

High blood pressure linked to adverse pregnancy outcomes

Pregnant women with chronic hypertension are highly likely to suffer from adverse pregnancy outcomes such as preterm delivery, low birth weight and neonatal death, which emphasises a need for heightened surveillance, according to research carried out at King's College London and published in *BMJ*.

The systematic review and meta-analysis looked for adverse outcomes including preterm delivery (<37 weeks' gestation); low birth weight (<2500g); perinatal death (fetal death after 20 weeks' gestation including stillbirth and neonatal death up to one month) and neonatal unit admission. All adverse neonatal outcomes were at least twice as likely to occur in women with chronic hypertension, compared with the general pregnancy population.

The researchers stress the importance of increased antenatal surveillance for women with chronic hypertension and suggest that strategies to predict those at greatest risk are needed.

Reference

1. **Bramham K., Parnell B., Nelson-Piercy C. et al.** Chronic hypertension and pregnancy outcomes: systematic review and meta-analysis. *BMJ* 2014;348:g2301.

Research studies effect of smoking ban on preterm birth

A systematic review and meta-analysis published in *The Lancet* examined the effect of smoke-free legislation on preterm birth, low birth weight and childhood hospital attendances for asthma¹. The researchers from the Netherlands, the UK (University of Edinburgh), Belgium and the US, found a 10% drop in preterm births and a fall in childhood severe asthma cases after the introduction of smoke-free laws. There was, however, no significant effect on low birth weight.

By identifying and analysing 11 studies involving more than 2.5 million births, the researchers looked at changes in the rates of childhood health outcomes before and after smoking bans were introduced. Although it is not certain that the smoking ban is the single direct cause of any differences seen, the research provides further support for recommendations to create smoke-free environments.

References

1. **Been J.V., Nurmatov U.B., Cox B. et al.** Effect of smoke-free legislation on perinatal and child health: a systematic review and meta-analysis. *Lancet* 2014;383:1549-60.

Neonatal organ donation – why not?

Current UK guidelines deter neonatal organ donation yet their organs could help save the lives of other infants. The biggest barrier to neonatal organ donation is that brainstem death testing cannot be confidently diagnosed for infants between 37 weeks' gestation and two months of age.

A study carried out by researchers from St George's Medical School, Great Ormond Street Hospital and NHS Blood and Transplant¹ found that over half of the infants who died at Great Ormond Street Hospital between January 2006 and October

2012 could potentially have been organ donors, if guidelines were changed.

The study's authors argue that changing the guidelines to facilitate donation after a circulatory definition of death, together with mandatory training in organ donation for neonatal teams, will allow parents the opportunity for donation.

Reference

1. **Charles E., Scales A., J Brierley J.** The potential for neonatal organ donation in a children's hospital. *Arch Dis Child Fetal Neonatal Ed* 2014;doi:10.1136/archdischild-2013-304803.

Review examines reasons for term admissions to neonatal care

NHS England has commissioned the Neonatal Data Analysis Unit (NDAU) to undertake a review of data held in the National Neonatal Research Database to identify:

1. The reasons for term admissions to neonatal care
2. Whether term admissions to neonatal care are increasing.

The review forms a part of NHS England's work on responding to the NHS Outcomes Framework (Domain 5: Treating and caring for people and preventing them from avoidable harm), which, in terms of response and improvement relating to the neonatal population, is focusing on the admission of full term infants to neonatal care.

In a workshop held in September 2013, the reasons for admission were shown by participants as varied and often dependant on transitional care facilities and individual Trust resources. NHS England would therefore like to consider how best it can support an improvement response nationally and work with clinical colleagues, Strategic Clinical Networks and others to take this forward.

The data will not be analysed or published on a unit basis; it will inform learning at a national level.

The results will be published on the Patient Safety First website at www.patientsafetyfirst.nhs.uk in a new Maternity, Newborn, Children and Young People's area.

Healthy diet reduces risk of premature birth

Pregnant women who eat a diet rich in vegetables, fruits, whole grains and who drink water as a beverage have a significantly reduced risk of preterm delivery, according to a study published on *bmj.com*.

Using data from the Norwegian Mother and Child Cohort Study¹, researchers based in Sweden, Norway and Iceland analysed preterm births among 66,000 women between 2002 and 2008. The researchers identified three distinct dietary patterns, interpreted as 'prudent' (vegetables, fruits, oils, water as a beverage, whole grain cereals, poultry, fibre rich bread), 'Western' (salty and sweet snacks,

white bread, desserts, processed meat products) and 'traditional' (potatoes, fish, gravy, cooked vegetables, low fat milk).

The team found that an overall 'prudent' or 'traditional' dietary pattern was associated with a significantly reduced risk of preterm delivery. Although these findings cannot establish causality, they support dietary advice to pregnant women to eat a balanced diet and drink water.

Reference

1. **Englund-Ögge L., Brantsæter A.L., Sengpiel V. et al.** Maternal dietary patterns and preterm delivery: results from large prospective cohort study. *BMJ* 2014;348:g1446.