

Lung function trajectories are impaired in survivors of very preterm birth

A research study published in *The Lancet Child and Adolescent Health* aimed to assess lung function from early childhood to mid-childhood in children born very premature.

To evaluate whether preterm birth survivors are destined for early onset chronic obstructive airway disease, researchers assessed 200 very preterm (≤ 32 weeks' gestation) children with and without bronchopulmonary dysplasia (BPD) born at King Edward Memorial Hospital, Perth, Australia. Spirometry, oscillatory mechanics, gas exchange, lung volumes, and respiratory symptoms were assessed twice in early childhood (4-8 years) and once in mid-childhood (9-12 years). Respiratory symptoms were documented via questionnaire at each visit.



Preterm infants may require pulmonary follow-up into childhood and beyond.

The authors found that preterm children with and without BPD had declines in spirometry scores over time compared with controls. Respiratory mechanics and gas exchange also deteriorated over time in children with BPD. They concluded that children with BPD, ongoing respiratory symptoms, or

changes reflecting inflammation have the poorest trajectories and might be at increased risk of lung disease in later life.

Reference

Simpson S et al. Lung function trajectories throughout childhood in survivors of very preterm birth: a longitudinal cohort study. *Lancet Child Adolesc Health* 2018;2:350-59.



One in five women will experience a mental health problem during pregnancy and/or in the first year following birth.

NHS England pledges specialist mental health services for new mums

NHS England has confirmed that new and expectant mums will be able to access specialist perinatal mental health community services in every part of the country by April 2019.

One in five women will experience a mental health problem during their pregnancy and in the first year after birth; depression and anxiety disorders are the most common. The health service is spending £23 million rolling out community perinatal services to underserved parts of the country. This funding forms part of a package of measures, worth a total of £365m by 2021, to transform specialist perinatal services so that at least 30,000 additional women can access evidence-based treatment closer to home.

Practical new guidance has also been published to help local healthcare systems as they put their plans into action. Perinatal Mental Health Care Pathways aims to improve access and quality in specialist perinatal mental health services. It sets out five new examples that promote improved patient treatment and care – depending on the mental health problem and the phase of pregnancy or the postnatal period.

Estimating neonatal length of stay for very preterm babies

A study in *Archives of Disease in Childhood – Fetal and Neonatal Edition* used statistical methods to provide estimates of length of stay in neonatal care for admissions of very preterm singleton babies. The researchers considered data extracted from the National Neonatal Research Database. The analysis is one of the largest studies to investigate predicting length of stay; over 20,500 babies of 24-31 weeks' gestation were included. The estimates allow potential for clinicians to offer more accurate information to parents about the timing of discharge and the risk of mortality.

Reference

Seaton S et al. Estimating neonatal length of stay for babies born very preterm. *Arch Dis Childhood Fetal Neonatal Ed* 2018 doi:10.1136/archdischild-2017-314405.

Babies feel pain even if they are not crying

Reliance on behavioural indicators (eg crying) to assess pain in infants underestimates how much pain babies actually feel when they undergo stressful medical procedures, according to Professor Maria Fitzgerald of University College London who spoke at the American Pain Society Scientific Summit in March.

Professor Fitzgerald and colleagues simultaneously measured brain activity, behavioural responses and hormonal stress responses in 56 hospitalised newborn babies following a blood test. They showed that babies who are more stressed exhibit a stronger brain response that is not accompanied by changes in behaviour. Premature infants were more sensitive to sensory stimulation than older infants and responded to painful stimulation and non-painful touch. Older babies displayed a more specific response and only responded to painful stimuli.

Reference

American Pain Society. 2018 Online at: <http://americanpainsociety.org/about-us/press-room/babies-feel-pain-even-if-they-re-not-crying>