Study estimates global GBS infection rates among mothers and newborns

Research published in the journal *Clinical Infectious Diseases* set out to determine the global impact of group B streptococcus (GBS) infection among pregnant women and newborn infants. The study estimated that 15% of newborn infants are exposed to GBS during delivery, however reassuringly, only 1.5% develop GBS infection.

Researchers determined that improving adherence to current guidance could reduce the number of cases. Giving antibiotics to high-risk women during delivery could potentially prevent 40% of infections; giving a GBS vaccine to all women could prevent 70% of infections.

Vaccines for pregnant women to prevent transmission of GBS are in development. In the UK pregnant women at risk of GBS infection are offered preventative antibiotics at the time of delivery.

Reference

Seale A.C. et al. Estimates of the burden of Group B Streptococcal disease worldwide for pregnant women, stillbirths and children. *Clin Infect Dis* 2017;65(suppl2): S200-19.

Monitoring procalcitonin levels could shorten antibiotic treatment in EONS

Up to 7% of term and late-preterm neonates in high-income countries receive antibiotics during the first three days of life due to suspected early-onset neonatal sepsis (EONS) yet the prevalence of culture-proven EONS is ≤0·1% suggesting substantial overtreatment. A research study published in the *Lancet* set out to assess whether procalcitonin (an indicator for inflammation) could be used to monitor sepsis and safely reduce antibiotic duration without increasing risk of complications.

Researchers screened 1,710 neonates with suspected EONS and concluded that procalcitonin-guided decision-making for suspected EONS reduces the duration of antibiotic treatment by 10 hours compared with standard care. The results raise the possibility that procalcitonin could be used to monitor sepsis.

Optimum use of antibiotics is a priority to minimise treatment for healthy babies and to avoid antibiotic resistance.

Reference

Stocker M. et al. Procalcitonin-guided decision making for duration of antibiotic therapy in neonates with suspected early-onset sepsis. *Lancet* 2017; 390:871-81.

Financial incentives may increase breastfeeding rates

Offering new mothers financial incentives may increase low breastfeeding rates, according to research published in *JAMA Pediatrics*.

More than 10,000 new mothers across south Yorkshire, Derbyshire and north Nottinghamshire were involved in the study, which was conducted by the Universities of Sheffield and Dundee. The mothers were offered shopping vouchers worth up to £120 if their babies received breast milk (breastfeeding or expressed milk) at two days, 10 days and six weeks old. A further £80 of vouchers was available if their babies continued to receive breast milk up to six months. Forty-six per cent of eligible mothers signed up to the scheme and over 40% claimed at least one voucher for breastfeeding. The trial found an increase in breastfeeding rates in the areas where the scheme was offered and the women reported that the vouchers were an incentive to continue breastfeeding.

Reference

Relton C. et al. Effect of financial incentives on breastfeeding: a cluster randomized clinical trial. *JAMA Pediatr* 2017: doi:10.1001/jamapediatrics.2017.4523.

Bliss awards celebrate high quality family-centred care

Bliss' Neonatal Excellence Awards recognise and celebrate outstanding individuals, teams and projects that make a difference to babies born premature or sick through delivering high quality family-centred care as part of the Bliss Baby Charter.

Designed to standardise high quality family-centred care across the UK, the Bliss Baby Charter is a practical framework for hospitals to ensure facilities, information and support are in place to encourage parents to be with their baby as much as possible.

On 12 March 2018, Bliss will be holding the Bliss Baby Charter conference and recognising excellent care through the awards for outstanding achievements. The categories are:

1. Parents' choice – this award recognises an outstanding health professional who has provided exceptional family-centred care in 2017.
2. Project of the year – this award recognises a project or initiative that improves outcomes for babies through excellent family-centred care.
3. Team of the year – this award recognises a team that has demonstrated collaborative working and ambition towards the delivery of family-centred care.

Individuals, teams and projects can be nominated via the online form at www.bliss.org.uk/neonatal-excellence-awards. All nominations must come from hospitals working towards Bliss Baby Charter Accreditation. Nominations will be evaluated by an expert panel of judges and the winners will be invited to attend the Bliss Baby Charter conference in Manchester to receive their award.

Respiratory problems in adult survivors of preterm birth may be caused by small airways

Research published in *Experimental Physiology* suggests that adults who were born prematurely may have smaller airways than those born at full-term and that this can cause respiratory problems.

It is known that cardiovascular and respiratory system function is affected by premature birth but the exact causes are still not completely understood. Adult survivors of very preterm birth (≤32 weeks' gestation) with and without bronchopulmonary dysplasia (BPD) have reduced expiratory airflow at rest and significant mechanical ventilatory constraints during exercise. The impaired respiratory function in those born prematurely could be due to smaller airways.

The study looked at adults who were born prematurely and adults who were born at full term of the same age and height. Using information from resting lung function tests, they calculated an estimate of airway size for both premature and full-term groups. The researchers found that the estimate of airway size was smaller in the premature group compared to the full-term group.

This discovery may provide a basis to help doctors tailor treatment of respiratory ailments in those born prematurely. Current treatment of respiratory ailments in adults born premature is similar to asthma treatments, which work to open up closed airways. This treatment may not have the same effect in individuals born premature because they might have small rather than closed up airways.

Reference

Duke J.W. et al. Premature birth affects the degree of airway dysanapsis and mechanical ventilatory constraints. *Exp Physiol* 2017; doi:10.1113/EP086588.

Secure video messaging gets NHS Digital central governance approval

An application that provides parents of sick and premature babies with video updates has received central governance approval. vCreate was first trialled in the neonatal intensive care unit at the Royal Hospital for Children, Glasgow, in April 2017. It now has over 170 parents signed up to receive personalised video updates of their babies' progress from their smart devices at times when they are not able to be at the cot side.

Founder Ben Moore says: "We are thrilled to hear that vCreate has passed central governance and will now be listed as a trusted application. This decision means that units considering vCreate will be able to get started quickly and parents will receive additional reassurance of their baby's wellbeing when they need it most." vCreate hopes that with NHS Digital's seal of approval more units will choose the application, which is free to neonatal units and parents through an innovative funding model.