inducible heme-oxygenase and non-heme oxygenase-dependent pathways related to oxidative stress may initially play a more central role in carbon monoxide production, with boys more susceptible to oxidative injury and its sequelae.

8.7 PREDICTING NEONATAL MORTALITY: A COMPARISON OF THE CRIB-II SCORE WITH AND WITHOUT TEMPERATURE AT ADMISSION

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Introduction: In 2003 the Clinical Risk Index for Babies was updated as CRIB-II. However, CRIB-II includes admission temperature, which complicates the use of this score as it can be influenced by early neonatal care. This work investigates the ability of CRIB-II with and without admission temperature (CRIB-II$_{(-T)}$) to predict in-hospital mortality among very preterm infants.
Methods: All infants born ⩽32 weeks' gestation and admitted for neonatal care were identified from the Neonatal Survey 2005–2006. Infants with lethal congenital malformations were excluded. Predictive probabilities for mortality were calculated for each infant using the published algorithm for CRIB-II and then recalibrated for CRIB-II and CRIB-II$_{(-T)}$ using the study data. The predictive abilities of the scores, investigated overall and by groups defined by gestational age and admission temperature, were summarised by *c*-statistics, Cox's regression and Brier scores.
Results: 3268 infants were included: 317 (9.7%) died before discharge. Using the published algorithm both versions of the score showed excellent discrimination (c = 0.92) but underpredicted the total number of deaths (CRIB-II, 255.2: CRIB-II$_{(-T)}$, 216.6). After recalibration CRIB-II and CRIB-II$_{(-T)}$ displayed excellent predictive characteristics both overall and for the groups defined by gestation. Whereas CRIB-II$_{(-T)}$ also displayed excellent predictive characteristics for the groups defined by temperature, CRIB-II showed a statistically significant lack of calibration (Cox's regression 36.1°C to 37.5°C, p = 0.021; ⩾36.0°C or >37.5°C, p = 0.011).
Conclusions: After recalibration CRIB-II without temperature showed excellent predictive qualities and should be used when benchmarking neonatal care to avoid the risk of results being influenced by early neonatal care.

8.8 THE BLISS CLUSTER RANDOMISED CONTROLLED TRIAL OF THE EFFECT OF "ACTIVE DISSEMINATION OF INFORMATION" ON STANDARDS OF CARE FOR PREMATURE BABIES IN ENGLAND (BEADI)

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Background: Traditional dissemination of information has limited impact on change in practice. Clarification of which dissemination strategies work best in neonatal units is needed. The trial aim was to assess the effectiveness of an innovative active strategy for dissemination of neonatal recommendations.
Methods: Cluster randomised controlled trial, all English neonatal units, randomised by hospital (n = 182), stratified by networks and unit level of care. Multifaceted intervention: audit/feedback, interactive educational meetings, organisational changes. Outcomes: hospital policies (hypothermia prevention, resuscitation team at birth) and practices in preterm babies (resuscitation team and surfactant in labour ward, admission temperature). Data: EPICure2 study (baseline), CEMACH survey (post-intervention). Statistical analysis (intention to treat): post-intervention differences between active and control group accounting for clustering effect (practice outcomes).
Results: There were no differences between active/control units in level of care, number of admissions or babies <1.5 kg per year and between preterm babies in active/control groups in relevant baseline demographics characteristics. There were no significant post-intervention differences between active/control units in hospital policies. There were post-intervention differences in practice for preterm babies: eg, mean admission temperature higher in the active group, mean difference 0.29°C (95% CI 0.22 to 0.55), more use of polyethylene occlusive wrapping 79% versus 62% (p = 0.05), more surfactant given in labour ward 78% versus 60% (p = 0.04) and a trend to more ideal birth resuscitation teams composition 68% versus 57% (p = 0.09).
Conclusions: An innovative "active" strategy for dissemination of neonatal recommendations is more likely to lead to practice changes in preterm babies than current knowledge transfer mechanisms in England.

Session 8C NNA: Feeding Difficulties

8.9 NASAL INJURIES IN PRETERM INFANTS ASSOCIATED WITH CONTINUOUS POSITIVE-AIRWAYS PRESSURE

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Background: Nasal trauma is a recognised complication of nasal continuous positive-airways pressure (CPAP) therapy, but its prevalence and severity has not been compared in controlled trials.
Methods: Preterm infants <30 weeks gestation and/or <1500 g at birth, randomly assigned to infant flow driver CPAP (IFD) or bubble CPAP (BCPAP) were followed to assess the incidence and severity of nasal injury. Nasal injury data on all babies were recorded prospectively on a nasal injury scoring chart devised for this study. The severity of nasal injury was graded as mild (1–4), moderate (5–8) or severe (⩾9). Data were analyzed using t-tests and χ^2 tests.
Results: Records were obtained on 85 infants (IFD 46, BCPAP 39). There was no difference in the gestational age (27.7 weeks in IFD versus 27.6 weeks in BCPAP) and birthweight (1046 g in IFD versus 1024 g in BCPAP) between the two study groups. Half of the study infants sustained moderate (31.8%) to severe (24.7%) nasal injuries. This was similar in the two groups (54.3% on IFD versus 59.0% on BCPAP; p = 0.668). The time of worst nasal injury was similar (IFD 4.2 ± 3.9 days versus BCPAP 4.5 ± 5.1 days, p = 0.813).
Conclusions: Nasal injury was equally common in babies receiving CPAP with either IFD or BCPAP devices and requires further intervention to reduce its frequency and severity.

Session 9

Session 9A BMFMS: Labour and Delivery

9.1 MYOMETRIAL CONTRACTILITY STUDIES IN DIABETIC PREGNANT WOMEN

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Several studies worldwide have shown a higher Caesarean section rate in diabetic compared with non-diabetic women. Local audit conducted at our hospital revealed an emergency Caesarean section rate of 37.4% compared with 13.2% for non-diabetic women. We