

(BPD). Neither score predicted necrotizing enterocolitis or spontaneous intestinal perforation (NEC/SIP), or severe retinopathy of prematurity (ROP).

Conclusion The HRC index in the first day after birth predicts death and multiple morbidities in ELBW infants and is strongly correlated with SNAP-II, an established illness severity score.

PS-047 TRADEOFFS BETWEEN MORTALITY AND MORBIDITY FOR VERY PRETERM INFANTS: RESULTS FROM THE EPICE COHORT

J Zeitlin¹, AK Edstedt Bonamy², M Bonet¹, ES Draper³, E Epice Research Group⁴. ¹Obstetrical Perinatal and Pediatric Epidemiology Research Team Center for Epidemiology and Biostatistics (U1153), Inserm, Paris, France; ²Department of Women's and Children's Health, Karolinska Institutet, Stockholm, Sweden; ³Department of Health Science, University of Leicester, Leicester, UK; ⁴Group Author, European Project, Paris, France

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Background and aims There is concern that declines in mortality after very preterm birth are accompanied by higher morbidity as more fragile babies survive. We investigated whether rates of severe neonatal morbidity were higher in regions with low versus high mortality.

Methods The EPICE cohort included all births between 22+0 and 31+6 weeks of gestation in 19 European regions in 2011–2012 (N = 7878 live births). We divided the cohort into tertiles based on regional in-hospital mortality rates excluding deaths due to congenital anomalies: low (<12.0%), medium (12.0 to 14.9%) and high (≥15.0%). Severe neonatal morbidity was defined as intraventricular haemorrhage grades III–IV, cystic periventricular leukomalacia, surgery/peritoneal drainage for necrotizing enterocolitis or retinopathy of prematurity (grades ≥3). Bronchopulmonary dysplasia (BPD) was analysed separately. Multilevel logistic regressions were used to model regional-level effects.

Results 6770 infants were discharged home. 12.2% had at least one severe morbidity (regional range: 3.8% to 24.4%) and 15.3% had BPD (regional range: 6.7% to 34.9%). Rates of severe morbidity were 11.7%, 12.1% and 12.9% in low, medium and high mortality regions, respectively (p = 0.45). BPD was higher in low mortality regions (18.7%, 16.7% and 10.2%, respectively (p < 0.001). The odds ratio for severe morbidity associated with birth in a low versus high mortality region was 0.83 (95% CI: 0.55–1.25) and for BPD was 1.81 (95% CI: 1.08–3.0).

Conclusion Rates of severe neonatal morbidity and BPD vary greatly between regions in Europe. BPD rates were higher in lower mortality regions, but this was not true for other morbidities.

PS-048 TRENDS IN SNAPPE-II AND CRIB II SCORES OVER A 15-YEAR PERIOD

MC de Vos, EJM Mulder, J Schuurmans, D Kwakkel, JB Derks, F Groenendaal. *Perinatal Center, Wilhelmina Children's Hospital University Medical Center Utrecht, Utrecht, Netherlands*

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Background During the last decades mortality of preterm born neonates has declined in the Western world.

Aim We hypothesised that the decrease in mortality in very pre-term neonates over a period of 15 years was associated with a decrease in illness severity scores (SNAPPE-II and CRIB II).

Subjects/methods Inborn neonates (January 1997 until December 2011; n = 928) with a gestational age of 26.0–29.9 weeks and without congenital malformations.

SNAPPE-II and CRIB II scores, mortality (<120 days) and morbidity (severe intraventricular haemorrhage (IVH), severe cystic periventricular leukomalacia (cPVL), bronchopulmonary dysplasia (BPD), perforated necrotizing enterocolitis (NEC) and severe retinopathy of prematurity (ROP)) were recorded. Based on important changes in care, subjects were categorised into three periods of year of birth (1: 1997–1999, 2: 2000–2005, and 3: 2006–2011) and outcomes were analysed using multivariable analysis including SNAPPE-II/CRIB II scores, period, gestational age, gender, and their interactions.

Results SNAPPE-II and CRIB II scores were significantly lower for gestational ages between 26.0 and 29.9 in period 3 versus period 1 (p = 0.002; p = 0.018, respectively) in a cubic model analysis. The risks of mortality and serious morbidity were significantly lower for similar SNAPPE-II and CRIB II scores in period 3 versus period 1 (p = 0.010; p = 0.041, respectively). Females had a significantly lower risk of mortality and serious morbidity than males (p = 0.031; p < 0.0001, respectively).

Conclusions SNAPPE-II and CRIB II scores decreased over a 15-year period. Meanwhile, the risk of mortality and serious morbidity for similar SNAPPE-II and CRIB II scores decreased suggesting substantial improvement in perinatal care.

PS-049 QUALITY APPRAISAL OF INTERNATIONAL GUIDELINES ON PERINATAL CARE OF EXTREMELY PREMATURE INFANTS

¹N Binopal, ²G Moore, ²B Lemyre, ²T Daboval, ³S Dunn, ⁴S Leduc. ¹Pediatrics, Children's Hospital of Eastern Ontario, Ottawa, Canada; ²Neonatology, Children's Hospital of Eastern Ontario, Ottawa, Canada; ³Children's Hospital of Eastern Ontario Research Institute, Children's Hospital of Eastern Ontario, Ottawa, Canada; ⁴Life Sciences, University of Ottawa, Ottawa, Canada

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Background Clinicians often refer to published or local guidelines when counselling expectant parents on perinatal care decisions at the limits of viability. The number and quality of guidelines used worldwide is unknown.

Objectives Assess quality of international guidelines regarding perinatal care of 22–25 wk GA infants.

Methods MEDLINE, Pre-MEDLINE and TRIP databases were searched for international guidelines using specific criteria. Titles/abstracts were screened and the final selected guidelines were reviewed and appraised by two reviewers using the validated AGREE-II (Appraisal of Guidelines for Research and Evaluation Instrument) tool. This instrument assesses guideline quality (scope, stakeholder involvement, rigour/transparency, clarity, applicability, editorial independence). Items with score differences >3 were reviewed for discussion.

Results Database and grey search yielded 263 publications. Screening left 37 guidelines, 16 of which met all inclusion criteria. Regions represented included North America, Australia and Europe. Appraisal using the AGREE-II tool by three independent appraisers revealed deficits within all domains, predominantly 'rigour of development' and 'applicability'. Overall quality scores