

## Meningitis B vaccine: one step closer

A potentially lifesaving vaccine to prevent Meningitis B has received 'Positive Opinion' by the European Medicines Agency (EMA) and is expected to be licensed shortly.

There are various types of meningococcal bacteria – A, C, W and Y – for which vaccines are available, but there is currently no licensed vaccine that protects against all strains of meningococcal serogroup B (MenB). The new vaccine (Bexsero) produced by Novartis is the first vaccine against MenB and is designed to cover most strains of the disease in Europe.

MenB is responsible for approximately 1,870 cases across the UK each year,

mostly in young children. Around one in 10 people affected will die and survivors can be left with serious after-effects, such as limb amputations and brain damage.

It is expected that the new vaccine will receive a UK marketing licence shortly. Once licensed, the Government can consider its introduction into the childhood immunisation schedule – it could be implemented in the UK by the end of 2013.

Chris Head, Chief Executive of Meningitis Research Foundation, says: "This news is a huge boost for our members and their families and for doctors and scientists who have all worked tirelessly against this devastating



A vaccine against MenB.

disease. Once the MenB vaccine is licensed, it is essential that the Government give it full consideration as soon as possible."



Baby Thomas, born at full term as predicted.

## Predicting premature birth

The risk of pregnant women giving birth early can be accurately measured with a simple cervical swab, according to research funded by baby charity Tommy's. The test will reduce distress for women who would otherwise receive unnecessary treatment.

The swab quantitatively measures the level of a protein known as fetal fibronectin (fFN). If the protein leaks out of the womb into the cervix, the likelihood of premature labour is increased – fFN levels reliably indicate whether a woman is likely to give birth prematurely.

fFN is already used as an indicator of likely preterm birth, but not in a quantitative way, meaning that many women are treated unnecessarily.

"The updated fFN test reduces the need for low-risk women to stay in for observation or get treatment when they don't have to," says lead researcher Professor Andrew Shennan from Guy's and St Thomas' NHS Foundation Trust.

## Midwife-led birth centre opens at Bradford

A £1.2m midwife-led birth centre has opened at the Bradford Royal Infirmary (BRI) as part of a £3.6m investment in maternity and neonatal facilities.

The seven-bed birth unit, run entirely by midwives, boasts two birthing pools and specially designed 'home-from-home' rooms. Docking stations for iPods are attached to the walls and birthing aids such as birth stools, mats and balls encourage women to remain upright so that labour can progress quickly.

There is a shared kitchen and a lift that will take new mums and babies directly to the postnatal wards. The adjacent 13-bed, consultant-led labour ward has also undergone full refurbishment and a new



A birth unit at Bradford Royal Infirmary.

bereavement room has been created for the privacy and dignity of families.

Bradford Teaching Hospitals NHS Foundation Trust has spent a further £400,000 on 37 additional maternity staff and £2m has been earmarked for expansion of the neonatal unit.

## Preterm birth rates

Research published in *The Lancet* suggests that 58,000 premature births per year could be prevented by 2015. The multi-country study shows that after years of poorly-explained increases, the rates of preterm births over the last five years are now leveling off in more than half of the 39 high-income countries assessed.

The research, conducted by an international team including members from Save the Children, the London School of Hygiene and Tropical Medicine, the Bill & Melinda Gates Foundation and the World Health Organization, advocates a combination of five specific strategies to cut preterm birth rates by 5% in high-income countries. The five interventions

are: smoking cessation, decreasing multiple embryo transfers during artificial insemination, cervical cerclage (cervical stitch) for high-risk women, progesterone supplementation and reduction of elective cesarean sections.

Furthermore, existing low-tech interventions including steroid injections for women in preterm labour, antibiotics for newborn infections and kangaroo care, could prevent 75% of preterm deaths without the need for neonatal intensive care.

A reduction of 58,000 preterm births annually could result in \$3 billion cost savings because of a decrease in complex and expensive care for extremely premature babies and loss of earnings for families.

## Update from EPICure

Two medical reports from the EPICure study – a population based study of survival and later health status in extremely premature infants – have been published in the *British Medical Journal*. The studies, funded by the Medical Research Council, compared premature babies born in hospitals throughout England in 1995 and 2006.

The articles report that severely premature babies (born before 27 weeks' gestation) were more likely to survive in 2006 than in 1995, but the proportion that experience serious health problems into childhood did not change. The suggestion is that while the number of very preterm babies who survive may continue to rise, it is likely that the number of children and adults with long-term disability caused by complications of premature birth will rise in parallel.

The first study, led by Professor Kate Costeloe from Queen Mary, University of London, looked at immediate survival rates and health of extremely preterm babies. The second study, led by Professor Neil Marlow of University College London, examined the health of the premature babies at three years of age.

More information is available at [www.epicure.ac.uk](http://www.epicure.ac.uk)

## Drop in stillbirth rates

Stillbirth rates in the West Midlands have fallen below the national average because midwives and doctors across the region have become better at identifying and investigating babies at risk.

A report from the West Midlands Perinatal Institute found that there were 5.02 stillbirths per 1,000 births in the region in 2011, compared to 5.27 in 2010. This equates to more than 50 extra babies being born alive and healthy.

Professor Jason Gardosi, Director of the West Midlands Perinatal Institute, believes the decrease is a result of a programme that helps to improve the recognition of babies who are not growing well during pregnancy. The Institute developed and pioneered the use of customised growth charts which can predict a baby's ideal growth curve in the womb.

Professor Gardosi says: "Babies in affected pregnancies can be delivered in better condition and fewer die as a result of complications due to fetal growth restriction."



The Children's Air Ambulance.

## Air ambulance and Glenfield Hospital team up to provide ECMO

A partnership between The Children's Air Ambulance (TCAA) and Glenfield Hospital, Leicester, will facilitate a helicopter cross-country transfer system that could potentially save the lives of many children and babies.

The charity will transfer extracorporeal membrane oxygenation (ECMO) teams and equipment from Glenfield to critically ill children and babies at hospitals across England and Wales.

Currently, Glenfield Hospital is one of only three hospitals that have an ECMO service, which means if a child requires the treatment they have to travel to Glenfield Hospital, Great Ormond Street Hospital or The

Freeman Hospital in Newcastle.

Glenfield Hospital is the largest centre that has the service and treats between 40 and 60 babies and approximately 20 children every year. It is also the only hospital in England to have a mobile ECMO unit.

Andy Williamson, CEO for TCAA, says: "Without access to an ECMO service, there is a very real possibility that children suffering from severe heart and lung failure would not survive. Initially we will be flying the ECMO teams and equipment to the patient, but we are also looking at how we can facilitate flying the child back to Glenfield."

## Three new research studies funded by Sands

Sands, the stillbirth and neonatal death charity, has announced that it will fund three new research studies.

The first study will investigate the possible benefits of a new scanning approach to predict babies that are small for gestational age. Impaired growth in a baby's development is thought to contribute to 25-30% of all stillbirths, however, research has not demonstrated that use of routine scanning reduces mortality. The 14-month study will be led by Professor Gordon Smith at Cambridge University.

The second research project is a two-year study aimed at improving bereavement care. It will involve talking

with recently bereaved parents and maternity doctors and midwives. The study will be conducted by Dr Dimitrios Siassakos of the University of Bristol.

Sands will also fund a retrospective review of stillbirth post mortem data. This two-year review will be led by Professor Neil Sebire, University College London, and aims to develop a standardised approach to collecting perinatal post mortem data. It will also develop an evidence base to define what post mortem investigations are useful and identify future targeted research studies.

For further details visit [www.uk-sands.org/Research/Research-Projects.html](http://www.uk-sands.org/Research/Research-Projects.html)