preventable) and lower proportions of deaths among term or near term births.

Conclusions: Registration differences are still important contributors to variability, but these differences do not explain the variability between countries which persists after removing extremely preterm births. There were different levels and patterns of fetal and neonatal mortality between European countries.

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INCIDENCE OF AND RISK FACTORS FOR NEONATAL MORBIDITY AFTER ACTIVE PERINATAL CARE: EXTREMELY PRETERM INFANTS STUDY IN SWEDEN (EXPRESS)

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Aims: To determine the incidence of neonatal morbidity in extremely preterm infants and to identify associated risk factors.

Methods: Population based study of infants born before 27 gestational weeks and admitted for neonatal intensive care in Sweden during 2004-2007.

Results: Of 638 admitted infants, 141 died. Among these, life support was withdrawn in 55 infants because of anticipation of poor long-term outcome. Of 497 surviving infants, 10% developed severe intraventricular haemorrhage (IVH), 5.7% cystic periventricular leucomalacia (cPVL), 41% septicaemia and 5.8% necrotising enterocolitis (NEC); 61% had patent ductus arteriosus (PDA) and 34% developed retinopathy of prematurity (ROP) stage ≥ 3 . Eighty-five per cent needed mechanical ventilation and 25% developed severe bronchopulmonary dysplasia (BPD). Forty-seven per cent survived to one year of age without any severe IVH, cPVL, severe ROP, severe BPD or NEC. Tocolysis increased and prolonged mechanical ventilation decreased the chances of survival without these morbidities. Maternal smoking and higher gestational duration were associated with lower risk of severe ROP, whereas PDA and poor growth increased this risk.

Conclusions: Half of the infants surviving extremely preterm birth suffered from severe neonatal morbidities. Studies on how to reduce these morbidities and on the long-term health of survivors are warranted.

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NEONATAL COMPLICATIONS AND AUTISM SPECTRUM DISORDERS

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Background and aims: Autism spectrum disorders (ASDs) are disorders of neural development characterized by impaired social interaction and communication, and by restricted and repetitive behavior. Previous studies investigating neonatal factors and ASDs have produced inconsistent results. We performed confirmatory analyses concerning various neonatal complications and a later diagnosis with ASDs, and infantile autism, specifically.

Methods: A Danish population based cohort study, including all children born in Denmark from 1994, through 2002, a total of 604,140 children. Diagnoses of neonatal complications were retrieved from the Danish National Hospital Register. Children diagnosed with ASDs were identified using the Danish Psychiatric Central Register. Data was analyzed using Cox proportional hazards regression.

Results: A total of 4,145 children were diagnosed with ASDs, of which 1,493 had infantile autism. We found an increased risk of ASDs after exposure to a variety of neonatal complications; respiratory distress: adjusted hazard ratio (HR)=1.24 [95% confidence interval (CI): 1.02-1.51], intracranial bleeding, cerebral edema or seizures: HR=1.94 [95% CI: 1.12-3.36], neonatal hypoglycemia: HR=1.46