Future Directions
by Lynn Molloy (Executive Director, ALSPAC)

The ALSPAC study, which has collected data on around ten thousand families based in and around Bristol for the last twenty years, has unique features which make it an exciting data source of interest to social scientists. ALSPAC has collected extremely detailed data over many time points from early childhood to late adolescence and has recently been awarded new funding to continue to collect new data in the future.

The ALSPAC study is just about to start on an exciting new programme of research. New data will be collected on the young study participants currently aged around 19 on the transition into adulthood. Data will also be collected on their parents as they move into middle age. Data will be collected via hands-on assessments as well as questionnaire data.

We will also be enrolling new participants into the study. We will recruit the next generation of ALSPAC (i.e. the offspring of the ‘children’ in ALSPAC) and this will provide a three generational cohort with biological, developmental, socioeconomic and lifestyle characteristics. Finally, we will seek consent from siblings of the original children to enter the study and we will pilot low-cost data collection on them.

Over the next few years we will also gain consent from participants to link to existing routine data obtained from a number of government departments such as the NHS, Department for Education, Department for Work and Pensions, Her Majesty’s Revenue & Customs and Ministry of Justice. The data collected is likely to be of particular interest to social scientists.

ALSPAC is committed to making the data available as quickly as possible to the research community. To allow maximal utilisation of the data we will be developing remote secure data access within the next couple of years. In the meantime if you would like to have data access or contribute to any future data collection in ALSPAC please read the Collaboration Policy and get in touch.

Best wishes
Lynn


Data Now Available

### Questionnaire data

<table>
<thead>
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<th>Questionnaire Type</th>
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</thead>
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<tr>
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<td>16 years old</td>
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<tr>
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<td>16+ years old child completed questionnaire “Life of a 16+ Teenager”</td>
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<tr>
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<td>16+ years carer completed questionnaire “Your Daughter/Son 16+ Years On”</td>
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### External Data

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<td>GCSE exam data school year 11</td>
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**Data available April 2011**

<table>
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<td></td>
<td>13 ½ years old</td>
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<tr>
<td></td>
<td>15 ½ years old</td>
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Dataset derived through obstetric records

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Research using ALSPAC data has led to the publication of over 550 peer-reviewed journal publications. For a full list of ALSPAC publications by year please visit:

http://www.bris.ac.uk/alspac/sci-com/pubs/
Combined Response Rates to Questionnaires and Clinics

Children of the 90s Outreach Clinics
By Ross Robinson — Outreach & Home Visits Project Manager, ALSPAC

Children of the 90s outreach clinics have been taking place since August 2010. They aim to bring the study closer to its participants, making taking part more convenient and interesting for our cohort families.

To date over 300 Young People and Mothers have attended outreach clinics in locations as diverse as GPs surgeries, community centres, Weston Grand Pier and Cabot Circus shopping centre. Many of these participants have also agreed to attend a shortened clinic at Oakfield House, to enable them to complete measures which are unavailable at outreach locations such as the DXA scan. In March, Children of the 90s will be conducting outreach data collection at Bristol City and Bristol Rovers Football Clubs, and is due to return to Cabot Circus in April.
The **MRC DSS Gateway** is a web based system that will allow interested parties within the scientific community to search the metadata from a number of MRC Exemplar studies of which ALSPAC is one, for data items and study information pertinent to their (the interested parties) research areas. It does not however, hold any participant level data from the ALSPAC study only.

Initial discussions about the inclusion of ALSPAC within the system began in 2009. Development of the system began in late 2009 and a series of workshops were held in London over the course of 2010. These were attended by ALSPAC representatives and technical leads on the project.

**Current Progress**

In 2010 metadata in the form of variable labels, value labels and frequency listings was generated from existing ALSPAC questionnaire built files up to fifteen years of age and uploaded into the system along with other supporting documentation. This meant that ALSPAC metadata made up a significant proportion of the data on the system at that time, the information currently available in the system. As a result of this ALSPAC is considered a major contributor to the project and is in a good position to make suggestions relevant to its development. One such major suggestion was the inclusion of a ‘shopping basket’ to allow users of the system to create lists of variables that can be output and sent to the relevant study to form part of a request for collaboration. In the most recent version of the system, this request has been implemented and is functional.

Variable level information will be supported by other varied information such as links to research papers and journal entries based on the selected variables along with other study level information.

In January 2011, a Beta test of the system was released and meetings held with the exemplar studies including ALSPAC so that the system could be seen working. It is envisaged that the system will go ‘live’ sometime after April 2011 once it has been approved and signed off by the relevant MRC committee.

**Benefits of the system**

The primary function of the system is to allow greater access to information about the data held by each of the studies involved, initially six exemplars but this will be expanded to cover a wider range of MRC funded studies. It is envisaged that this will create a greater number of approaches to studies with ideas for collaboration and in turn open greater funding opportunities and new revenue streams for the studies themselves.
Gateway to Metadata (continued...)

From an ALSPAC perspective, it will offer greater levels of publicity to the scientific community, generate interest in the study, generate new grants and research opportunities and enable us to work towards open access to data which is an important part of future plans for the study.

Administrative Record Linkage in ALSPAC

The PEARL (Project to Enhance ALSPAC through Record Linkage) project is establishing data linkages with a number of UK government data sources. In order to show potential linkage partners and prospective collaborators how well ALSPAC manages and protects its data, it has embarked on a project to gain ISO 27001 certification. This is an international, risk based standard of information security management, more widely recognised in the corporate world than in academic circles.

The ALSPAC information security group (ISG) has been formed comprising of staff from various areas of ALSPAC and the School of Social and Community Medicine (SSCM); this will steer the organisation through to successful certification and oversee the management of any information security issues beyond the initial project. A new ALSPAC specific information security policy has been drafted and is awaiting feedback from the ISG before being submitted to SSCM and the ALSPAC Executive for approval and adoption.

Certification lasts for three years and is achieved through two external on-site audits. ALSPAC is expecting to go for these in June and July respectively. These are then followed by two annual surveillance audits. During this time the information security procedures and policies put in place will be under constant review and improvement to keep enable ALSPAC to keep its ISO27001 certified status.

“...This is an international, risk based standard of information security management...”

For further information on the ALSPAC Information Security Project please contact:

Anthony Phillips, ALSPAC Head of Data - Anthony.Phillips@bristol.ac.uk
Or
Jonathan Onslow, ALSPAC Data Security Officer – Jonathan.onslow@bristol.ac.uk

For further information on ISO27001: http://www.itgovernance.co.uk/files/Infosec_101v1.1.pdf

For further information on the PEARL project please contact:

Andy Boyd, ALSPAC Data Linkage Manager – andy.boyd@bristol.ac.uk
I am a lecturer in developmental psychology in the School of Social and Community Medicine. My main research interest is in the development of depression during adolescence. In my most recent research funded by the ESRC (RES-000-22-2509), I have been collaborating with Dr Jon Heron, Professor Glyn Lewis and Professor Ricardo Araya to investigate the role of pubertal development as a risk factor for the emergence of depressive symptoms in girls during adolescence.

The period from late childhood to adolescence is a time of rapid developmental change and is associated with an increased prevalence of psychological distress. During this transition period, the widely reported gender difference in rates of depression emerges, with a shift from similar rates in pre-adolescent boys and girls to approximately twice as many females than males with depression by mid adolescence.

Pubertal development and the emergence of depressive symptoms in adolescent girls from the ALSPAC cohort

It has been suggested that advancing pubertal development is more strongly associated with the emerging gender difference in prevalence of depression than chronological age. Using ALSPAC data, we have examined the role of pubertal development (timing of menarche; Tanner breast and pubic hair stages) in determining risk for depressive symptoms in adolescent girls.

The findings from this sample of UK adolescents provide evidence for a marked increase in depressive symptoms in girls during adolescence, compared to boys, and underline the importance of pubertal development as a risk factor for the emergence of depressive symptoms. Adolescence is a critical developmental period and psychological distress at this crucial stage may have an enduring social and psychological impact. Empirical findings from a large contemporary cohort have the potential to impact on the design and implementation of prevention and treatment programmes for depression in adolescents.

Over half of UK households have pets and there is increasing evidence to suggest that pet ownership can have both positive and negative impacts on human health. An area of particular interest is the impact of pet ownership on children.

I have been using ALSPAC data to investigate childhood pet ownership. The carer (usually mother) was asked what pets she owned during pregnancy and then at seven other time points up to child age ten. I have used the wealth of data within ALSPAC to investigate factors associated with household pet ownership, and ownership of particular pet types, and identified a number of variables. These include gender, presence of older siblings, ethnicity, maternal and paternal education, maternal and paternal social class, maternal age, number of people in the household, house type, concurrent ownership of other pet types, and whether the mother had pets during her childhood. Demographic variables such as age, gender, socio-economics and ethnic status are also known to be associated with health behaviours, thus complicating the study of the effects of pet ownership on human health.

Once pet ownership had been characterised, I then used it to examine the hypothesis that pet ownership may be associated with childhood obesity, in particular dog ownership, through encouragement of active lifestyles.

Preliminary analyses suggested that dog ownership at 7yrs was associated with a slightly increased likelihood of being obese. However, after controlling for gender, maternal education and social class, plus other previously identified risk factors for obesity in this cohort (birth weight, maternal smoking during gestation, parental obesity, TV watching, and sleep duration), obesity was no longer associated with dog ownership at 7 years. This demonstrates the importance of controlling for other behavioural and environmental factors, particularly as socio-economic status affects both pet ownership and health outcomes.

(...continued on page 8)
Early problems with friendships in childhood and experience of psychotic symptoms in adolescence

Sarah Sullivan
NIHR Research Training Fellow
School of Social and Community Medicine
University of Bristol

Well-characterised birth cohorts such as ALSPAC offer unique opportunities for Human-Animal Interaction research and my demonstration of their capability should encourage more researchers in the field to use them. To whoever thought to put pet ownership questions in ALSPAC, thank you! Unfortunately, the questions were removed after age 10, but we have negotiated for them to be added back into the current questionnaire circulation, at age 18, to include retrospective pet ownership questions to cover the gap during the teenage years. This should allow further investigation of pet ownership during adolescence and young adulthood. Watch this space!

Poor social functioning and difficulties with interpersonal relationships are serious features of psychotic illnesses, including schizophrenia. For sufferers these problems lead to few and poor quality friendship, a poor quality of life and unemployment. Poor social functioning is also associated with a greater probability of relapse, hospitalisation and increased use of medication. There are therefore also cost implications for the NHS.

Previous prospective and retrospective research has found that childhood social difficulties are antecedent to schizophrenia in adulthood. Whether a deterioration of social functioning in childhood is antecedent to adult schizophrenia is also of interest since it can add information about the aetiology of schizophrenia. An association between adult psychotic illness and stable but poor level of social functioning in childhood is evidence in favour of damage to the brain either pre or perinatally whereas an association with deteriorating social functioning in early adolescence is evidence in favour of a problem with adolescent synaptic pruning.

Psychotic illnesses are now frequently viewed as existing on a continuum, rather than being either present or absent, with the entire population appearing at a point on the continuum. An example of this is that approximately 13% of the ALSPAC cohort had experienced at least one psychotic symptom over the previous 6 months at the age of 12 years. This study investigates associa-
tions between these symptoms and previous measures of social functioning (peer problems and prosocial behaviour) at 7 and 11 years, as well as associations between deteriorating social functioning between these ages and psychotic symptoms.

We found that problems with peer relationships at both these ages were associated with an increase in odds of psychotic symptoms at 12 years. This is evidence in favour of the pre or perinatal brain damage hypothesis of psychosis. There was no evidence of an association between deteriorating social functioning and psychotic symptoms however, meaning that in this cohort problems with synaptic pruning in early adolescence is not a likely explanation for psychotic symptoms.

Self-harm among the ALSPAC teenagers

Self-harm is of concern not only because of the immediate physical injury, but also due to its association with psychological distress, and elevated risk of suicide. Rates rise rapidly during the teenage years, particularly among girls, making mid adolescence a key time to examine its causes and consequences. Because a lot of self-harm behaviour does not come to the attention of healthcare services, it is important that we research it among community-based samples such as ALSPAC. A team of us from the School of Social and Community Medicine - David Gunnell, Jon Heron, Glyn Lewis, Jonathan Evans and myself - included questions on self-harm and suicidal thoughts in the “Life of a 16+ Teenager” questionnaire. We found that 18.8% of respondents had ever hurt themselves on purpose (25.6% girls and 9.1% boys), and 15.8% had ever thought of killing themselves. Most of the self-harm behaviour involved cutting (64.3%), and the commonest reasons given were a desire to gain relief from a terrible state of mind (64.3%) followed by a desire to punish themselves (40.9%). Those who had ever self-harmed were much more likely to have also had thoughts of killing themselves. They were also more likely to know either a friend or a family member who had ever self-harmed, compared to those who had never engaged in this behaviour. Only one third had ever tried to seek help from anyone about their self-harming behaviour. Our next analysis will involve examining which earlier life experiences are risk or protective factors for ever having self-harmed by the age of 16. We are particularly focusing on school-related experiences – for example bullying, relationships with peers and with teachers, and academic performance – with a view to identifying school-based interventions that might prevent self-harm in the future.
Updates

Impact on Family Socio-Economic Status on Outcomes in Childhood & Adolescence

www.bristol.ac.uk/ifssoca

This ESRC funded project started in 2007 and runs for 5 years. The objective is to understand the importance of family socio-economic status/position for adolescents in Britain today. The primary focus is the behaviours and outcomes of individuals in late childhood and adolescence, including physical and mental health, risky behaviours, school performance and the acquisition of soft cognitive skills.

The research team consists of psychiatrists, psychologists, economists, statisticians, educationalists and epidemiologists.

Over 50 researchers are involved, most are based at the University of Bristol. Researchers at the Institute of Education take the lead on two projects and leading experts from 14 other institutions both inside and outside the UK take key roles in one or more sub-projects.

There are 27 related sub-projects organised into 6 interlinked strands. With only a year to go until the end of the project, lots of exciting developments have been made:

Antecedents of cognitive outcomes in adolescence led by Professor Anna Vignoles, with Claire Crawford and John Jerrim, Institute of Education

Work on this strand continues apace. Claire Crawford and Anna Vignoles have completed a paper investigating the academic progress made by children with Special Educational Needs. This paper uses the rich ALSPAC data to compare the academic progress made in primary school by children who have been formally identified as having SEN with the progress made by a control group of very similar children who have not been formally identified as having SEN by their school. The results suggest that children with certain types of SEN make significantly less progress in primary school than do otherwise similar children who do not have SEN.

John Jerrim and Anna Vignoles have also completed a paper entitled “The use (and misuse) of statistics in understanding social mobility: regression to the mean and the cognitive development of high ability children from disadvantaged
This paper examines the cognitive skill trajectories of young children from infancy through into secondary school and specifically focuses on how rates of cognitive development may vary between children from rich and poor backgrounds. A number of key studies in this area have reached one particularly striking (and concerning) conclusion – that highly able children from disadvantaged homes are overtaken by their rich (but less able) peers before the age of 10 in terms of their cognitive skill. This has become a widely cited “fact” within the academic literature on social mobility and child development, and has had a major influence on public policy and political debate. This paper assesses whether this finding is due to a spurious statistical artefact known as regression to the mean (RTM) and concludes that indeed after applying some simple adjustments for RTM, we obtain different results.

Since the last newsletter, Dr Catherine Chittleborough, Prof Debbie Lawlor and Prof John Lynch have completed a project examining whether maternal characteristics measured during pregnancy predict poor child health and development outcomes (Chittleborough C, Lawlor DA, Lynch JW. Pediatrics 2011 in press). So that every child is given the best start in life, all families receive universal care postnatally, but families with greater need receive more support for longer periods of time. Preventive programs such as the Family Nurse Partnership in the UK and Family Home Visiting in Australia offer extended services beyond immediate postnatal contact to “vulnerable” families often identified by maternal age, with mothers aged less than 20 years eligible for the program. This study used ALSPAC data to demonstrate that whilst teenage motherhood may be an important risk factor for poor child development up to age 5, it is an inaccurate predictor of developmental risk in children. Factors other than young maternal age, including education, smoking and depression during pregnancy, improve identification of those at greatest risk of poorer development and should be considered in identifying families eligible for programs aimed at improving child and maternal outcomes through intensive parent support. We have extended this work to examine prediction of maternal outcomes and will be able to report on that in the next newsletter. (...continued on page 12)
Our work on socioeconomic inequalities has focused largely on childhood height, an important predictor of future health and well-being. In ALSPAC we have found that socioeconomic differentials in length/height are present at birth and that these differences stay relatively constant through infancy and childhood - i.e. there is no further widening of differentials after birth (Howe LD, Galobardes B, et al. JECH 2010). By contrast, in the Pelotas Brazilian cohort, length/height differentials that were present at birth continued to widen through infancy and then stabilised in childhood (work submitted). In a second Low and Middle Income Country (LMIC) – Belarus – we have found that the magnitude of socioeconomic differentials in height in children who were born in the late 1990s were similar to those of their parents, who spent most of their lives living in the country when it was under a communist regime, in which occupational wage differences were relatively small (Patel R, Lawlor DA, et al. Annals of Human Biology 2011 in press). Results across all three cohorts (UK, Brazil and Belarus) were generally consistent in the differentials from mid-childhood with an approximate 1cm difference between the lowest and highest socioeconomic groups. Together these findings suggest a persistent socioeconomic effect on stature that appears to be driven by exposures in-utero or in early infancy. Finally, in ALSPAC, genetic variants that have been found in genome-wide association studies to be robustly associated with adult height were not notably associated with birth length, but became associated with height and growth in height from mid-childhood (work submitted).
Professor Don Rubin from Harvard University is one of the world’s most eminent statisticians. He accepted an invitation from Fiona Steele to visit Bristol in October. Don’s talks were both very well attended and gave us much food for thought. The members of the methods strand got an opportunity to talk with Don afterwards, and benefited from the useful exchange of ideas that ensued.

Frank Windmeijer and Paul Clarke have published a paper in *Biostatistics* clarifying how estimates obtained using structural mean models should be interpreted. These models are used to estimate the effect of an exposure when it has not been randomised but selected by those in the study. However, these models require some assumptions that do not always hold in practice, and this paper set about explaining what these assumptions are. Frank is currently developing this work in a much more general framework called the generalized method of moments. While this method is well known in econometrics, it has not been used for structural mean models, and this promises to be a major development in the area.

Fiona Steele has done wide ranging work on methods for longitudinal and event history data. She ran a workshop with Jon Heron and Kate Tilling from the health strand on methods for longitudinal data analysis with applications, which brought together techniques and applications that have been widely used on this project. Fiona was also invited to write a discussion paper on event history analysis, which attracted great interest and which will be published soon on *Australian & New Zealand Journal of Statistics*. Fiona further guest-edited a special issue on Lifecourse Research for *Journal of the Royal Statistical Society*, which will be published next year.

Paul Clarke and Michael Spratt have developed a model to adjust for ‘non-ignorable non-response’ on ALSPAC. Non-ignorable non-response occurs when the probability that people respond to a question like drug use depends on their actual drug use, which of course may be missing. The paradoxical nature of these models makes them notoriously difficult to fit. To help things along, the methodology was extended to incorporate information on how difficult the participants were to contact, and on those who didn’t originally respond to the Teen Focus 3 Clinic but who were successfully followed up. The results of this study will be...
Fiona Steele, FBA, Professor of Social Statistics at the University of Bristol, has been awarded an Order of the British Empire (OBE) in the Queen’s New Year Honours for her services to social science.

Fiona, who is based in the University’s Graduate School of Education, said: "I am thrilled. The award recognises the important role of statistics in social sciences research."

Fiona's main interests are in methodological research motivated by social science problems, particularly in the field of demography. Fiona was the youngest female Fellow to be elected to the British Academy, a national body for humanities and social sciences.

Carol Propper, Professor of Economics of Public Policy at the University, has been awarded a CBE for her services to social science in the Queen’s Birthday Honours in June 2010. Carol currently holds a joint appointment with the Business School at Imperial College London where she is Professor of Economics and Head of the Healthcare Management Group. With colleagues she founded the highly successful Centre for Market and Public Organisation.

The award recognises Carol's research into public economics and the economics of health care as well as her work with colleagues from other social science and medical disciplines. Her recent paper (with John Van Reenen of the LSE) on the medical consequences of nurses pay (EFM News) appears in the highly regarded Journal of Political Economy. Carol is particularly interested in the impact of incentives on the quality of health care delivery and, more widely, on the design and consequences of incentives within the public sector and the boundary between the state and private markets.

Carol has been a Council Member of the Economics and Social Research Council and of the Royal Economic Society. She was Senior Economic Advisor to NHS Executive on Regulation of the NHS Internal Market 1993-4, Co-Director of the Centre for the Analysis of Social Exclusion at London School of Economics from 1997-2007, and Director of the Centre for Market and Public Organisation from 2002-2005.
Showcasing ALSPAC as a Resource for Social and Health Researchers  

Monday 4 April, 2-5pm  
Royal Statistical Society, 12 Errol St, London EC1Y 8LX

While there has already been much high profile research based on ALSPAC, efforts have recently been made to increase awareness of these data among the wider research community. The aim of this meeting is to showcase the ALSPAC data and its potential for answering research questions concerning health and social factors. The four presentations will cover the following issues: the ALSPAC data and its linkage to important administrative data sources; factors affecting the relationship between gestational weight gain and the health of mothers and their offspring in later life; a comparison of the socio-economic differences in children’s behavioural and educational development found in ALSPAC and a US cohort; and the use of genetic data to establish the causal relationship between physical characteristics with a genetic basis, like obesity, and important outcomes, like educational attainment.

The meeting is sponsored by the ESRC-funded project “Impact of Family Socio-economic Status on Outcomes in Childhood & Adolescence”.

Presentations:

**ALSPAC and data linkage to routinely collected administrative records**  
*Andy Boyd* (School of Social and Community Medicine, University of Bristol)

**Gestational weight gain in a UK cohort: patterns, risk factors and associations with later mother and offspring health**  
*Debbie A Lawlor* (MRC Centre for Causal Analyses in Translational Epidemiology, University of Bristol)

**The development of SES gradients in skills during the school years: comparing ALSPAC with a US cohort**  
*Liz Washbrook* (Centre for Multilevel Modelling, University of Bristol)

**Genetic markers as instrumental variables**  
*Stephanie von Hinke Kessler Scholde* (Imperial College Business School, London)

Admission:  
There is no charge for this event but pre-registration is recommended. Please email meetings@rss.org.uk or telephone 020 7273 8010 to register.
Inequalities in childhood and adolescent health workshop

Thursday 14 April
Burwalls conference centre, University of Bristol
Organised by Professor Debbie A. Lawlor and Professor Carol Propper
funded by the ESRC project Impact of Family Socio-economic Status on Outcomes in Childhood and Adolescence

This workshop is aimed at academics, population health practitioners and policy makers who are interested in understanding and reducing health inequalities in children and adolescents. It will present both methodological research, concerned with developments aimed to better understand causal effects and possible biases in inequalities research and applied research concerned with recent evidence on inequalities in health in children and adolescents and policy implications of these.

Speakers:

Laura Howe (MRC CAiTE, University of Bristol)
The emergence of socioeconomic inequalities in health across childhood and adolescence

Debbie A. Lawlor (MRC CAiTE, Department of Social Medicine, University of Bristol)
Socioeconomic inequalities in obesity and related disorders in childhood

Marie-Jo Brion (MRC CAiTE, University of Bristol & Federal University of Pelotas, Brazil)
Cross-cohort comparisons in socioeconomic inequalities in childhood and adolescent health – methods for assessing causality

Whitney Robinson (University of North Carolina & University of Michigan, USA)
Causal inference in inequalities research

Mike Shields (University of Melbourne)
Born to be unhappy? The predictive power of childhood circumstance on adult life satisfaction.

Ana Diez-Roux (University of Michigan, USA) &
Bruna Galobardes (University of Bristol)
Can systems methods help us transcend current impasses in health inequalities research?

John Lynch (University of South Australia) &
Cathy Chittleborough (University of Bristol & University of South Australia)
Evidence translation for effective early childhood intervention

Admission is free and lunch will be provided for all participants. Participants are responsible for covering their own travel and accommodation costs. Places are limited and will be allocated on a first come first served basis.

For more information and to register for this workshop please contact Amanda Edmondson
E-mail: amanda.edmondson@bristol.ac.uk Tel: +44 (0)117 3310952
Upcoming Events (continued…)

Meeting of the General Applications and Medical Sections
Recent Developments in Observational Epidemiology using Mendelian Randomisation

Thursday 26 May, 10:30-5pm
(with morning coffee, afternoon tea and lunch)
Royal Statistical Society headquarters, 12 Errol Street, London, EC1Y 8LX

Mendelian randomisation involves using genetic variants that are known to be reliably associated with modifiable risk factors to estimate the causal effects of these risk factors. The last ten years has seen an explosion in the number of published Mendelian randomisation studies, most of which rely on instrumental variable techniques from econometrics. The aim of this meeting is to highlight recent developments from biostatistics, epidemiology and econometrics, and the impact that these will have on future Mendelian randomisation studies. An extremely full day will comprise six presentations from prominent workers in the field. The meeting will conclude with a panel discussion in which matters raised during the day will be discussed and questions taken from the floor.

The meeting is sponsored by the ESRC-funded project “Impact of Family Socio-economic Status on Outcomes in Childhood & Adolescence”; the MRC-funded project “Inferring Epidemiological Causality using Mendelian Randomization”; and the MRC Centre for Causal Analysis in Translational Epidemiology at the University of Bristol.

Presentations:

Mendelian Randomisation: Where did it come from? What is it? Why is it useful?
Debbie A Lawlor (MRC Centre for Causal Analyses in Translational Epidemiology, University of Bristol)

A comparison of different IV methods for binary outcomes and what we have learned about them
Vanessa Didelez (Department of Mathematics, University of Bristol)

Mendelian randomization analysis of case-control data using structural mean models
Jack Bowden (MRC Biostatistics Unit, Cambridge)

Bayesian methods for meta-analysis of Mendelian Randomisation studies
Stephen Burgess (MRC Biostatistics Unit, Cambridge)

Estimation using structural mean models with multiple instruments
Tom Palmer (MRC Centre for Causal Analyses in Translational Epidemiology, University of Bristol)

Mendelian Randomisation: The Future
George Davey Smith (MRC Centre for Causal Analyses in Translational Epidemiology, Univ of Bristol)

It is necessary to register for this event and there is a charge. Please email conference@rss.org.uk or phone 020 7614 3936 (PM only) or 020 7614 3918 to register.