living in deprived areas of Bristol.

### **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 have just analysed a feasibility study to see whether a similar device would be acceptable to UK parents. The study was conducted in Sunderland and extended to Fife and the baby box had a mixed reception. Some parents found the box useful especially for day time sleep but others were reluctant to use it. Further funding is sought to pilot this intervention in families with infants at high risk of SIDS.

### **The car seat challenge?**

During the course of 2016-17 we finally completed work on the pilot study of the effects of car seat use on infant physiology. This was published in early 2017, and we are currently working with the Lullaby Trust and the car seat manufacturers on a more detailed, larger study to investigate how to minimise the identified potential adverse effects on infants of prolonged periods in a car safety seat.

### **Working with organisations to reduce risk of infant death**

Given the expertise within the University and our belief that the precision in which we collect data should be extended to the delivery of any resulting advice we have been involved in several projects to deliver risk reduction messages. Peter Blair has been working with UNICEF on a popular infographic for health professionals to simplify advice surrounding bed-sharing (46,000 views in the first two weeks of its launch). He has also updated a UNICEF leaflet on 'Caring for your infant at night' including health professional guidelines and worked with the Scottish NHS to adopt a similar approach. Peter Fleming is a co-investigator in a current case control study which has investigated all unexpected infant deaths in New Zealand from 2012 to 2015 inclusive, the results of which are currently being analysed. Anna Pease has been working with the Lullaby Trust on their 2017 Safer Sleep Week campaign, developing the messages based on her work with families at higher risk of SIDS. All 3 have been involved in an international project to look at the global strategy of future SIDS research which will be published soon in Pediatrics.

## 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 and intergenerational effects

This year we have continued with a study of the offspring whose own parents were exposed to the smoking of their own mothers in pregnancy. Previously we had published effects on growth in utero and during childhood contingent on whether the mother herself smoked during pregnancy. This year we continued the programme using funding from the Escher Family Fund to identify associations between prenatal smoking by the maternal grandmother on autistic traits and diagnosed autism in the grandchild. This programme is masterminded by Marcus Pembrey working with Jean Golding using the ALSPAC database. A large grant from the John Templeton Foundation will continue this work until 2020.

### 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 continuing to concentrate on whether it has any adverse effects on the development and behaviour of the offspring of the pregnancy. The project is undertaken by Jean Golding, Caroline Taylor, Steve Gregory and Captain Joseph Hibbeln. It is funded by the National Institutes of Health [NIH] in the USA and by a Wellcome Trust Career Re-Entry Fellowship held by Caroline Taylor. To date we have examined child development, blood pressure, behaviour and intellectual ability. Results indicate no adverse effects of mercury levels provided the women eat fish. Further research will examine the relationships with educational attainment.

### 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.

### **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.

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

In 2014-17 Carol Joinson led an MRC-funded study investigating continence problems in children and adolescents. The project analysed data from ALSPAC to examine risk factors in early childhood that are associated with continence problems at school age and to identify patterns of childhood continence problems that are more likely to persist into adolescence. This project, carried out with Mariusz Grzeda and Dr Jon Heron, identified a range of risk factors in early childhood that are associated with persistent continence problems including family history of incontinence, developmental delay, psychosocial factors (emotional and behaviour problems and stressful life events), sleep problems and toilet training. A notable finding of this research is that primary school children who have persistent bedwetting with daytime wetting have a much higher chance of experiencing bedwetting in adolescence than children with bedwetting alone.

The project also found that continence problems are associated with a range of adverse psychosocial outcomes in adolescence by using data from ALSPAC and by conducting qualitative interviews in young people (aged 11-20) with continence problems. The qualitative work, carried out with Dr Katie Whale and Dr Helen Cramer, also asked young people about their treatment experiences and how they cope with their continence problems at school.

The research team used the findings to develop information resources for teenagers on the website of The Children's Bowel and Bladder Charity (<https://www.eric.org.uk>). In 2017 Carol and Katie have been working on a project funded by the Elizabeth Blackwell Institute and Enterprise & Impact Development Fund to develop a smartphone app to support young people with daytime wetting to self-manage their symptoms. The project involved running three participatory design workshops with young people (aged 10-17) with daytime wetting to work with them to co-design a prototype app.

This year, Carol was invited to become a member of the multidisciplinary PLUS Consortium (<https://plusconsortium.umn.edu>) which is funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) at the National Institutes of Health (NIH) and she will collaborate with a team of US researchers to examine risk factors for lower urinary tract symptoms in girls and young women.

### **Know Violence in Childhood**

A small scoping project was commissioned by Know Violence in Childhood (KVIC) in 2016. 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. The project was led by Yasmin Iles-Caven, working with Jean Golding and Genette Ellis.

### **Promoting Resilience in children**

Alan Emond has been leading on a series of studies investigating factors promoting resilient responses to adversity in children and young people. A resilience group supported by the World Universities Network has investigated resilience, well being and mental health in migrants aged 13-16 years across 6 countries. This work was presented at the Pathways to Resilience Conference in CapeTown in June 2017 and has been submitted for publication.

Alan collaborated with Maureen Samms-Vaughn of the University of the West Indies to supervise Gabriella Hattersley, a Bristol medical student who undertook an analysis of resilience in young people exposed to violence in Jamaica. This work was for the dissertation of her Global Health BSc

Nisreen Khambati used ALSPAC to investigate factors associated with well being, self esteem and mental health in adolescence of children exposed to maltreatment in the first 5 years of life. She presented in Capetown and is now writing up.

### **Pioneering ethics in longitudinal studies: the early development of 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. Karen Birmingham has documented the early work of the Committee. The University of Bristol Policy Press will publish this short book in December 2017.

### 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 the 1000 files, and transferred them to the University of Bristol Library's Special Collections in August 2015 and a further 45 box files in December 2016. The Wellcome Trust 2 year award to Special Collections to undertake the professional cataloguing of the Archive will finish in March 2018. This includes a digital version of all 84 newsletters (parents, child, professionals, etc). 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 in 2018, once issues over embargo periods and gate-keeping have been resolved.

### 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

[www.thecviproject.co.uk](http://www.thecviproject.co.uk) @cviproject

Cathy Williams (supported by an NIHR Senior Research Fellowship) is continuing the 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 three data collection sites (Southampton, Gloucester and North Somerset), collaborations with the PenCRU unit in Exeter (Dr Chris Morris) and the DECIPHer unit (Dr Ruth Kipping). The Study Manager is Dr Anna Pease and the Administrator is Rose Watanabe.

### 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 ALSPAC data. Cathy Williams and Denize 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) and Dr K Luyt.

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

Cathy Williams 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. The study is now finished; results are being presented at international meetings and submitted for publication.

### **Improving vision in children with poor eye movement control**

Cathy Williams has been working with Prof Iain Gilchrist (Department of Experimental Psychology) and Dr Rosie Clark to pilot a new “App” they have developed. Dr Clark has carried out investigations involving 12 children with special educational needs (SEN) and guided each of them through a programme of using the App regularly. She and a senior orthoptist have recorded their eye movements before and after training.

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

**Lead: Esther Crawley** with Basim Almutairi, Emma Anderson, Lucy Beasant, Amberly Brigden, Sarah Baos, Simon Collin, Maria Loades, Ceri Maltby, Roxanne Parslow and Rebecca Read.

### **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 are starting to publish our findings.

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.

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. This has provided interesting data on the different symptom phenotypes and outcomes at 2 months.

Simon Collin's programme of research using the Clinical Practice Research Datalink (CPRD) and a prospective cohort of adult CFS/ME patients is finished and the findings have been published.

The main findings arising from this research are: a gradual decline in recorded diagnoses of CFS/ME since 2001, and an increase in diagnoses of fibromyalgia. This analysis of CPRD data showed that adults and children with CFS/ME have greater health care needs than the rest of the population with higher levels of health care resource used ten years before and after their diagnosis of CFS/ME.

## **Treatment**

The “MAGENTA” trial (comparing Graded Exercise Therapy with Activity Management) successfully moved into the full trial phase and recruitment is on track. Recruitment will continue until March 2018.

Our new FITNET-NHS trial comparing online specialist treatments (internet delivered CBT or Skype-delivered Activity Management) for adolescents who do not have access to a local service has begun recruitment. We welcomed Emma Anderson as our new Trial Manager. Roxanne Parslow and Lucy Beasant continue to investigate preference for treatment and the feasibility and acceptability of the interventions in our trials.

Maria Loades has begun her PhD investigating depression and anxiety in children with CFS/ME. Thirty five children have been interviewed and this work will help towards developing a treatment adapted for this group of young people.

We want to understand how best to treat primary school children with CFS/ME. To investigate this Amberly Brigden began her PhD in October 2016. This PhD comprises four projects: analyses of trial and cohort data, qualitative interviews with families and clinicians, a systematic review and an expert group in the fourth year. In July 2017, Amberley was awarded an NIHR Doctoral Fellowship to complete this work.

We have also started MOrPH-CFS, investigating whether the virome in children with CFS/ME is any different from the virome in their brother and sisters (who do not have CFS/ME). We will do this by looking for the genetic 'signatures' of viruses in DNA extracted from saliva. We are delighted to welcome our summer placement Research Assistant, Tom Greenwood, who has been awarded a scholarship through the Wellcome Trust.

## **Qualitative Studies**

Lucy Beasant continues to undertake qualitative research funded by the MRC ConDuCT Hub. The purpose of this PhD project is to explore how and when treatment preference influences trial participation, specifically focusing on the preferences of young patients and their parents

considering recruitment to different surgical and complex interventions, (including data from CFS/ME RCTs; SMILE, MAGENTA & FITNET-NHS).

Ceri Maltby is undertaking qualitative research as part of her PhD looking into adult CFS/ME patients' ideas of their mind/body and how these perspectives are formed and evolve throughout their lived experience of illness. Catherine Linney was successful in obtaining a University of Bristol PhD studentship to study why children from ethnic minorities are less likely to access CFS/ME services. Her project will include a variety of methods: qualitative, quantitative, and more anthropological techniques.



We said a sad 'goodbye' to Simon Collin in May 2017, as he left for a new job in London with Public Health England. Simon's new role is working 50% on tuberculosis (TB) and 50% on healthcare associated infection (HCAI) and antimicrobial resistance (AMR). We thank him for his great contribution at CCAH and wish him well.

## 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, Dave Rea and Puspa Raj Pant.

### Children's Burns Research

Projects involving CCAH staff in 2016-17 included:

**The developmental and behavioural associations of childhood burns (PI Emond)** - An analysis of the Avon Longitudinal Study of Parents and Children (ALSPAC) identified the individual developmental and behavioural characteristics of children who were burned or scalded, using a large population based UK cohort.

**The SILKIE Study - Can skin grafting success rates in burn patients be improved by using a low friction environment? (PI Young)** - The Silkie study closed in January 2017 having recruited 131 patients. This study assessed the feasibility, clinical effectiveness and cost-effectiveness of a low friction nursing environment in improving skin graft take in children and adults requiring skin grafting after burn injury. The study demonstrated that low friction sheeting is safe to use with burned patients undergoing skin grafting in acute care, practical issues in relation to sheet usage were relatively easy to resolve, collecting routine healthcare data for this study was

straightforward, the use of iBID database was not an effective way to collect relevant data and that the secondary outcome (partial graft loss) was more complex to collect, but had more statistical power to assess clinical effectiveness.

**Children's behaviour in house fires.** Research undertaken with the Devon and Somerset Fire and Rescue Service to explore the ethics and feasibility of asking children to describe their behaviour during accidental dwelling fires was presented at the World Injury Prevention and Safety Promotion Conference in Tampere, Finland in September 2016, together with a survey of children's fire safety education across England. This research was presented to the Fire Sector Federation in October 2016.

### **Health visitor intervention following a burn**

Toity Deave was awarded funding from the Avon Primary Care Research Collaborative Research Capability Fund to undertake a literature review, evidence synthesis and consult with subject experts. We also undertook some preliminary work with health visitors and parents and developed a framework for an evidence-based intervention for use by HV teams to use with families whose children have attended ED with a burn/scald. The proposed intervention will include a 'hazard assessment' to identify modifiable risks for child injury in the home environment using a photosphere.

Together with Professor Ben Hicks, Head of Engineering Systems and Design at the University of Bristol, we have produced a demonstration photosphere for an 'unsafe' kitchen with hazards labelled invisibly, which can be identified by the user by hovering the cursor over the hazard or clicking it. This 'identifies' the hazard to the user and opens a box with a positive prevention message, some incidence/epidemiological data and links to resources for further information. The photosphere environment includes the demonstration photorealistic view for HVs to use with families to mark-up interactive features and identify injury hazards. This multi-disciplinary team has been awarded an Elizabeth Blackwell Institute Translational Acceleration and Knowledge Transfer (TRACK) award to create a framework and fully functioning pilot product.

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

This inter-agency partnership supports activities to reduce avoidable unintentional injuries in children across the wider Bristol area and improve the outcome for patients when injuries do happen. The team is led by Julie Mytton with Toity Deave and Trudy Goodenough (UWE), and Alan Emond (UoB). The team completed a strategic review in August 2016 and refocused its activity onto two key areas; injury prevention, and injury data. We are currently completing a Child Injury Health Needs Assessment to capture existing injury data for the Bristol area and

map these needs against current service provision. We have been awarded £5300 from Bristol Health Partners to support this activity.

### **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 papers in journals such as JAMA Pediatrics, Trials, BMC Public Health and PLoS ONE. Presentations both locally, nationally and internationally have been well received and these are continuing. In addition, Toity Deave has been invited to contribute to two Childhood Injury Prevention Workshops to help with the North Somerset County Council strategy for child injury prevention

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) (<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. 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.

### **Prevention of traumatic brain injuries**

Julie Mytton, together with Mark Lyttle and Peta Sharples from University Hospitals Bristol NHS Foundation Trust were awarded £10,000 funding in April 2017, from the NIHR Brain Injury Healthcare Technology Cooperative to undertake a feasibility study. They will be exploring whether it is feasible to identify potentially modifiable risk factors for non-fatal traumatic brain injury from routinely collected information on child patients admitted to the Bristol Royal

Hospital for Children. The project will explore the views of children, their parents and carers, and service providers, and will examine the quality and level of detail of information on the circumstances of the brain injury event recorded in routine hospital records. The project runs from August 2017 to July 2018.

### **Supporting Action through First-aid Education (SAFE) study**

The Child Injury HIT, together with the Avoiding Hospital Admissions Health Integration Team, were 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 ran from March 2016 to January 2017, working across four urgent care settings in the Bristol area. The project involved documentary analysis, a survey of patients and carers using urgent care services, interviews and focus groups with service users, and interviews with service providers. The project report was published on the British Red Cross website in July 2017 and outcomes from the study have been used to inform the future direction of first-aid education in the British Red Cross.

## **Global Child Health**

### **Nepal**

A new collaboration with Kathmandu Medical College to establish a Nepal Injury Research Centre commenced in July 2017. This project, funded through the National Institute for Health Research Global Health Research programme, is led by Julie Mytton as Director of the UK team of research and support staff, together with Professor Sunil Joshi, from Kathmandu Medical College, as Director of the Nepalese team. The aim of the project is to build capacity and capability to deliver injury prevention research and create a sustainable research centre by June 2020.

The team will be working with a number of NGOs, the Nepalese Government, the World Health Organisation and the Centre for Injury Prevention Research Bangladesh. We will engage communities and stakeholders, undertake surveillance to determine the current burden of fatal and non-fatal injuries across all ages, prioritise prevention interventions for development and future evaluation, and provide and develop training. Members of CCAH include Santosh Bhatta, Pete Blair, Toity Deave, Matthew Ellis, Alan Emond and Puspa Pant. Maggie Heeley is funded as the project administrator.



As well as winning the large award from the NIHR Global Health Research Programme, Julie Mytton celebrated a special birthday in 2017. Here she is celebrating her birthday at CCAH.

### **Brazil**

Alan Emond is collaborating with colleagues at the Universidade Federal de Pernambuco (UFPe) in Recife, Brazil on a project investigating the mental health and behavioural outcomes of children exposed to domestic violence when in utero or during the early years of life. In April 2017 Elizabete da Souza successfully defended her PhD at UFPe using the study data, and is now writing up for publication.

### **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.

### **Montenegro**

Toity Deave was invited by WHO (Europe) to present and take part in a workshop in Podgorica, Montenegro, on child violence and maltreatment prevention and the role of primary health care. This follows on from a similar workshop which she took part in in Estonia in 2015. Discussions are ongoing in relation child injury prevention and home/health visiting.

### **USA**

*Professor Stephen Nowicki*, the distinguished psychologist at Emory University, Atlanta, USA, continues to work with Jean Golding on investigating locus of control (LOC) within the ALSPAC cohort 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. The first

papers have been published this year; they look at the link between the parents' LOC, the way in which they bring up their children, and the consequences. In particular the difficulty that parents have in coping with a difficult child is less successful if the parents are externally oriented (i.e. they tend to believe that there is not much point in trying to do anything constructive since it is all due to luck or fate).

*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 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 [www.bristol.ac.uk/social-community-medicine/projects/isleofmanstudy/](http://www.bristol.ac.uk/social-community-medicine/projects/isleofmanstudy/)

Interested researchers are invited to contact the Committee by email [elspac-iom@bristol.ac.uk](mailto:elspac-iom@bristol.ac.uk).

### **Mexico**

*Daniela Estrada de León* worked at the Centre in 2017.

She is in her final year of an MSc in Public Health at the Universidad Autonoma de Nuevo León, in Mexico and was investigating the validity of a questionnaire to identify obesogenic feeding practices in mothers of pre-school children living in north-east Mexico.

The questionnaire combines items from a Spanish version of three existing questionnaires.

Daniela was supervised by Drs Caroline Taylor and Pauline Emmett.



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

The Young People's Advisory Group (YPAG) programme for 2016-17 worked with a group of 15 from Redland Green Post 16 Centre. This is the seventh year that this school has worked with us to host the YPAG. They provide access to young people as "experts" on being young people rather than a specific condition or disease. During the programme the YPAG was consulted on five occasions including: insights into the views of young people around potentially effective intervention models for the prevention of harmful alcohol use; Looking for opinions on "Eye Train" an app/game designed to help young children with eye movement disorders and young people's use of pornography. Providing researchers with first-hand knowledge of being a young person in the current world.

Throughout the year the group receive teaching and support sessions followed by presentations of their own research studies. One group looked at links between use of social media, wearing of make-up and self-esteem in girls, another at effects of differing levels of stress on performance in examinations. One student, who worked alone, designed a questionnaire to determine if there exists a common, acceptable age gap for the intimate

relationship between a person of 16-18 years of age and a person over 18 years of age as perceived by people 16-18 years of age, with feedback of over a hundred responses. These presentations once again, were of a very high standard and each received a certificate of achievement to include in their portfolios. This mutually beneficial arrangement was valued by the schools involved, their pupils who participated and researchers from the CCAH.



*Redland Green YPAG presentations 2017*

## **PhD students associated with the Centre in 2016-17**

### **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.

### **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: *An investigation of inequalities in paediatric burns and scalds in England and Wales*

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, reviewed the epidemiology of thermal injury in children which resulted in the development of PhD research questions related to inequalities. In his second year he analysed Hospital Episode

Statistics (HES) data sets . In his final year, Moses has analysed the data on paediatric burns collected in Emergency Departments using the Burns And Scalds Assessment Template (BASAT).

### **Julia Sarginson**

Title: *The Systemic Inflammatory Response 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 submitted in April 2017 and passed her viva in August 2017

### **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.

## **PhDs awarded in 2016-17**

### **Blanca Bolea-Alamañac**

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

Her PhD was submitted in February 2016; she passed her viva in July 2016 and was awarded the degree in November 2016

### **Anna Pease**

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

Anna passed her PhD in May 2016 and graduated in July 2016

### **Roxanne Parslow**

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

Her PhD was submitted in October 2016 and Roxanne passed in December 2016

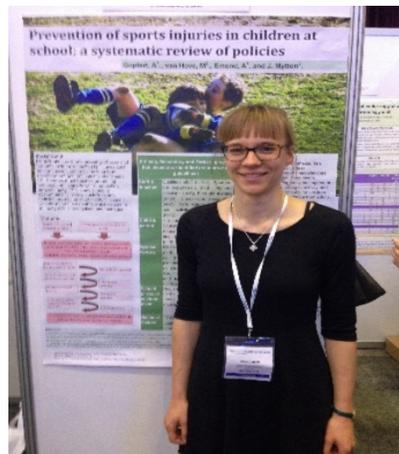
## Clinical academic trainees based at the Centre in 2016-17

### Ian Harrowell

Ian is an Academic Foundation Trainee in Paediatrics who spent 2015-2016 investigating 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, In 2017 he has had two manuscripts accepted for publication.

### Anya Gopfert

Anya Gopfert, Academic Foundation Trainee, completed a systematic review of policies to prevent sports injuries in children at school, supported by Julie Mytton and Alan Emond. The review found only a small number of policies in which there was limited evidence to inform recommendations. Evidence was rarely specified by age, gender or developmental stage and at times adult evidence was applied to child populations.



Anya presented a poster at the 2017 scientific meeting of the Royal College of Paediatrics and Child Health.

### Nisreen Khambati

Nisreen Khambati is an Academic Foundation Trainee in Paediatrics who has spent 2016-2017 investigating the protective factors promoting resilience in children exposed to parental maltreatment within the ALSPAC cohort. She has been supervised by Professor Alan Emond, Liam Mahedy and Jon Heron.

In June 2017, Nisreen presented her work at an international research conference in South Africa; “Pathways to Resilience IV: Global South Perspectives” and had the opportunity to attend the WUN Workshop on Resilience in Youth and Service Providers in Cape Town. She is currently in the process of writing up her research for submission to a peer-reviewed journal.



Alan Emond and Nisreen Khambati at the World Universities Network Resilience workshop, held at Goedgedacht Conference Centre near Cape Town in June 2017

## Teaching Activity

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

The 2016/2017 academic year saw our tenth cohort of 28 students successfully work towards an intercalated BSc degree in Global Health. As an uncertain world makes variable national commitments towards 17 Sustainable Development Goals it is reassuring to see demand for this course continues to rise amongst Health Science students from UK and European neighbours (whom we will be welcoming to Bristol for the first time this autumn). Academic staff from several faculties in UoB and UWE contribute to this course.

There were 3 awards this year for the David Baum prize for best students on the Global Health Course – Sam Shaw, Hannah Best and Hannah Mahoney.



*Sam Shaw receiving the David Baum prize*

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

Cathy Williams has been 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. From July 2017 Cathy Williams will assist a new unit lead, Dr Robin Marlow, who will carry on with the course 2017-18.

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

During 2016-17, CCAH staff lectured on the medical student child health course, taught tutorials and workshops and SSCs and examined in the OSCE. Alan Emond chaired the academy leads meetings.

UoB is developing a new course for medical students, called MB21. A new curriculum group, led by Richard Coward, has been set up to develop the child health curriculum for the new MB21 course. The child health component of the new course will be delivered from 2020.

Matthew Ellis is leading a helical theme in the MB21 curriculum on Global Health.

Carol Joinson is leading on developing the new first year epidemiology module in MB21, to be launched in September 2017.

### **Postgraduate**

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

Short course: Pete Blair led an SSCM short course 'Introduction to epidemiology' in January 2017, and several members of CCAH contributed.

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

## Academic staff at CCAH during 2016-17

Dr Tom Allport (UoB) Honorary Senior Lecturer in Child Health

Dr Emma Anderson (UoB) Senior Research Associate/Trial Manager

Dr Sarah Baos (UoB) Senior Research Associate/Trial Manager

Ms Kate Beckett (UWE) Knowledge Mobilisation Research Fellow

Mr Santosh Bhatta (UWE) Research Associate

Ms Karen Birmingham (UoB) Research Fellow

Dr Pete Blair (UoB) Reader in Medical Statistics

Ms Amberly Brigden (UoB) Research assistant

Dr Simon Collin (UoB) Research Fellow

Prof Esther Crawley (UoB) Professor of Child Health

Dr Toity Deave (UWE) Associate Professor in Family and Child Health

Miss Katie De-Loyde (UoB) Research Statistician

Dr Matthew Ellis (UoB) Senior Clinical Lecturer in Child Health

Ms Gennette Ellis (UoB) Data Preparation Assistant

Dr Pauline Emmett (UoB) Senior Research Fellow

Prof Alan Emond (UoB) Professor of Community Child Health

Prof Peter Fleming (UoB) Professor of Infant Health & Developmental Physiology

Prof Jean Golding (UoB) Emeritus Professor of Paediatric and Perinatal Epidemiology

Dr Trudy Goodenough (UWE) Research Fellow

Dr Anya Gopfert (UoB) Academic Foundation trainee

Mr Tom Greenwood (UoB) Research Assistant

Mr Steve Gregory (UoB) Data Manager

Dr Amanda Hall (UoB) Honorary Research Fellow

Dr Ian Harrowell (UoB) Academic Foundation trainee

Dr Linda Hollén (UoB) Research Statistician

Mrs Yasmin Iles-Caven (UoB) Research Assistant in Child Health

Dr Jenny Ingram (UoB) Senior Research Fellow  
Ms Debbie Johnson (UoB) Research Midwife  
Dr Carol Joinson (UoB) Reader in Developmental Psychology  
Dr Rebecca Kandiyali (UoB) Research Health Economist  
Dr Nisreen Khambati (UoB) Academic Foundation trainee  
Dr Katie De-Loyde (UoB) Research Associate  
Dr Peter Lunt (UoB) Honorary Research Fellow  
Dr Mariusz Grzeda (UoB) Research Associate  
Dr Julie Mytton (UWE) Associate Professor in Child Health  
Dr Puspa Pant (UWE) Research Associate  
Dr Roxanne Parslow (UoB) Research Associate  
Prof Marcus Pembury (UoB) Visiting professor  
Dr Anna Pease (UoB) Senior Research Associate  
Dr Clare Sheahan (UoB) Teaching Fellow  
Dr Caroline Taylor (UoB) Research Fellow  
Dr Katie Whale (UoB) Senior Research Associate  
Miss Cathy Williams (UoB) Reader in Paediatric Ophthalmology

## APPENDIX 1: Active grants and fellowships 2016 – 2017

### Newly awarded grants in 2016-2017

NIHR – HTA - CHICO (Children’s Cough). Reducing antibiotic prescribing for children presenting with cough or URTI. (PI) **Pete Blair** (Co-applicant) **Jenny Ingram**. £882,400. (2017 – 2020)

NIHR Public Health Research Programme - ABA (Assets-based feeding help Before and After birth) study for improving breastfeeding initiation and continuation. (PI) **Jenny Ingram (Bristol Site)**. £328,980. (Nov 2016 – Nov 2018).

NIHR – Global Health Research Programme, Nepal Injury Research Centre. (PI) **Julie Mytton**. £1,999,862 (2017 – 2020)

NIHR Brain Injury Healthcare Technology Cooperative - Feasibility of identifying modifiable factors in non-fatal brain injury in children. (PI) **Julie Mytton**. £10,000 (2017 -2018)

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

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

NIHR - Multicentre randomised controlled feasibility study in conserving breast surgery. (PI) Zoe Winters (Co-Applicants) **Rebecca Kandiyali** and Jenny Ingram. £250,000.00. (2017 – 2020)

NIHR – REPROVIDE. (PI) Gene Feder (Co-Applicant) **Rebecca Kandiyali**. £3,237,413. (2017 – 2022)

Wellcome Trust/Elizabeth Blackwell Institute - Elizabeth Blackwell TRACK Award. (PI) **Alan Emond** (Co-Applicant) **Toity Deave**. £14,353 (2017 – 2018)

NIHR HTA - Antidepressant use during pregnancy: assessing benefits to mothers and long-term neurodevelopmental risks to children using the Clinical Practice Research Datalink. (PI) Dheeraj Raj (Co-Applicant) **Alan Emond**. £880,000. (2016 – 2019).

Public Health England - Microcephaly and intracranial abnormalities in infants whose mothers travelled to countries likely to be affected by Zika during pregnancy or in the 3 months prior to conception. (PI) R Pebody (Co-applicant) **Alan Emond**. £20,500. (2016 – 2017)

Lullaby Trust - OASIS (Oto-Acousting Signals In SIDS) Newborn hearing screening and the risk of unexpected infant death: Feasibility observational study. (PI) **Peter Fleming and Pete Blair**. £187,549. (2016 – 2017)

The John Templeton Foundation – Transgenerational non-genetic pathways to human development. (PI) **Jean Golding** and M Pembrey. £995,516. (2017 – 2020)

NIAAA – Two small projects: (a) To assess the relationship between prenatal mercury and academic abilities (including reading and maths) and determine whether there are protective interactions with maternal fish consumption. (b) To determine whether there are protective interactions between prenatal mercury and breast feeding in regard to offspring outcomes including cognitive function and behaviours. (PI) **Jean Golding**. \$35,000. (June 2017 – May 2018)

Medical Research Council (MRC) – Pathways to self harm: Biological mechanisms and genetic contribution. (Co-Investigator) **Carol Joinson**. £165,937.00 (October 2017 – September 2019)

NHS Research Endowment Fund - Does early frequency and form of stools predict later bowel and bladder dysfunction and their consequences? (Co-Investigator) **Carol Joinson**. £43,921.00. (February 2017 – February 2018)

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.

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

Bristol Health Partners - On behalf of the Child Injury Health Integration team – patients, families and professionals' experiences of trauma care pathway services. (PI) **Julie Mytton**. £6,059 (2017 – 2018)

NERC - Enhancing environmental data resources in cohort studies: ALSPAC exemplar (ERICA). (Co-Applicant) **Caroline Taylor** £126,000. (2016 – 2017)

Nestle Nutrition - Second extension of grant to investigate picky eating in the ALSPAC cohort: determinants and related health outcomes. PIs **CM Taylor** and **PM Emmett** £5,000. (2016-17)

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

## Fellowships awarded in 2016-2017

University of Bristol Studentship – Investigating the treatment of paediatric CFS/ME for **Amberly Brigden** £42,888. (October 2016 – 2021)

NIHR Doctoral Research Fellowship – Depression in paediatric chronic fatigue syndrome for **Maria Loades** £311,749 (2016 – 2021)

APCRC Launching Fellowship for **Anna Pease** (2017-2018).

## Ongoing grants in 2016-2017

NIHR – EPPIC (Enhancing Post-Injury Psychological Intervention & Care, Knowledge Mobilisation Research Fellowship. (PI) **Kate Beckett**. £192,000.00 (2016 – 2019)

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 – 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

NIHR – EME. Reducing pathology in Alzheimer’s disease through Angiotensin Targeting – The RADAR Trial. Kehoe P (PI). **Blair PS** (Co-applicant) £2,038,791 (2012-2018)

NIHR – An Investigation of the treatment of paediatric CFS/ME. (PI) **Esther Crawley**. £864,736.00. (2014 – 2018)

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 Bleijenbergh, Paul Stallard, David Kessler, Harriet Downing, John Macleod, Simon Price. £999,977.80 (2016-2021)

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 - Cerebral Visual Impairment in primary school age children: prevalence, impact and effectiveness of support. (PI) **Cathy Williams**. £976,104.72 (2015 – 2020)

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

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 (Safe Tea). (PI) **Alan Emond**. £35,000.00 (2016 – 2020)

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

NHS Health Quality Improvement Partnership - National Learning Disability Mortality Review Programme. (PI) **Peter Fleming**. £2,393,744.00. (2015 – 2018)

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)

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

Escher Foundation. Grandmaternal smoking and autism (PI **Jean Golding**) US\$25,000 (2015-17)

The John Templeton Foundation. Internal Locus of Control: Origins, Determinants and Benefits. (PI) **Jean Golding**. £294,042. (2015 – 2017)

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

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)

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)

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)

Wellcome Trust. Career Re-Entry Fellowship **for Caroline Taylor** £280,000 (2015 – 2019)

## APPENDIX 2: Centre Publications 2016 – 2017

Kendrick, D., Kellezi, B., Coupland, C., Maula, A., **Beckett, K.**, Morriss, R., Joseph, S., Barnes, J., Slaney, J. and Christie, N. Psychological morbidity and health-related quality of life after injury: multicentre cohort study. *Quality of Life Research* 2016. Published Online First: 26 October 2016, doi: 10.1007/s11136-016-1439

**Beckett, K.**, Henderson, E. M., Parry, S., Stoddart, P. and Fletcher, M. A mixed-method study of pain management practice in a UK children's hospital: Identification of barriers and developing strategies to maintain effective in-patient paediatric pain management. *Nursing Open* 2016; 3 (1). pp. 19-29. ISSN 2054-1058 Available from: <http://eprints.uwe.ac.uk/28642>

Kellezi, B., Coupland, C., Morriss, R., **Beckett, K.**, Joseph, S., Barnes, J., Christie, N., Slaney, J. and Kendrick, D. The impact of psychological factors on recovery from injury: A multicentre cohort study. *Social Psychiatry and Psychiatric Epidemiology* 2016. ISSN 0933-7954

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