ESTIMATED NEONATAL SURVIVAL FOR VERY PRETERM BIRTHS IN THE UK
Sarah Seaton et al have provided valuable new outcome information about extremely preterm babies born in the UK between 2016 and 2020. These data will be highly valuable in discussions with families. We have been relying on evidence from earlier years and from other health systems. They report neonatal survival figures. This means the proportion of babies who are still alive 28 days after birth. Outcomes of more than 43,000 pregnancies are reported. The data exclude babies whose deaths were considered to be caused by congenital anomalies. The data do not include deaths after 28 days. Around 75% of deaths have occurred by 28 days, so it is important to recognise that some later deaths occur during and after the initial birth hospitalisation. By combining datasets they were able to consider survival from three points in the patient journey: 1. Babies alive at the onset of care for the birthing process, 2. Babies where survival-focused care was initiated, ie, resuscitation or ventilation was provided following birth and/or the baby survived to be admitted for neonatal care. 3. Babies admitted to a neonatal care unit, ie, the baby was known to be admitted for neonatal care and/or the baby survived beyond the first day after birth. They report outcomes by completed weeks of gestation from 22 to 32 weeks and further by 100g birth weight intervals at each gestational week. Separate tables are provided for singleton and multiple births. They include information about outcomes for babies with birthweights below 500g. See page F562

PRIORITY SETTING FOR NEONATAL RESEARCH TRIALS IN THE UK
Neonatal care has a strong record of advancement through research and in the UK there is widespread participation of neonatal units in multicentre RCTs. Implementation of new evidence is better supported than ever before through national benchmarking and audit structures. Katie Evans et al report the outcomes from a large research prioritisation project to select and prioritise questions that can be studied in future RCTs in the UK. Parents and former neonatal patients were contacted through the national care coordinator groups, Maternity Voices Partnerships, relevant charity and advocacy websites and through social media. Participants were assisted in developing research questions in the PICO format using trial outcomes identified in core outcome sets. Eligible questions were entered into a three-round Delphi to establish a consensus as to their importance. 108 respondents submitted research questions for consideration; 144 participants completed round one of the Delphi survey, 106 completed all three rounds. All 186 questions were amalgamated into a final list of prioritised research questions that can be viewed in the supplemental materials. The top five ranked research questions related to breast milk fortification, intact cord resuscitation, timing of surgical intervention in necrotising enterocolitis, therapeutic hypothermia for mild hypoxic ischaemic encephalopathy and non-invasive respiratory support. By selecting questions of high priority across all stakeholder groups we should have the best chance of achieving high recruitment rates and rapid answers. See page F569

NEONATAL SEIZURES
Rod Hunt’s editorial on treatment of neonatal seizures discusses the limitations of current evidence base for the treatment of neonatal seizures and comments on the article in the September issue by Elizabeth Sewel et al.1 Nearly every facet of detection, investigation, treatment and follow-up of infants with neonatal seizures is subject to some variation in practice. It is now recommended that neonatal anti-seizure medication is discontinued before discharge. Dr Hunt further suggests that it should be discontinued as soon as possible after the resolution of acute seizures. He discusses the challenges of seizure detection and the growing body of evidence that seizures themselves are independently associated with brain injury and impaired neurodevelopment. This compels us to treat, but there remains a lack of evidence from RCTs that treatment improves outcomes. See pages F552

USING SURFACTANT TREATMENT TO OPTIMISE OUTCOMES IN EXTREMELY PRETERM INFANTS
Kirsten Glaser et al take a look at the evolution of the evidence base for surfactant treatment over the last 15 years following the move towards initial non-invasive support, away from intubation and surfactant treatment at birth. Non-invasive respiratory support with treatment of the infants developing RDS using less invasive surfactant administration techniques is the best population based bet for minimising the risk of death or BPD but the observation that the infants who end up needing rescue treatment with ventilation and further surfactant treatment have worse outcomes leaves open the question as to whether indications for initial treatment with surfactant and or ventilation can be refined further by selecting infants at the highest risk for different approaches. The difficulties with the present definition of BPD make it difficult as a primary driver of therapeutic goals without focussing on more severe disease. The possibility that risks of BPD and mortality may not move in the same direction in the highest risk infants require that they are also considered separately. See page F554

HERPES SIMPLEX VIRUS INFECTION (HSV) AMONG NEONATES
Kia Hee Schulz Dungu et al use data from all neonatal and paediatric EDs in Denmark from 1 Jan 2010 to 31 Dec 2019 to estimate the incidence of neonatal HSV infection. There were 54 cases identified among 596,927 live births, giving an incidence of 9 per 100,000 live births. The gestation at birth was 35 weeks or more in 96% of cases. The neonates who presented with illness suggestive of invasive bacterial infection all presented within 14 days of birth. The authors estimated the number of infants being investigated for possible invasive bacterial infection and treated with antibiotics who would require empirical treatment with acyclovir to capture these cases and this varied with the postnatal age at presentation. On days 0–3 the number of infants having infection screen and treated with antibiotics would need to be treated with additional acyclovir would be 1139. This number fell to 168 and further to 103 for infants being evaluated for possible sepsis on days 4–7 and 8–14 respectively. This may explain why the perspectives of neonatologists and paediatricians differ regarding the need for empiric treatment for possible herpes infection at the time of presentation. See page F655

REFERENCE