

The Aberdeen Maternity and Neonatal Databank Update

The AMND remains an invaluable resource for obstetric research. With continuous advancements in data linkage procedures the scope of the AMND will continue to broaden. Data entry is now complete for 2013 and some progress has been made for 2014 and 2015. Plans for NHS Grampian to move to completely electronic system are currently being considered which may speed up data entry process for the AMND. In the meantime, data is still being collected from the medical notes by our hardworking coding staff members.

A data resource profile article on the databank has been published in the International Journal of Epidemiology. The article provides details on the scope of the AMND as well as how researchers can access and make the best use of the AMND. This will broadcast the AMND to an international audience, particularly researchers who may be able to utilize data from the AMND.

Data Resource Profile
for AMND now
published in the
International Journal
of Epidemiology

Public Engagement:

This year the AMND has been involved in a couple of public engagement activities which has helped to raise awareness about the benefits and research output of the database. At CafeMED in March, Dr Sohinee Bhattacharya together with Dr Steve Turner gave a public presentation titled 'Programmed from Birth?' Then in May, we were involved in the May Festival where we had a stall for the three days. We rounded up on the last day with a presentation on the AMND by Dr Sohinee Bhattacharya and Dr Mairead Black. We will like to use this medium to appreciate, again, all those who helped in one way or another to make this happen. We shall continue to raise the public awareness of the database by engaging in activities such as these.



Dr Sohinee Bhattacharya presenting at cafeMED



Some representatives of the AMND at May Festival 2015

Long service award for Frances McLeod



Frances McLeod with the Principal at the Award Ceremony

Congratulations to Frances McLeod who received a long service award for 40 years of service



Dr Sohinee Bhattacharya giving a testimonial about Frances at the Award Ceremony

Goodbye

In March 2015 the Steering Committee said goodbye to Prof Tracy Humphrey who has taken up the position of Head of School of Nursing and Midwifery at Napier University in Edinburgh. Dr Asha Shetty has replaced Prof Humphrey as the Chair of AMND steering committee.

Student's Corner

Two medical students, Anna Rose and Sam Tweed, completed their research project for BSc (Hons) in Medical Sciences with the AMND. Both did very well and had the opportunity to present their work at national and international scientific meetings. Anna won the prize for best presentation at the Northern Obstetrics and Gynaecological Society meeting in Elgin. Here is what Sam had to say:

"The project was made possible by the exceptional wealth of data within the AMND,"

"I recently completed my project utilising data from the Aberdeen Maternity & Neonatal Databank (AMND). To complete the project, I took a year out from my medical degree and learnt some key skills in research planning, statistical analysis and epidemiological techniques.

The project was made possible by the exceptional wealth of data within the AMND, linking multiple generations and looking at outcomes over a long follow up period. The support of researchers and statistical experts in the AMND team to guide my foray into epidemiological research

was also invaluable.

I have since presented my work at many group meetings and major conferences, which has been hugely rewarding. As an undergraduate it has been a rich learning experience to work with a broad team, from those on summer studentships to PhD students and senior researchers. The skills and knowledge gained during my project will be very influential in shaping my future medical and research career."

- Sam Tweed



Sam Tweed

Researcher's Report

The AMND continues to receive data access requests from internal colleagues and external collaborators. A number of peer reviewed publications have also been added to the AMND related publications portfolio. We approached one of the researchers, Dr Steve Turner, to give a brief overview of one of his projects and how AMND has been useful.

"There is a well-known association between reduced birth weight and increased risk for conditions such as heart disease, asthma and type 2 diabetes and work with the AMND has started to shed light onto when this link first begins. Scotland is one of a small number of countries world-wide where this work is possible because we can anonymously link mothers records during pregnancy to their child's health records using the community health index number. Routinely collected antenatal ultrasound scan results, first introduced in 1985, have been added to the AMND and then linked to routinely collected health outcomes in children and young adults. The outcomes include obesity, asthma, diabetes, ADHD and epilepsy. We have already published our results which demonstrate that reduced size from as early as ten weeks gestation is linked to increased risk for asthma."



Dr Steve Turner

".....work with the AMND has started to shed light....."

-Dr Steve Turner



Approved applications for release of data

Chief Investigator: Dr Mairead Black

Project Title: Trends in caesarean section over time: are thresholds for delivery falling and neonatal outcomes improving?

Institution: University of Aberdeen

Chief Investigator: Prof. Andrew McIntosh

Project Title: Stratifying Resilience and Depression Longitudinally

Institution: University of Edinburgh

Chief Investigator: Professor Tracy Humphrey
Project Title: Decision making about mode of birth after caesarean section: Prediction scores using local population data

Institution: Robert Gordon University

Chief Investigator: Dr Steve Turner

Project Title: How accurate is gestational assessment? – using IVF as the gold standard

Institution: University of Aberdeen

Chief Investigator: Dr Angus MacBeth

Project Title: Maternity-related outcomes in women with a diagnosis of psychotic disorder: a case-control data-linkage study in a North East Scottish cohort

Institution: University of Edinburgh

Chief Investigator: Prof Rebecca Reynolds

Project Title: Maternal Obesity and the risk of Diabetes in the Offspring

Institution: University of Edinburgh

Chief Investigator: Dr Asha Shetty

Project Title: The influence of epidural analgesia on the outcome of labour

Institution: University of Aberdeen

Chief Investigator: Dr Asha Shetty

Project Title: Obstetric outcomes for nulliparous women at extremes of maternal age

Institution: University of Aberdeen

Chief Investigator: Dr Asha Shetty

Project Title: Repeat induction of labour for postdated pregnancy

Institution: University of Aberdeen

Chief Investigator: Dr Doris Campbell

Project Title: Incidence of Obstetric Cholestasis

Institution: University of Aberdeen

Chief Investigator: Dr Sam Philip

Project Title: Glucose tolerance in pregnancy and future risk of diabetes in the mother and her offspring

Institution: University of Aberdeen

Chief Investigator: Dr Sarah Murray

Project Title: Gestation of delivery of twins – influences on perinatal mortality and morbidity and childhood educational outcomes

Institution: University of Edinburgh

Chief Investigator: Shakila Thangaratinam

Project Title: Accuracy of clinical characteristics, biochemical and ultrasound markers in the prediction of pre-eclampsia: an Individual Participant Data (IPD) Meta-analysis

Institution: Queen Mary University of London

“The AMND continues to receive data access requests from internal colleagues and external collaborators”

AMND related publications

Below is a list of the most recent publications related to the AMND. More publications are available on the AMND website (www.abdn.ac.uk/amnd)

Van Oostwaard MF, Langenveld J, Schuit E, Papatsonis DNM, Brown MA, Byaruhanga RN, Bhattacharya S, Campbell DM, Chappell LC, Chiaffarino F, Crippa I, Facchinetti F, Ferrazzani S, Ferrazzi E, Figueiró-Filho EA, Gaugler-Senden IPM, Haavaldsen C, Lykke JA, Mbah AK, Oliveira VM, Poston L, Redman CWG, Salim R, Thilaganathan B, Vergani P, Zhang J, Steegers EAP, Mol BWJ, Ganzevoort W. Recurrence of hypertensive disorders of pregnancy, an Individual Patient Data Meta-Analysis. *American Journal of Obstetrics and Gynecology* (2015), 212(5):624.e1-17 doi: 10.1016/j.ajog.2015.01.009.

Brewster A, Hardock V, Bhattacharya S. Exploring the relationship between maternal body mass index and offspring birth weight: Analysis of routinely collected data from 1967 to 2010 in Aberdeen, Scotland. *Journal of Obstetrics and Gynaecology* (2015) DOI: 10.3109/01443615.2015.1017557.

Wagner MM, Bhattacharya S, Visser J, Hannaford PC, Bloemenkamp KWM. Association between miscarriage and cardiovascular disease in a Scottish cohort. *Heart* doi:10.1136/heartjnl-2015-307563. E-pub ahead of print Aug 5 2015.

DoPierala AL, Bhatta S, Raja EA, Bhattacharya S, Bhattacharya S. Obstetric consequences of subfertility: a retrospective cohort study. *BJOG*. 2015; DOI: 10.1111/1471-0528.13584.

McCall SJ, Bhattacharya S, Okpo E, Macfarlane GJ. Evaluating the social determinants of teen-age pregnancy: A temporal analysis using a UK obstetric database from 1950-2010. *Journal of Epidemiology and Community Health*. 2014 doi:10.1136/jech-2014-204214

Rukuni R, Bhattacharya S, Murphy M, Roberts D, Stanworth S, Knight M. Maternal and Neonatal Outcomes of Antenatal Anemia in a Scottish Population: a retrospective cohort study. *Acta Obstetrica et Gynecologica Scandinavica (AOGS)* in press

Ayorinde AA, Wilde K, Lemon J, Campbell D, Bhattacharya S. Data Resource Profile: The Aberdeen Maternity and Neonatal Databank (AMND). *International Journal of Epidemiology* 2016; doi: 10.1093/ije/dyv356



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