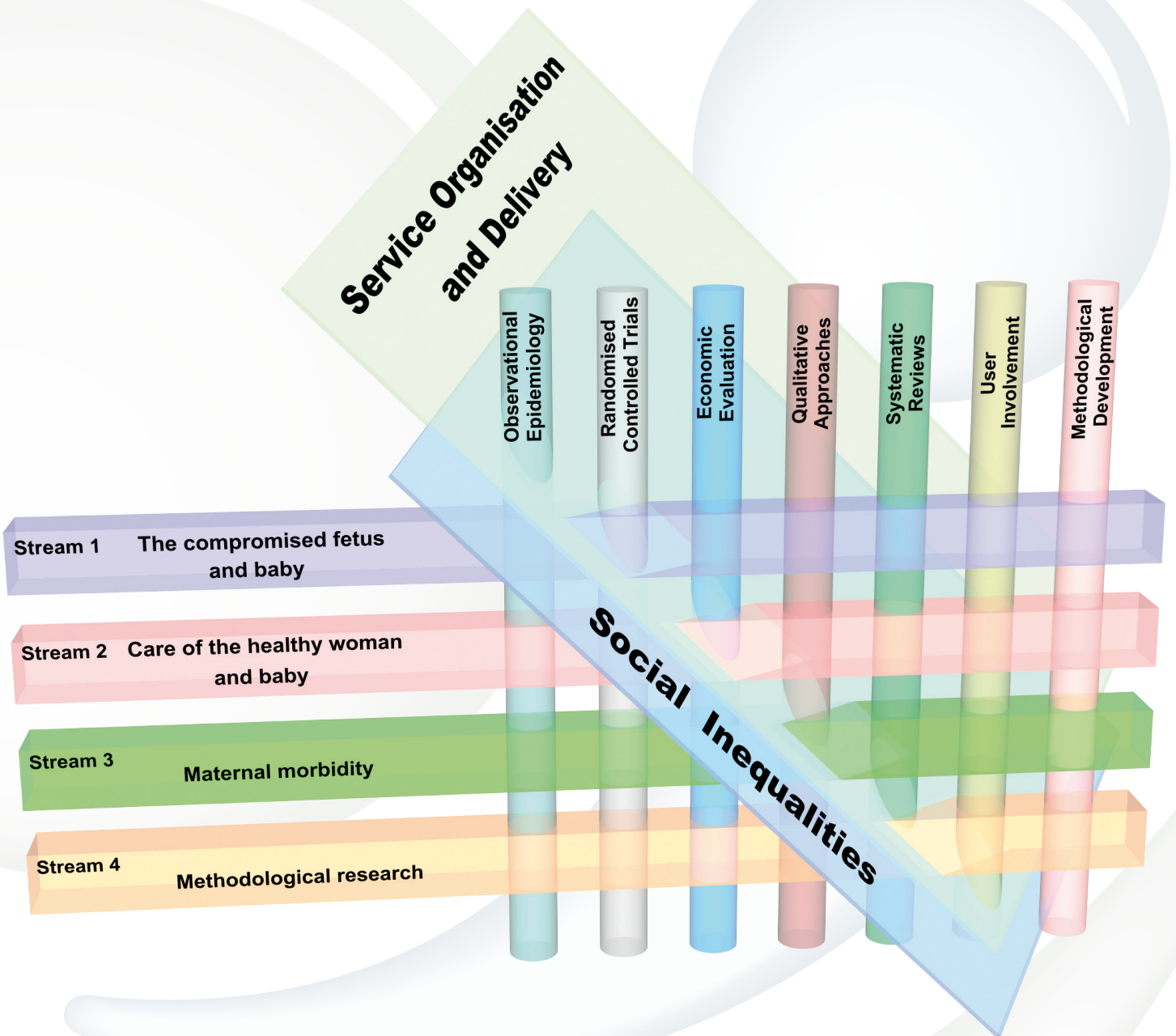




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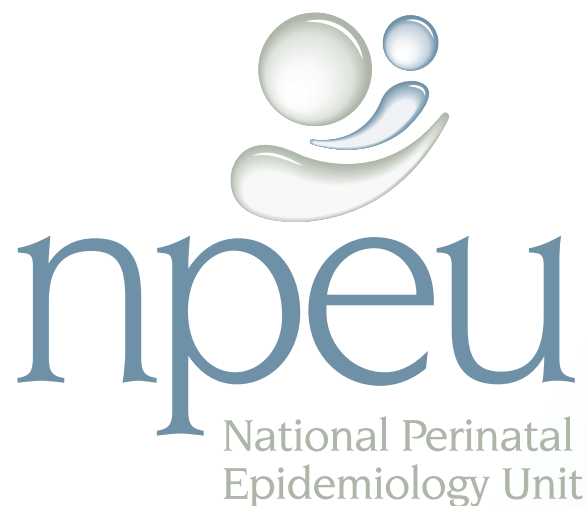
National Perinatal
Epidemiology Unit



Annual Report 2006

National Perinatal Epidemiology Unit

Annual Report 2006



Front Cover

The front cover illustrates the framework used to describe the NPEU programme of work for the period 2006 to 2010. Our research is carried out under the four streams of: the compromised fetus and baby, care of the healthy woman and baby, maternal morbidity and methodological research. The two themes of service organisation and delivery and social inequalities cross-cut much of the research undertaken in the programme. The various different methods used in our research are illustrated by the vertical rods.

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Introduction

Welcome to the new-look NPEU Annual Report. I am aware that changing a document like the NPEU Annual Report after nearly 30 years will provoke some exclamations of dismay, but our work has been increasing in recent years and, coupled with the long duration of many of our projects, we were conscious that the Annual Report was becoming long and repetitive. We have therefore streamlined this report to include just a summary of all our ongoing and recently completed work with details of only those projects which started in 2006. Complete details of all the ongoing work at the NPEU can be found on our new-look website (see page 2 or visit www.npeu.ox.ac.uk).

We have co-ordinated this revised Annual Report to coincide with the start of our new Programme of Work. Some of you will be aware that our main funder, the Department of Health in England, supports the Unit for five year periods during which we undertake a range of projects in the perinatal health setting. Describing these projects within a clear framework for clinicians, researchers and the public has always been a challenge. For the current work programme 2006-2010, we have developed a framework of four streams with two cross-cutting themes which is illustrated on the front cover of this Annual Report. The description of projects started during 2006 follows these four streams of work.

I also want to say a few words about our notable successes for 2006. First, Stavros Petrou and Marian Knight both received personal fellowship awards. Stavros is our senior Health Economist and was awarded a very prestigious MRC Senior Non-Clinical Research Fellowship to undertake a programme of methodological research on economic aspects of perinatal and paediatric health care. Marian Knight, a consultant in public health, runs the successful UKOSS programme of research, and she was awarded a Post-Doctoral Fellowship from the National Coordinating Centre for Research Capacity Development of the Department of Health to undertake a series of projects to further develop methods for studying rare conditions in pregnancy utilising the UKOSS methodology.

Another important award for 2006 was the funding we have received from the NIHR Service Delivery and Organisation Programme and the Department of Health Policy Research Programme to undertake the Birthplace project. This ambitious multi-methodological programme of studies includes a large prospective cohort study comparing clinical outcomes for mothers and babies of birth planned at home, in

midwifery units and in obstetric (hospital) units. This important work is being led by Rona McCandlish and will report in 2009/2010.

Less daunting but just as important has been the repeat of the 1995 study which explored women's views of the care they received during pregnancy, childbirth and the postnatal period. The report of this study, 'Recorded Delivery' (www.npeu.ox.ac.uk/maternitysurveys/report) has been able to map changes in the care provided for women by the maternity services between 1995 and 2006. The findings are more encouraging than many people expected, suggesting that NHS maternity services are far from being in the desperate state in which they are often portrayed.

I hope you enjoy reading this new Annual Report. If you have any suggestions for improvements in subsequent years please do let us know.



NPEU Director: Professor Peter Brocklehurst

Website

www.npeu.ox.ac.uk

Development of the NPEU website continues and it has rapidly become a valuable resource for our collaborators. Development of secure web based randomisation has continued and, during late 2006, work began on linking web based randomisation to an automated telephone recruitment system. This was completed in time for the start of the CORONIS study.

Visits to the NPEU website have continued to increase in line with the expanding amount of material available from the site and some approximate figures are shown below.

Website Statistics

- The NPEU website now receives an average of over 10,000 successful requests per day - a daily increase of over 3000 requests in the last year!
- Currently, the top 8 most frequently visited areas of the website, in order, are:
 - National Maternity Surveys
 - INIS

- Annual Report
- UKOSS
- BOOST
- TOBY
- 4Child
- N3R

- On average, over 600 megabytes of data are transferred to and from the website every day, an increase of over 400%!

The New Website

Throughout 2005 and into 2006, the website has been undergoing some significant changes behind the scenes. Due to be launched in late 2007, the new website will offer new features such as the ability to search the whole site for keywords plus a more sophisticated news box.

Along with the new features comes an all new look, designed to be user friendly and as cross-browser compatible as possible. Below is a sneak preview of the new design.

The screenshot shows the NPEU website homepage. At the top left is the NPEU logo. A news banner reads: "News: Welcome to the new NPEU website. This new website has been finely crafted over the last year to bring you an intuitive and informative experience. You will find all the old pages and services, such as the 'Staff Page', and 'How to Find Us', but you will also find new features, such as this news bar, and the search box, to help you find exactly what you're looking for much more easily." Below the banner is a navigation bar with links: Home | Contact Us | Find Us | Accessibility & Help. A search box is on the right. On the left is a sidebar menu with links: About Us, Publications, Useful Links, What We Do (Methodology), Secure Randomisation Site, Logout, Areas of Access, and User Controls. The main content area is titled "Welcome" and contains a paragraph about the unit's history and staff. Below the text is a group photo of the staff. At the bottom, there is a footer with navigation links and a copyright notice: © 2007 npeu.

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5. Liz Schroeder
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7. Suzanne Williams
8. Mary Logan
9. Tricia Boyd
10. Catherine Rounding
11. Shan Rich
12. Denise Jennings
13. Helen Newdick
14. Sara Lewis
15. Andy Kirk
16. Harriet Hay
17. Maggie Redshaw
18. Peter Brocklehurst (Director)
19. Ron Gray
20. Laura Murray-White
21. David Puddicombe
22. Sarah Ayers
23. Ursula Bowler
24. Jenny Kurinczuk
25. Christine Hockley
26. Sue Bellenger
27. Geraldine Surman
28. Andy King
29. Ann Kennedy
30. Madalena Gallagher
31. Karen Lindsay
32. Brenda Strohm
33. Anne Smith
34. Lynne Roberts

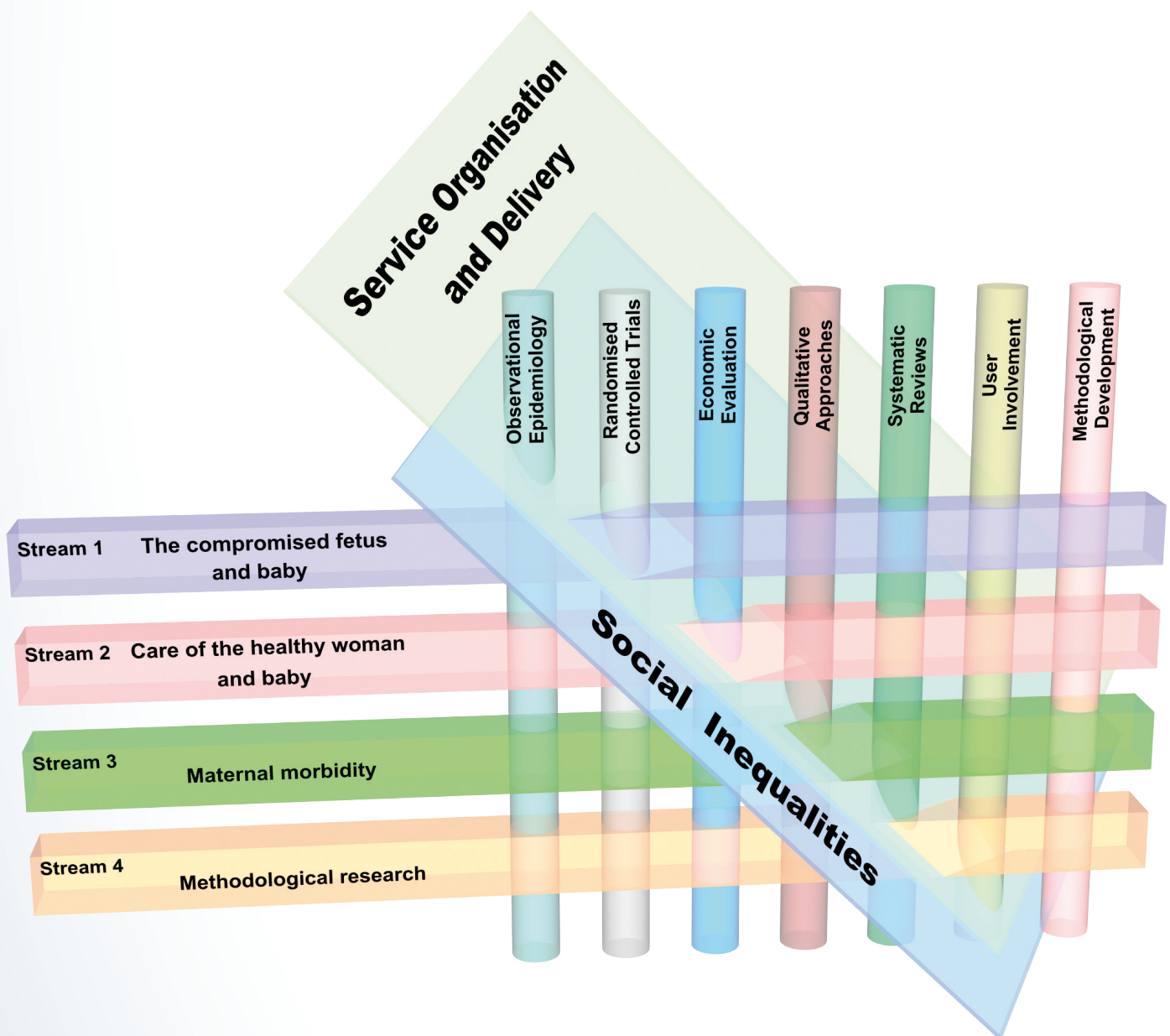


Missing

Breidge Boyle	Rona McCandlish
Oya Eddama	Ellie Morgan-Jones
Barbara Farrell	Maria Quigley
Bob Gatten	Rachel Rowe
Carole Harris	Patsy Spark
Merryl Harvey	Melanie White-Koning
Ed Juszcak	Wei-Hong Zhang
Marian Knight	Rui Zhao
Andy Leslie	



Programme of Work



Introduction

The programme of work for the period 2006 to 2010 is described in this section of the report. This new programme of work is summarised using the framework of four streams of work with two cross-cutting themes and is illustrated above. A summary of all the work in progress and completed during 2006 is given in the following two tables which separate work in progress in the first table from completed studies which are given in the second table.

Following the summary table and to avoid the repetition from year to year we have included the full details of only new projects which started in 2006. These are described after the summary table under the headings of the four streams of work. Details of all the ongoing and completed projects at the NPEU are described in a longer version of the annual report which is available for download from the NPEU website at: <http://www.npeu.ox.ac.uk/annualreport>.

Table of Work

NPEU Table of Work Key

NPEU contact: Most projects involve an NPEU team and often outside collaborators. The postscript (a) means that the grant holder or chief investigator for the project is outside the NPEU.

The initials of the NPEU researchers are used in the table for brevity and represent the chief investigator or the researcher who will take the lead with the project:

PB Peter Brocklehurst RG Ron Gray MK Marian Knight JK Jenny Kurinczuk
 RM Rona McCandlish SP Stavros Petrou MQ Maria Quigley MR Maggie Redshaw

Stream 1: The compromised fetus and baby	Duration	NPEU contact
1.1 Neonatal encephalopathy, cerebral palsy and other childhood impairments		
Reaching consensus on the definition of neonatal encephalopathy for surveillance purposes	2005-08	JK
Secondary analysis of Western Australian case control data to further investigate the relationship between intrapartum events, neonatal encephalopathy & cerebral palsy	2007-08	JK
TOBY trial - whole body cooling for babies born with neonatal encephalopathy	2002-08	PB
NEST trial - whole body cooling for neonates undergoing extracorporeal membrane oxygenation (ECMO)	2005-08	PB(a)
Monitoring rates of cerebral palsy, particularly in high risk subgroups	2005-08	JK
Monitoring rates of vision loss and hearing loss in children	2005-08	JK
Analysis of 15 year trends and causes of vision loss in children	2005-07	JK
UKCP Collaboration: Variations in the relationship between cerebral palsy and socio-economic deprivation	2005-07	JK(a)
UKCP Collaboration: Analysis of survival and severity of cerebral palsy	2006-07	JK
Economic evaluation alongside TOBY trial - cost-effectiveness of total body cooling	2006-08	SP
Economic evaluation of progesterone for the prevention of preterm birth in twins	2005-07	SP
Economic evaluation of outpatient cervical ripening prior to induction of labour	2005-07	SP
1.2 Child health outcomes following assisted reproductive technologies (ART) and related fertility issues		
International collaborative work using record linkage methods to investigate the risks of cerebral palsy, intellectual disability, hospitalisation and congenital anomalies associated with ART	2002-09	JK(a)
Pregnancy of survivors of cancer: an epidemiological study (PISCES)	2006-07	JK(a)
Survey of fertility, reproductive choices and future plans	2006-08	JK(a)
The effects of psychosocial stress on time to conception	2005-07	RG
A comparison of the early parenting experience of parents of multiples and singletons arising from natural conception and infertility treatment using Millennium Cohort Study data (MCS)	2006-07	MR

Stream 1: The compromised fetus and baby	Duration	NPEU contact
1.3 Congenital anomalies		
Developing a system for monitoring rates of congenital anomalies for surveillance purposes	2005-08	JK
FOCaL - feasibility of investigating the long-term outcomes of specific congenital anomalies using congenital diaphragmatic hernia as the exemplar	2006-08	JK
Survey of prenatal diagnosis screening methods across Europe	2005-07	JK(a)
Congenital hydrocephalus: a population based study on prevalence and outcome	2005-07	JK(a)
1.4 Preterm birth		
Genetic association study of preterm birth	2006-10	RG(a)
Effect of social deprivation and fetal gender on gestational age and size at birth	2005-07	RG(a)
Economic impact of preterm birth	2005-07	SP
Neonatal networks, admissions and transfers	2005-07	MR
Parents' experience of care following admission of their infant to a neonatal unit	2005-07	MR
ADEPT trial - early versus delayed enteral feeding for babies born with absent or reversed end-diastolic flow and growth restriction	2005-08	PB
INIS trial - International Neonatal Immunotherapy Study - intravenous immunoglobulin for babies with sepsis	2000-11	PB
PROGRAMS trial - GM-CSF for sepsis prophylaxis in preterm growth-restricted babies	2001-12	PB(a)
BOOST-II UK trial - targeting oxygen saturation levels in preterm babies	2006-11	PB
Probiotics trial - probiotics for preterm babies	2006-10	PB(a)
Economic evaluation alongside PROGRAMS trial - the cost-effectiveness of GM-CSF for sepsis prophylaxis in preterm growth-restricted babies	2001-07	SP
Economic impact of preterm birth (II)	2006-07	SP

Stream 2: Care of the healthy woman and baby	Duration	NPEU contact
2.1 Attitudes towards pregnancy and childbirth		
Nothing currently in progress under this heading - see table of completed studies for work in this area		
2.2 Recent users' views and experience of maternity care		
Nothing currently in progress under this heading - see table of completed studies for work in this area		
2.3. Antenatal screening		
Women's experience of antenatal screening and social inequalities in access to screening	2003-07	PB(a)
Antenatal screening for Group B Strep - protocol development	2005-07	PB
Cost-effectiveness of alternative prevention and treatment strategies for GBS	2005-07	SP

Stream 2: Care of the healthy woman and baby	Duration	NPEU contact
2.4. Minor problems in pregnancy		
Nothing currently in progress under this heading - see table of completed studies for work in this area		
2.5 Care in labour and delivery		
ELSA trial of home versus hospital support in early labour	2004-07	PB(a)
EUPHRATES trial - trial of blood collector bag in the third stage of labour	2001-07	PB(a)
CAESAR trial - factorial trial of caesarean section surgical techniques	2001-07	PB
International CAESAR trial - factorial trial of caesarean section surgical techniques in developing countries	2006-11	PB
Labour and delivery interventions in women from ethnic minorities (MCS analysis)	2005-07	MR
2.6. Postnatal health care		
The protective effects of breastfeeding in a national UK survey	2005-07	MQ
Feeding twins, triplets and higher order multiples: a systematic review, secondary data analysis and development of evidence-based guidelines	2007-09	MQ
Systematic review of effect of donor breast milk in preterm infants	2004-07	MQ
Cochrane review: Formula milk versus donor breast milk for feeding preterm or low birthweight infants	2006-07	MQ
Cochrane review: Formula milk versus maternal expressed breast milk, for feeding	2006-08	MQ
2.7. Organisation of maternity care		
Evaluation of Maternity Units in England (EMU)	2005-09	PB
Birth at Home Study	2006-09	PB

Stream 3: Maternal morbidity	Duration	NPEU contact
3.1 Maternal mental illness		
Systematic review of the use of the Edinburgh Postnatal Depression Scale (EPDS) in screening for postnatal depression	2005-07	RG
Study in twins of antenatal depression	2005-07	RG
3.2 Obesity and outcome of pregnancy		
Nothing currently in progress under this heading - see table of completed studies for work in this area		
3.3 Smoking, alcohol and drug misuse in pregnancy		
Nothing currently in progress under this heading - see table of completed studies for work in this area		
3.4 Maternal morbidity		
Continue the development of the UK Obstetric Surveillance System (UKOSS)	2005-10	MK
Surveillance of tuberculosis in pregnancy	2005-07	MK
Surveillance of acute fatty liver of pregnancy	2005-07	MK
Surveillance of amniotic fluid embolism	2005-08	MK

Stream 3: Maternal morbidity	Duration	NPEU contact
Surveillance and case control study of peripartum hysterectomy	2005-08	MK
Surveillance and case control study of antenatal pulmonary embolism	2005-07	MK
Surveillance and case control study of eclampsia	2005-07	MK
Surveillance of pulmonary vascular disease	2006-11	MK
Surveillance of myocardial infarction	2006-08	MK
Surveillance of fetomaternal alloimmune thrombocytopenia	2006-08	MK
Surveillance of gastroschisis	2006-08	MK
Surveillance of different methods of treating obstetric haemorrhage	2007-08	MK
Surveillance of pregnancy in women with a renal transplant	2007-09	MK
Surveillance of pregnancy in women following other solid organ transplant	2007-12	MK
Surveillance of extreme obesity in pregnancy	2007-08	MK
Surveillance of uterine rupture	2008-09	MK

Stream 4: Methodological Research	Duration	NPEU contact
Investigation of the completeness of case ascertainment by UKOSS using FMAIT as one of the candidate conditions	2006-09	MK
Investigation of the completeness of case ascertainment by UKOSS using gastroschisis as one of the candidate conditions	2006-09	MK
INLET trial - cluster trial of newsletters and educational supplements to centres participating in the INIS trial	2006-08	PB
Dealing with childhood deaths in randomised trials (BRACELET)	2006-09	PB(a)
Programme of methodological research on economic aspects of perinatal and paediatric health care	2006-11	SP
Using verbal autopsy to assign stillbirths and neonatal causes of death	2006-07	MQ

Table of Work: Studies completed in 2006

Stream 1: The compromised fetus and baby	Duration	NPEU contact
Analysis of IVF success rates based on HFEA data	2006	JK
Association between infertility treatment and perinatal outcomes and infant health and development in a national UK survey	2004-06	MQ
Epidemiology of twinning and the effects of ART	2006-07	JK
Women's experience of treatment for infertility	2005-06	MR
Spina bifida follow-up - feasibility study of conducting face to face interviews with families to determine long-term follow-up	2005-06	JK
Nurse staffing in relation to risk adjusted mortality in neonatal care	2005-06	MR
Review of methods for neurodevelopmental follow-up of preterm infants after two years of age	2005-06	MR

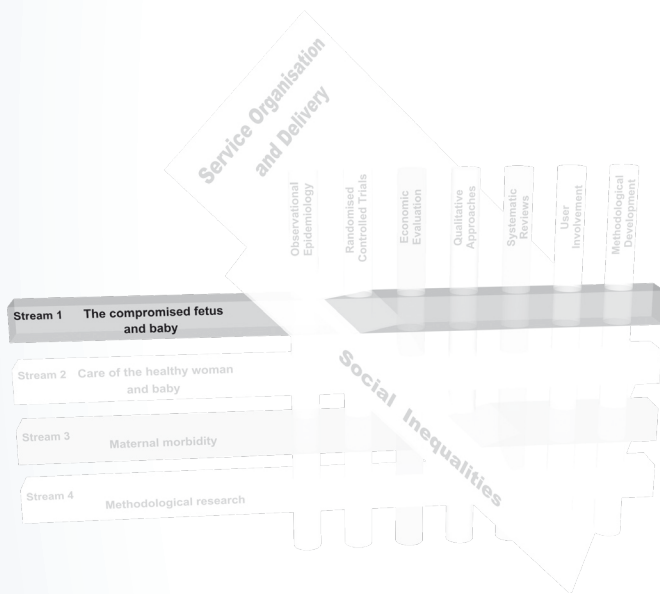
Stream 2: Care of the healthy woman and baby	Duration	NPEU contact
National survey of women's views and experience of maternity care	2006007	MR
Feasibility study for a large national survey of women's views of maternity care	2006-07	MR
ALPS trial - massage in late pregnancy and labour - pilot study	2004-06	PB(a)
Caesarean section and risk associated with stillbirth in subsequent pregnancy	2005-06	RG
Infant feeding and neonatal/postnatal mortality	2005-07	MQ
Socio-economic inequalities in maternal health (MCS data analysis)	2005-06	SP
Relationship between family income and child asthma: an econometric perspective	2006-07	SP

Stream 3: Maternal Morbidity	Duration	NPEU contact
Review of fetal alcohol effects	2005-06	RG

Stream 4: Methodological Research	Duration	NPEU contact
Using record linkage to enhance and validate data collected in the Millennium Cohort Study	2004-06	MQ
Women's preferences for alternative management methods for first trimester miscarriage	2006-07	SP
Social capital and its relationship with preference-based measures of health status	2006-07	SP

Streams of Work

Projects Started During 2006



Stream 1: The compromised fetus and baby

1.1 Neonatal encephalopathy, cerebral palsy and other childhood impairments

Economic evaluation alongside the TOBY trial - cost-effectiveness of total body cooling



Chief Investigator:

Oya Eddama

Other investigators:

Denis Azzopardi, Hammersmith Hospital, London, Peter Brocklehurst, David Edwards, Imperial College, London, Henry Halliday, Queen's University of Belfast, Malcolm Levene, University of Leeds, Marianne Thoresen, St Michael's Hospital, Bristol and Andrew Whitelaw, University of Bristol.

Other NPEU staff involved:

Brenda Strohm, Cathy Mulhall, Ursula Bowler, Sarah Ayers

Moderate or severe perinatal asphyxial encephalopathy occurs in approximately 2 per 1000 births and is associated with an increased risk of death or neurodevelopmental impairments. Approximately 25% of infants with moderate encephalopathy will develop cerebral palsy, while almost all infants with severe encephalopathy die or survive with multiple disabilities. There are currently no treatments for perinatal asphyxial encephalopathy which improve these outcomes. The TOBY study is a multicentre, randomised trial, which is investigating whether a reduction of body temperature by 3–4 degrees centigrade in full term infants with moderate or severe perinatal asphyxial encephalopathy is a safe treatment that may improve survival without neurodevelopmental impairments. A prospective economic evaluation is being conducted alongside the TOBY trial with the view to estimating the cost-effectiveness of the treatment from a health service perspective.

Contact person: Oya Eddama

Funding: DH

Status of Project: Ongoing

1.2 Child health outcomes following assisted reproductive technologies (ART) and related fertility issues

Analysis of IVF success rates based on Human Fertilisation and Embryology Authority data

Chief Investigator:

Jenny Kurinczuk

Other investigators:

Christine Hockley, Maria Quigley

The aim of this project was to review how IVF outcome data should be best presented to consumers and practitioners. The five month project involved stakeholder discussions, a review of relevant reports and the literature, and analysis of the Human Fertilisation and Embryology Authority (HFEA) dataset for treatment cycles started in 1999 to 2003. The final report has been submitted to the HFEA.

Contact person: Jenny Kurinczuk

Funding: HFEA

Status of project: Complete

Publication: Report submitted to the HFEA

Pregnancy in survivors of cancer: an epidemiological study (PISCES)

Chief Investigator:

Siladitya Bhattacharya, University of Aberdeen

Other investigators:

Heather Clark, Amanda Lee, University of Aberdeen, Jenny Kurinczuk

Information on the course and outcomes of pregnancies amongst women who have survived cancer is limited. The aim of this study was to assess obstetric and neonatal outcomes in women with a prior episode of cancer. Data were obtained from a linkage between the Scottish Cancer Registry and routinely collected data from Scottish maternity hospitals. Cancer survivors had significantly higher rates of postpartum haemorrhage and operative or assisted delivery. The risk of preterm delivery (<37 weeks) was also found to be higher but was of marginal statistical significance. Whilst largely reassuring to women intending to become pregnant after surviving cancer, the results indicate areas of increased risk that require additional surveillance during pregnancy and delivery.

Contact person: Jenny Kurinczuk
Funding: National Health Service (Grampian) Research Endowment Fund

Status of project: Complete
Publication: 2007-23

Survey of fertility, reproductive choices and future plans (FINE)

Chief Investigators:

Siladitya Bhattacharya, University of Aberdeen

Other investigators:

Maureen Porter, Allan Templeton, Mark Hamilton, Amanda Lee, University of Aberdeen, Jenny Kurinczuk

Available population-based data about fertility, infertility, reproductive choices and future fertility plans in the UK are now 15 years out of date. This study aims to establish the prevalence of infertility in a defined population of women, and trends over time; to estimate the uptake of services relevant to fertility treatment; and to identify risk factors associated with infertility. This study is being undertaken in the Grampian region which was the site of the most recent study of this type. If this methodology proves successful we aim to carry out a larger UK-wide study - for which further funding will need to be sought.

Contact person: Jenny Kurinczuk

Funding: Chief Scientist Office, Scotland

Status of project: Ongoing

Epidemiology of twinning and the effects of ART

Chief Investigator:

Jenny Kurinczuk

An analysis of the trends in twinning using England and Wales data was undertaken to investigate the factors responsible for the rise in twinning seen since 1976. This was undertaken as work to contribute to the Multiple Births Study group of the Royal College of Obstetricians and Gynaecologists. The analysis is being extended to include data from Scotland.

Contact person: Jenny Kurinczuk
Funding: DH
Status of project: Complete although further analysis continues
Publication: 2006-28

Review of the perinatal outcomes of ART

Chief Investigators:

Jenny Kurinczuk, Enda McVeigh, University of Oxford

We were asked by the Scientific Advisory Committee of the Royal College of Obstetricians and Gynaecologists to undertake a review of the evidence about perinatal outcomes for pregnancies and children born following conception by assisted reproductive technologies. The review has been published as an RCOG Scientific Opinion Paper.

Contact person: Jenny Kurinczuk
Funding: DH
Status of project: Complete
Publication: 2007-30

A comparison of the early parenting experience of parents of multiples and singletons arising from natural conception and infertility treatment

Chief Investigator:

Maggie Redshaw

This study utilises the Millennium Cohort Study first sweep data set, particularly the qualitative data arising from the open ended responses of mothers and fathers concerning the early months with their recent baby. The sample used consists of a total of 460 parents of multiples and singletons resulting from treatment for infertility, parents of 195 multiples born without fertility treatment, and a random

sample of parents of 500 singletons also born without recourse to treatment for infertility. Quantitative methods will be used to describe the respondents in terms of demographic characteristics and qualitative methods will be used to explore the issues associated with early parenting for the different groups.

Contact person: Maggie Redshaw
Funding: DH
Status of project: Ongoing

1.3 Congenital anomalies

FOCaL - feasibility of investigating the long-term outcomes of specific congenital anomalies using congenital diaphragmatic hernia as the exemplar

FOCaL
Follow-up of Children Long-term

Chief Investigator:
Jenny Kurinczuk

Other investigators:
David Howe, Diana Wellesley, Southampton University Hospitals NHS Trust, Elizabeth Draper, University of Leicester, Rosie Thompson, University of Bristol, Ann Tonks, West Midlands Perinatal Institute, Hannah Veazey, Imperial College, Judith Rankin, University of Newcastle upon Tyne, David Tucker, CARIS, Wales, Charlotte Huddy, University Hospitals Leicester, Patricia Boyd, Maggie Redshaw, Cath Rounding

The primary aims of this project are to develop and test the feasibility of using a standard methodology to describe the health status at two years of age of children born with a congenital diaphragmatic hernia and to investigate the willingness of parents to be contacted when their children are older with a view to later follow-up. The secondary aims are to describe the current incidence, the perinatal outcomes, and the pattern of mortality for those pregnancies and children with congenital diaphragmatic hernia who do not survive to age two years. If successful, the long-term goal is to apply this general methodology to the follow-up of children with other serious congenital anomalies.

Contact person: Jenny Kurinczuk
Funding: Birth Defects Foundation
Status of project: Ongoing

1.4 Preterm birth

Genetic association study of preterm birth

Chief Investigator:
Tim Frayling, Peninsula Medical School

Other investigators:
Caroline Relton, University of Newcastle, George Davey Smith, University of Bristol, Andrew Hattersley, Peninsula Medical School, Ron Gray

Preterm birth is a major clinical and public health problem. It is the single most important cause of perinatal morbidity and mortality in developed countries. The aetiology of preterm birth is poorly understood. Several risk factors are known and a number of potential pathways to preterm birth have been postulated but causal mechanisms remain unclear. Genetic factors have been shown to influence both normal parturition and preterm delivery. The aim of this study is to conduct the largest and most comprehensive genetic association study of preterm birth to date. We anticipate that this will help to identify some of the genes that influence preterm birth. This in turn will improve our understanding of the critical aetiological pathways involved and may lead to improved preventative measures. This genetic association study is being conducted using the ALSPAC cohort as well as birth cohorts in Cumbria and Exeter.

Contact person: Ron Gray
Funding: March of Dimes Birth Defects Foundation, USA
Status of project: Ongoing

BOOST-II UK trial - targeting oxygen saturation levels in preterm babies

BOOST - II UK
Benefits of Oxygen Saturation Targeting

Chief Investigator:
Peter Brocklehurst

Other investigators:
Edmund Hey, Leeds, Win Tin, James Cooke University Hospital, Middlesbrough, Ben Stenson, University of Edinburgh, Henry Halliday, University of Belfast, Pamela Cairns, University of Bristol, Sanjeev Deshpande, Royal Shrewsbury Hospital NHS Trust, Neil Marlow, University of Nottingham

Other NPEU staff involved:

Breidge Boyle, Michelle Gabriel, Andy King, Maria Quigley, Ursula Bowler, Ed Juszczak

It is not known whether very preterm babies should be given enough oxygen to maintain arterial saturation a little above what it is *in utero*, or enough to achieve the saturations seen in the healthy term baby after birth. Observational studies suggest that rates of retinopathy of prematurity correlate with differing attitudes towards early oxygen use. However, restricting oxygen exposure to minimise this problem risks increasing early mortality, the number of survivors with cerebral palsy, and affecting cognitive ability in the long term survivors. This double blind randomised controlled trial will compare the effects of maintaining functional arterial oxygen saturations at levels of 85–89% versus 91–95% in babies born at less than 28 weeks' gestation. The primary outcome for the trial is mortality and major disability at age two years. Secondary outcomes include retinopathy of prematurity as well as duration of oxygen therapy, chronic lung disease, growth and health service utilisation. The trial will recruit 1,200 babies from 36 UK centres over a period of four years and started recruiting in September 2007.

Contact person: Peter Brocklehurst

Funding: MRC

Status of project: Ongoing

Probiotics trial - probiotics for preterm babies

Chief Investigator:

Kate Costeloe, Homerton Hospital, London

Other investigators:

Michael Millar, Mark Wilks, Homerton Hospital, London, Peter Brocklehurst, Ed Juszczak

Preterm babies are at increased risk of episodes of bacterial infection which may be fatal and are associated with long-term complications in survivors. This is largely because preterm babies have immature defences against infection. An important way in which the body is protected is through the 'friendly bacteria' that normally live in the gut. At birth there are no organisms in the gut but healthy babies who are nursed with their mothers quickly become colonised with their 'friendly bacteria'. Preterm babies who are separated from their mother at birth are more likely to become colonised with bacteria in the environment of the Neonatal Unit that may cause disease. It is possible that if these babies are given 'friendly bacteria' (probiotic), these will multiply in the gut, improve the general health of the intestine and reduce the chance of potentially pathogenic organisms becoming

established. This should reduce infection. This randomised trial will test whether giving preterm babies a single probiotic bacterium will improve their health and decrease their risk of infection. The main outcomes that will be measured are episodes of infection, episodes of necrotising enterocolitis, death, growth, use of antibiotics and length of stay.

Contact person: Kate Costeloe
(kate.costeloe@homerton.nhs.uk)

Funding: NIHR Health Technology Assessment Programme

Status of project: Ongoing

Economic impact of preterm birth (II)

Chief Investigator:

Stavros Petrou

Other investigator:

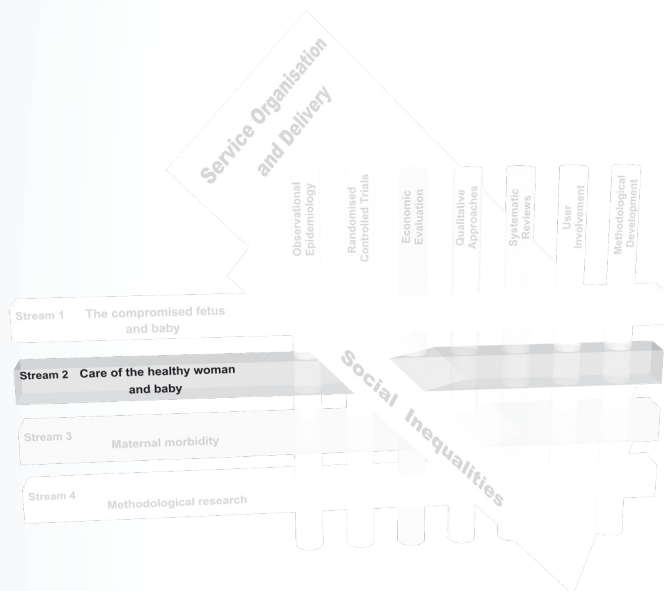
Lindsay Mangham, London School of Hygiene and Tropical Medicine

In this study a decision-analytic model will be used to assess the clinical and economic consequences of preterm birth. The model will use a decision tree to describe the life course of infants born at low gestational age, and to estimate changes in health status and economic outcomes resulting from specific adverse sequelae of preterm birth. The analysis will be conducted from a societal perspective with a time horizon of up to 18 years. Detailed epidemiological and economic data will be required to populate the model. There is a substantial literature on the short and, to a lesser extent, long term clinical consequences of prematurity. Therefore, a selective review will be carried out to estimate the proportions of children following different paths in the model in different gestational age categories. A parallel, overlapping, review will be carried out to estimate the costs associated with each pathway. Where different publications suggest different probabilities for intermediate outcomes, such as hospital re-admission, all the figures will be collected and applied in probabilistic sensitivity analyses. Where there are gaps in the evidence, secondary data sources will be analysed. These may include the Oxford Record Linkage Study, the EPICure study and, possibly, NPEU trials with ongoing follow-up. The results of the study will primarily be presented in terms of mean costs in each gestational age category.

Contact person: Stavros Petrou

Funding: Tommy's Charity

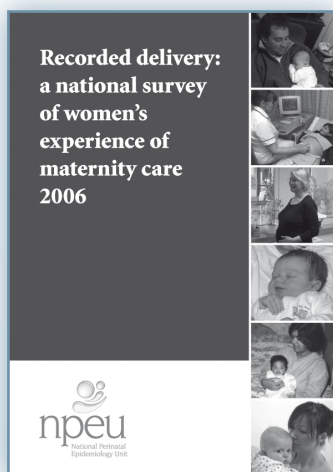
Status of project: Ongoing



Stream 2: Care of the healthy woman and baby

2.2 Recent users' views and experience of maternity care

National survey of women's views and experience of maternity care



Chief Investigator:

Maggie Redshaw

Other investigators:

Rachel Rowe, Peter Brocklehurst, Christine Hockley

The last national survey of recent mothers was carried out in 1995 and it was timely to undertake another national survey, again with a random sample, selected by the General Register Office at the Office for National Statistics. This national survey, the preparation for which started in December 2005, provides a benchmark of current practice and experience, a

point of comparison to measure change over the last ten years and a baseline against which to measure future changes in care and their impact on women's experience.

Contact person: Maggie Redshaw

Funding: DH, Healthcare Commission and NHS Information Centre

Status of project: Complete

Publication: NPEU 89

Feasibility study for a large national survey of women's views of maternity care

Chief Investigators:

Maggie Redshaw, Rachel Rowe

Other investigators:

Peter Brocklehurst, Christine Hockley, Sally Donovan and Esther Howell, Picker Institute Europe

A feasibility study was undertaken on behalf of the Healthcare Commission for NHS Trust-level maternity surveys, based on the national survey of women's views and experiences of maternity care. For this a version of the national survey instrument was developed. Maternity service users in seven individual trusts, selected to reflect diversity of organisation, location and in the population served, were surveyed during 2006 prior to the 2007 surveys to be carried out in all trusts in England as part of the national review of maternity services for which the Healthcare Commission is responsible. The NPEU team worked with the Picker Institute team, who undertook the management of the survey in relation to the Trusts.

Contact person: Maggie Redshaw

Funding: Healthcare Commission

Status of project: Complete

2.5 Care in labour and delivery

CORONIS: A fractional factorial trial of caesarean section surgical techniques in developing countries



Chief Investigator:

Peter Brocklehurst

Other investigators:

Edgardo Abalos and Juan Nardine, Centro Rosarino de Estudios Perinatales, Argentina, Victor Addo, Komfo Anokye Teaching Hospital,

Ghana, Mohamed ElSheikh, University of Khartoum, Sudan, Shabeen Naz Masood, Sobhraj Maternity Hospital, Pakistan, Mathews Mathai and Jiji Elizabeth Mathews, Christian Medical College and Hospital, India, James Oyike, Kenyatta National Hospital, Kenya, Jai Sharma, Maulana Azad Medical College, India

Other NPEU staff involved:

Barbara Farrell, Patsy Spark, Shan Rich, Maria Quigley, Ursula Bowler, Sarah Ayers

Caesarean section is becoming an increasingly common operation in many resource-poor countries and yet the morbidity of surgery may be higher in these settings than most industrialised countries. It is possible that certain surgical techniques used at caesarean section may decrease subsequent short- and long-term morbidity. This large fractional factorial randomised controlled trial will recruit 15,000 women in 6 countries and will evaluate five elements of the caesarean section operation: (1) sharp versus blunt abdominal entry; (2) single versus double layer closure of the uterus; (3) uterine exteriorisation versus no exteriorisation for uterine repair; (4) closure versus non-closure of the pelvic and parietal peritoneum; (5) Vicryl versus catgut for uterine repair.

Contact person: Peter Brocklehurst
Funding: MRC and World Health Organisation
Status of project: Ongoing



CORONIS investigators meet in Oxford

2.6. Postnatal health and care

Cochrane review: Formula milk versus donor breast milk for feeding preterm low birth weight infants

Chief Investigator:
Maria Quigley

Other investigators:

Bill McGuire, Australian National University Medical School, Ginny Henderson, University of Dundee, Mary Anthony, John Radcliffe Hospital, Oxford

Maternal breast milk is the recommended form of enteral nutrition for preterm or low birth weight infants. Observational studies have found that feed intolerance and necrotising enterocolitis are less common in infants fed with human milk than in infants fed formula milk. However, maternal breast milk is not always available. The two common alternatives available for feeding preterm or low birth weight infants are donor breast milk or formula milk. The objective of this review was to examine the evidence that enteral feeding with formula milk versus donor breast milk improves growth and developmental outcomes without significant adverse effects, specifically increasing the incidence of necrotising enterocolitis, in preterm or low birth weight infants. The review includes both pasteurised and non-pasteurised donor breast milk, and groups together the studies where the formula or donor breast milk was given as a sole diet or a supplement to mother's own milk.

Contact person: Maria Quigley
Funding: DH
Status of project: Complete
Publication: 2007–25

Cochrane review: Formula milk versus maternal expressed breast milk for feeding preterm or low birth weight infants

Chief Investigator:
Maria Quigley

Other investigators:

Bill McGuire, Australian National University Medical School, Ginny Henderson, University of Dundee, Mary Anthony, John Radcliffe Hospital, Oxford

Maternal breast milk is the recommended form of enteral nutrition for preterm or low birth weight infants. Observational studies have found that feed intolerance and necrotising enterocolitis are less common in infants fed with human milk compared to formula milk. However, in comparison with formula milk, maternal breast milk may provide insufficient nutrition for growth and development in preterm infants. The objective of this review is to examine the evidence that enteral feeding with formula milk versus maternal expressed breast milk improves growth and developmental outcomes without

significant adverse effects, specifically increasing the incidence of necrotising enterocolitis, in preterm or low birth weight infants.

Contact person: Maria Quigley
Funding: DH
Status of project: Ongoing

2.7. Organisation of maternity care

Birthplace in England Research Programme (Birthplace)



Chief Investigator:

Peter Brocklehurst

Other investigators:

Rona McCandlish, Maggie Redshaw, Stavros Petrou, Jane Sandall, Kings College London, Christine McCourt, Thames Valley University, Alison Macfarlane, City University, Alison Miller, CEMACH, Mary Newburn, NCT, Deirdre Murphy, University of Dublin, Neil Marlow, University of Nottingham, Rona Campbell, University of Bristol

Other NPEU staff involved:

Rachel Rowe, David Puddicombe, Liz Schroeder, Bob Gatten, Mary Stewart, Laura Murray-White

Current UK government policy has been designed to give women a choice of settings for birth. There are major gaps in the evidence regarding any accurate estimate of the risk of poor outcomes associated with planning birth in the different settings. The Birthplace in England Research Programme is a 3 year integrated programme of research. Birthplace is made up of several component studies: a mapping survey of the current provision of maternity services in England (completed in collaboration with the Healthcare Commission); a large national prospective cohort study comparing the safety and cost effectiveness of birth planned at home, in a midwifery unit or an obstetric unit; case studies of women's experience using different systems of maternity care; and a national study of intrapartum related outcomes by planned place of birth. When the study is completed in 2009, a stakeholder consensus group will be held to address questions on how maternity services will be commissioned in the future. Birthplace will aim to provide stakeholders and

service commissioners with the evidence needed to evaluate the safety of planned birth in each of the locations. This research will also provide women and families accessing services, and health professionals providing care to make informed decisions about women's options for place of birth.

Contact person: Peter Brocklehurst
Funding: NIHR Service Delivery and Organisation Programme
Status of project: Ongoing



Birthplace investigators

Relationship between family income and child asthma: an econometric perspective

Chief Investigator:

Stavros Petrou

Other investigators:

Mara Violato, Health Economics Research Centre, University of Oxford, Ron Gray

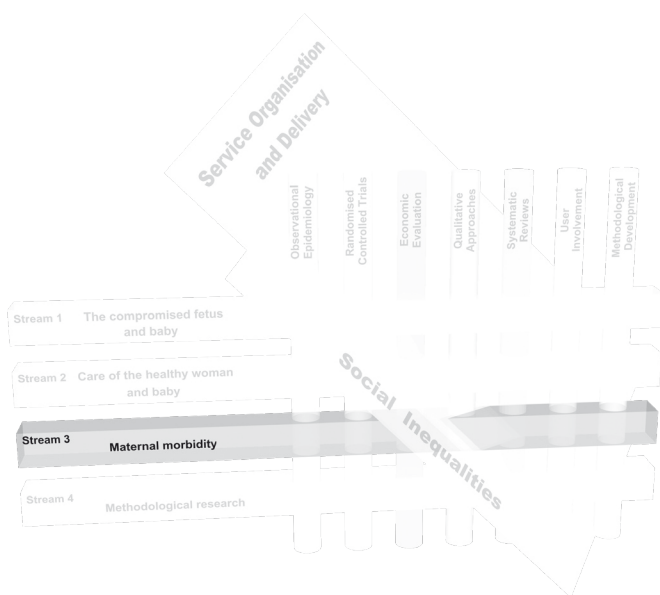
Recent government reports in the United Kingdom and other countries have called for the implementation of policies and programmes to reduce socioeconomic inequalities in adverse child health outcomes. A number of observational studies conducted in North America have demonstrated a positive association between family income and child health outcomes, with some suggestion of a steepening of the income gradient during the later childhood years. Other health econometric studies in this area, most notably from the UK and other European countries, point to a much weaker income effect upon child health throughout the childhood years.

The conflicting evidence in this area motivates a further investigation into the extent to which the relationship between family income and child health might be spurious and driven by unobserved heterogeneity rather than representing a causal effect. Our study attempts to disentangle this nexus in the UK context using the instrumental variables

approach, which will enable us to draw causal inferences by eliminating biases associated with unobservable factors.

Our focus is upon adverse childhood respiratory outcomes, principally preschool asthma, and is justified as follows. We are examining data from the Millennium Cohort Study, a nationally representative birth cohort study collecting information on health, wealth, education, family and employment from parents of almost 19,000 children born in the UK in 2000–01. Our analyses are being undertaken using adverse respiratory health outcomes as dependent variables and family income as an independent variable. All models are adjusted for relevant factors, such as family history of asthma, smoking, breastfeeding and sociodemographic factors. Innovatively for the literature on respiratory diseases, we account for the endogeneity of the income variable by estimating probit models with instrumental variables. Appropriate instruments that are correlated with family income and simultaneously exogenous to adverse respiratory health outcomes are included in the models.

Contact person: Stavros Petrou
Funding: MRC
Status of project: Ongoing



Stream 3: Maternal morbidity

3.1. Maternal mental illness

Do children’s sleep problems predispose mothers to depression?

Chief Investigator:
 Wendy Hall, University of British Columbia

Other investigators:

Jenny Kurinczuk, Sven Silburn, Steve Zubrick and Debbie Parson, Telethon Institute for Child Health Research, Western Australia

This study uses data from a cohort of 2,224 children born in Western Australia who were followed from birth using postal data collection. The aim of the analysis was to investigate whether children’s sleep problems predispose mothers to subsequent depression. The analysis included mothers and children over the first four years of the child’s life. The principal outcome measure was maternal depression score, assessed using the Beck Depression Inventory (BDI), with a score greater than 9 as an indicator of mild depression. Twenty-seven percent of mothers reported depression scores ≥ 10 on the BDI when their child was aged one, which dropped to 20.2% when the children were four. Having a child with a sleep problem significantly increased the odds of maternal depressive mood in the following year (odds ratios ranged from 1.8 to 2.4). Mothers of children with sleep problems experienced abnormal family functioning and had the highest depression scores. However, even in the presence of normal family functioning infant sleep problems were associated with high depression scores. These longitudinal population-based data provide evidence of a temporal relationship between early childhood sleep problems and the development and persistence of maternal depression which has important implications for the management of pre-school sleep problems.

Contact person: Jenny Kurinczuk
Funding: Healthway - Health Promotion Foundation of Western Australia

Status of project: Complete
Publication: 15*

3.4 Maternal morbidity

UKOSS Surveillance of pulmonary vascular disease



Chief Investigator:
 Marian Knight

Other investigators:
 Peter Brocklehurst, Jenny Kurinczuk, Steve Yentis, Chelsea and Westminster Hospital

Other NPEU staff involved:

Carole Harris, Patsy Spark

Pre-existing or gestational occurrence of pulmonary vascular disease, including Eisenmenger's syndrome, primary and secondary pulmonary hypertension, is one of the rare conditions widely considered to pose an extreme risk of maternal death. Four of the nine maternal deaths in women with congenital heart disease reported in the UK in the last triennium were associated with pulmonary vascular disease. Eisenmenger's syndrome is estimated to carry a maternal mortality rate of 40% per pregnancy, with an infant mortality rate of 10–15%. This prospective study through UKOSS will provide an appropriate national cohort with good ascertainment and allow a comprehensive study of the epidemiology and current management of Eisenmenger's syndrome and pulmonary hypertension.

Contact person: Marian Knight

Funding: DH

Status of project: Ongoing

UKOSS Surveillance of myocardial infarction

Chief Investigator:

Marian Knight

Other investigators:

Peter Brocklehurst, Jenny Kurinczuk, Cathy Nelson-Piercy, Guy's and St Thomas' Hospital

Other NPEU staff involved:

Carole Harris, Patsy Spark

Myocardial infarction (MI) in pregnancy is known to be associated with significant maternal and fetal mortality. The widely quoted incidence estimate of 1 in 10,000 births is based on a study conducted in 1970. However, with current trends in lifestyle factors associated with cardiovascular disease and increasing age at childbirth, the incidence of MI during pregnancy can be expected to have increased. This study will provide a national picture of the incidence of the disease, its epidemiology and management.

Contact person: Marian Knight

Funding: DH

Status of project: Ongoing

UKOSS Surveillance of fetomaternal alloimmune thrombocytopenia

Chief Investigator:

Marian Knight

Other investigators:

Jenny Kurinczuk, Peter Brocklehurst, Mike Murphy and Pauline Hurley, John Radcliffe Hospital, Oxford

Other NPEU staff involved:

Carole Harris, Patsy Spark

Fetomaternal alloimmune thrombocytopenia (FMAIT) is the most common cause of severe neonatal thrombocytopenia in otherwise well term infants, and can lead to serious bleeding, intracranial haemorrhage and sometimes death of the fetus or infant. First pregnancies are often severely affected and the diagnosis is usually made with the birth of a first affected infant. There is a current debate about the utility of antenatal screening for the condition. Additionally, there are considerable controversies in the optimal management of FMAIT-affected pregnancies. There is no clear approach to the antenatal management of first affected pregnancies, and several questions remain in the approaches to managing second and subsequent affected pregnancies. This descriptive, population-based study will address deficiencies in basic epidemiological information about the condition highlighted in a recent evaluation against National Screening Committee criteria for appraising a screening programme and also allows outcomes following different management strategies to be assessed.

Contact person: Marian Knight

Funding: Wellbeing of Women

Status of project: Ongoing

UKOSS Surveillance of gastroschisis

Chief Investigator:

Marian Knight

Other investigators:

Peter Brocklehurst, Jenny Kurinczuk, Tricia Boyd, Liz Draper, University of Leicester

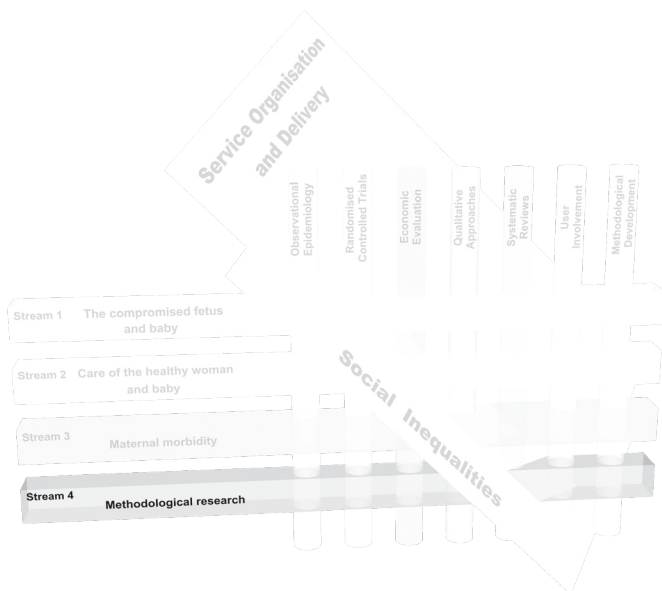
Other NPEU staff involved:

Carole Harris, Patsy Spark

Gastroschisis is a congenital anomaly of the anterior abdominal wall, in which gut and other abdominal contents are herniated through a defect in the wall to one side of the umbilicus. The condition has been noted to be increasing worldwide. Currently regional congenital anomaly registers cover only 50% of the UK population and ascertainment through the National Congenital Anomaly System is known to be poor in those areas not covered by regional registers. This UK-wide study will estimate the birth prevalence of gastroschisis and variations in birth prevalence nationally. The study will also investigate the current antenatal

and postnatal management of this condition in the UK. A number of issues continue to be debated in the literature, including antenatal monitoring, mode of delivery, methods of closure and time to initial surgery. Outcomes associated with different monitoring, delivery and surgical repair strategies will be described and compared.

Contact person: Marian Knight
Funding: Birth Defects Foundation
 - Newlife
Status of project: Ongoing



Stream 4: Methodological research

Investigation of the completeness of case ascertainment by UKOSS using FMAIT as one of the candidate conditions



Chief Investigator:
 Marian Knight

Other investigators:
 Peter Brocklehurst, Jenny Kurinczuk

This study will use two different capture-recapture methodologies to assess completeness of ascertainment through UKOSS. Using the candidate disorder of fetomaternal alloimmune thrombocytopenia (FMAIT) Dual-System Estimation (DSE) will be used to compare case identification through UKOSS with ascertainment through the British Paediatric Surveillance Unit (BPSU). This will be compared with data

obtained through the information collected by the National Blood Service to assess data validity.

Contact person: Marian Knight
Funding: Wellbeing of Women and NCCRC
Status of project: Ongoing

Investigation of the completeness of case ascertainment by UKOSS using gastroschisis as one of the candidate conditions

Chief Investigator:
 Marian Knight

Other investigators:
 Peter Brocklehurst, Jenny Kurinczuk

This project, in collaboration with the British Isles Network of Congenital Anomaly Registers (BINOCAR) and BAPS-CASS will use the candidate disorder of gastroschisis to compare case identification through UKOSS, BAPS-CASS, the National Congenital Anomaly System (NCAS) and the regional congenital anomalies registers. This comparison will use log linear methods and logit methods to model dependence between sources in order to overcome any biases in the estimate of ascertainment introduced by lack of independence.

Contact person: Marian Knight
Funding: Birth Defects Foundation
 - Newlife and NCCRC
Status of project: Ongoing

INLET trial - cluster trial of newsletters and educational supplements to centres participating in INIS trial

Chief Investigator:
 Peter Brocklehurst

Other investigators:
 William Tarnow-Mordi, Australia, Barbara Farrell, Maria Quigley

The aim of this project is to evaluate, in a randomised cluster study among 64 UK and Australian centres participating in INIS, whether (a) individualised distribution of a monthly INIS Newsletter plus Educational Topic to members of staff in each centre *versus* (b) current practice, which is to distribute 5 newsletters per centre via notice boards and staff meeting areas, will increase recruitment and improve local research nurses' perception of support from their medical and nursing colleagues.

Contact person: Peter Brocklehurst

Funding: MRC
Status of project: Ongoing

Dealing with childhood deaths in randomised trials (BRACELET)

Chief Investigator:

Diana Elbourne, London School of Hygiene and Tropical Medicine

Other investigators:

Claire Snowden, London School of Hygiene and Tropical Medicine, Martin Ward-Platt, Newcastle, Robert Tasker, Cambridge, Peter Brocklehurst

The project will describe current policy and practice in relation to death in neonatal and paediatric intensive care trials. It will draw upon the views and experiences of trialists and staff associated with a small number of such trials, to determine how parental bereavement is handled and what issues respondents feel it raises. The inclusion of paediatric as well as neonatal trials will highlight the common and the disparate needs which might arise in the two settings as well as widen the relevance of the research. Improved understanding of the perspectives of the various parties will assist trialists and clinicians to develop methods and strategies for new trials in the intensive care setting which would best serve the needs of clinicians and families at the centre of the research process.

Contact person: Peter Brocklehurst or
Diana Elbourne
(diana.elbourne@lshtm.ac.uk)

Funding: NIHR Health Technology
Assessment Programme

Status of project: Ongoing

Programme of methodological research on economic aspects of perinatal and paediatric health care

Chief Investigator:

Stavros Petrou

Strategies to improve the health and broader well-being of pregnant women, mothers and children should necessarily be underpinned by a strong evidence base. Scientific lines of enquiry from a number of disciplines have, to varying degrees, supported evidence-informed policy and practice in perinatal and paediatric health care. Health economics evidence has similarly made an important and relevant contribution to decisions concerning the production, distribution and evaluation of health and health care for pregnant women, mothers and children in the UK. As a relatively new discipline, however, there remain important developments and refinements to be made in several areas of health economic theory and

methodology. Moreover, there remain a large number of areas of perinatal and paediatric health care where health economic techniques could usefully contribute to an efficient and equitable allocation of scarce resources. Stavros Petrou has recently started a programme of methodological and applied research on economic aspects of perinatal and paediatric health care that encompasses: measurement of preference-based outcomes in the perinatal and paediatric contexts; valuation of health gains in the perinatal and paediatric contexts; cost measurement and valuation in the perinatal and paediatric contexts; and the cost-effectiveness of prevention and treatment strategies for preterm birth.

Contact person: Stavros Petrou
Funding: MRC Senior Non-clinical
Research Fellowship

Status of project: Ongoing

Using verbal autopsy to assign stillbirth and neonatal causes of death

Chief Investigator:

Karen Edmond, London School of Hygiene and Tropical Medicine

Other investigators:

Charles Zandoh, Betty Kirkwood and colleagues from Kintampo Health Research Centre, Ghana and London School of Hygiene and Tropical Medicine, Maria Quigley

Improved estimation of the burden of cause-specific perinatal and neonatal mortality is essential for the development and evaluation of maternal and newborn health programmes. This study assessed the diagnostic accuracy of the verbal autopsy - an interview with bereaved parents about the signs and symptoms experienced before death - for assigning neonatal deaths and stillbirths in Ghana. All stillbirths and neonatal deaths that occurred in the study population of a community randomised trial between 1 January 2003 and 30 June 2004 were prospectively included. Community verbal autopsies were carried out within 6 months of death and were compared with causes of death in hospital records. Preliminary findings suggest that the verbal autopsy has good diagnostic accuracy for neonatal deaths but not for stillbirths.

Contact person: Maria Quigley or Karen
Edmond
(karen.edmond@lshtm.ac.uk)

Funding: DfID

Status of project: Ongoing

Social capital and its relationship with preference-based measures of health status

Chief Investigator:

Stavros Petrou

Other investigator:

Emil Kupek, research associate, NPEU

Social capital is a concept that attempts to describe the quantity and quality of social interactions in a community. This study explores the relationship between individual measures of social capital and alternative measures of health status within the context of a large national survey of population health. Using data for 13,753 adult participants in the 2003 Health Survey for England, linear regression with weighted least squares estimation and Tobit regression with upper censoring were used to model the relationship between individual measures of social capital and EQ-5D utility scores. In addition, logistic regression was used to model the relationship between individual measures of social capital and a dichotomous self-reported health status variable. The study demonstrated that low stocks of social capital across the domains of trust and reciprocity, perceived social support and civic participation are significantly associated with poor measures of health status. The implications for health economists and, potentially, for policy makers are discussed.

Contact person: Stavros Petrou

Funding: DH

Status of project: Complete

Publication: 2*

Publications 2005 - 2007

2005

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Unit Reports

- NPEU 74 Kurinczuk JJ, Barralet JH, Redshaw M, Brocklehurst P. Report to the Patient Safety Research Programme (Policy Research Programme of the Department of Health). Monitoring the incidence of neonatal encephalopathy – what next? Oxford: NPEU, 2005.
- NPEU 75 Stewart M, McCandlish R, Henderson J, Brocklehurst P. Report of a structured review of birth centre outcomes. December 2004. Oxford: NPEU, 2004
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- NPEU 79 4Child. Four Counties Database of Cerebral Palsy, Vision Loss and Hearing Loss in Children. Annual Report 2003. Oxford: NPEU, 2003.
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- NPEU 92 National Perinatal Epidemiology Unit. Annual Report 2005. Oxford: NPEU, 2006.
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Forthcoming Publications

- 1* Bodeau-Livinec F, Surman G, Kaminski M, Wilkinson AR, Ancel PY, Kurinczuk JJ. Recent trends in visual impairment and blindness in the UK. *Arch Dis Child*.
- 2* Petrou S, Kupek E. Social capital and its relationship with preference-based measures of health status. *Health Econ*.
- 3* Henderson J, Petrou S. A structured review of the economic implications of home births and birth centres. *Birth*.
- 4* Petrou S, McIntosh E. Measuring the benefits of growth hormone therapy in children: A role for preference-based approaches? *Arch Dis Child*:13.
- 5* Hockley C, Quigley MA, Hughes G, Calderwood L, Joshi H, Davidson LL. Linking Millennium Cohort data to birth registration and hospital episode records. *Paediatr Perinat Epidemiol*.
- 6* Knight M on behalf of UKOSS. Eclampsia in the United Kingdom 2005. *Br J Obstet Gynaecol*.
- 7* Petrou S, McCann D, Law CM, Watkin P, Worsfold S, Kennedy CR. Health status and health-related quality of life of children age 7–9 years with permanent childhood hearing impairment. *Pediatrics*.
- 8* Stevenson J, McCann D, Watkins P, Worsfold S, Kennedy C and the Neonatal Hearing Outcomes Study Team (Petrou S, member of Study Team). The relationship between language/speech development and behaviour problems in children with hearing impairment. *J Speech Lang Hear Res*.
- 9* Calvert J, Boyd P, Chamberlain P, Said S, Lakhoo K. Outcome of antenatally diagnosed congenital cystic adenomatoid malformation of the lung: Audit of 10 years' experience 1991–2001. *Arch Dis Child*.
- 10* Coast J, Noble S, Noble A, Horrock S, Asim O, Peters T, Salisbury C. Economic evaluation of a GPSI-led Primary Care Dermatology Service. *Br Med J*.
- 11* van den Akker O, Redshaw M. Depression in the perinatal and postnatal period continues to challenge researchers and practitioners worldwide. *JRIP*.
- 12* Petrou S. *Economics of newborn care*. 7th edition. Harcourt International.
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- 14* Alderdice F, McNeill J, Rowe R, Martin D, Dornan J. Inequalities in the reported offer and uptake of antenatal screening. *Public Health*.
- 15* Hall WA, Zubrick SR, Silburn SR, Parsons DE, Kurinczuk JJ. A model for predicting behavioural sleep problems in a random sample of Australian pre-schoolers. *Infant Child Dev*.

NPEU Advisory Committee 2006

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Sources of Funding

Summary of Income in 2006

Funder	Total (£)
Action Medical Research	51,387
BDF Newlife	1,176
BLISS - the premature baby charity	66,562
British Heart Foundation	33,415
Department for Education and Skills	4,790
Department of Health	1,022,307
European Commission	26,398
Health Care Commission	94,775
HFEA	20,895
Medical Research Council	785,726
National Coordinating Centre for Research Capacity Development (NCCRCD)	8,760
NHS Executive Anglia & Oxford	27,888
NHS Information Centre	13,000
Orthotic Education and Training Trust	9,520
Picker Institute Europe	53,558
Queen's University Belfast	3,127
Service Delivery and Organisation Programme (SDO)	31,296
Tommy's the Baby Charity	27,772
Unipath	59,387
Wellbeing	32,268
Wellcome	69,384
Grand Total	2,443,391



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