

Conclusions An ICU stay can have significant, long-lasting impacts on young people and their families. This is the first pan-European survey to investigate ICU care for this group. We identified significant variation in adherence to quality standards. Some of this may be culturally influenced but there are also differences in less obviously controversial measures e.g. DVT prophylaxis. Further qualitative work is planned.

Big Data Studies

0-006 FOLLOW – UP OUTCOMES FROM THE BOOST-II UK TRIAL OF OXYGEN SATURATION TARGETING IN PRETERM INFANTS

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Background and aims The optimal target range for pulse oximeter saturation (SpO₂) in extremely preterm infants is unknown. BOOST-II UK is one of 5 international studies that have recently investigated this.

Methods Preterm infants born before 28 weeks' gestation were randomised within 24 h of birth to an SpO₂ target range of 85–89% or 91–95%. The intervention used masked offset oximeters and was continued until 36 weeks' gestation. The primary outcome was a composite of death or serious neurosensory disability (SND) in survivors at age 2 corrected for prematurity, evaluated in 745 infants cared for using updated trial oximeters. A sensitivity analysis restricted to infants assessed by a Bayley III examination and a secondary analysis including a further 228 infants who were studied before the oximeters were updated were also performed.

Results The primary outcome was determined for 722 (96.9%) of infants.

Abstract 0-006 Table 1

	Lower SpO ₂ target (85–89%)	Higher SpO ₂ target (91–95%)	Adjusted risk ratio (* =95% CI, † =99% CI)	P value
Death or SND	187/366 (51.1%)	165/356 (46.3%)	1.11 (0.98–1.26)*	0.11
Death	101/371 (27.2%)	69/369 (18.7%)	1.38 (1.0–1.9) †	0.01
SND	86/265 (32.5%)	96/287 (33.4%)	1.01 (0.76–1.34) †	0.96

The sensitivity analysis showed similar results. In the secondary analysis the mortality difference was 4.9% (p = 0.05). Severe visual loss did not differ between groups.

Conclusions The higher SpO₂ target group had 8.5% greater survival with no increase in serious neurosensory disability. For infants born before 28 weeks' gestation, SpO₂ targets below 90% are not recommended.

0-007 NEONATAL HYPOGLYCEMIA: INTENSIVE TREATMENT OR EXPECTANT MONITORING?

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Background The definition of neonatal hypoglycemia is still subject to discussion, resulting in a wide range of treatment protocols.

Objective To compare two expert-based management strategies at both ends of the current treatment-spectrum of 'moderate' neonatal hypoglycemia (plasma glucose 2.0–2.5 mmol/l).

Design/methods Otherwise healthy, 'high-risk' newborns ≥35 weeks and ≥2000 gram with moderate hypoglycemia: premature, small- or large-for-gestational-age or infants of diabetic mothers, were randomised to an intensive treatment strategy (aiming at [glucose] ≥2.6 mmol/l) or an expectant monitoring strategy (aiming at [glucose] ≥2.0 mmol/l). Development was assessed at 18 months (corrected) age, using the Bayley Scales of Infant Development (BSID-III). The study was designed as a non-inferiority trial.

Results In 84% of the 691 enrolled infants the BSID-III was performed. Cognitive and motor outcomes were comparable in both treatment arms (Table). The results were similar in the overall analysis and in the subgroups.

Abstract 0-007 Table 1 Cognitive and motor outcomes at 18 months

	Intensive Treatment	Expectant Monitoring	Mean Difference (95%CI)
BSID-Cognitive	103.6 ± 10.9	104.6 ± 11.4	1.0 (-0.8;+2.8)
BSID-Motor	101.8 ± 10.6	101.6 ± 11.7	-0.2 (-2.1;+1.6)

The plasma glucose concentration was higher in the intensive treatment group: +0.24 mmol/l (+0.31;+0.16). Hypoglycemia episodes (after randomization) occurred more frequently in the expectant monitoring group (70% vs. 57%, p < 0.001). More infants in the intensive treatment group received additional feeding (94% vs. 76%), tube-feeding (12% vs. 4%) and/or intravenous glucose (20% vs. 6%) (all: p < 0.001).

Conclusion An expectant monitoring strategy is not inferior to intensive treatment with regard to developmental outcome at 18 months in otherwise healthy newborn infants ≥35 weeks and ≥2000 gram with moderate hypoglycemia.

0-008 EARLY BIFIDOBACTERIUM BREVE BBG-001 TO PREVENT NECROTISING ENTEROCOLITIS, LATE-ONSET SEPSIS AND DEATH: THE PIPS TRIAL

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Background Interpretation of published trials of probiotics in preterm infants is complicated by the use of multiple bacterial strains and exclusion from some trials of babies at high-risk of complications.

Objective To evaluate a single strain of *Bifidobacterium breve* in an unselected population of preterm infants.

Methods Multi-centre double blind Randomised Placebo Controlled Trial of *Bifidobacterium breve* BBG-001, 2.1 to 5.3 × 10⁸ cfu daily, (*B breve*) in infants below 31w gestation randomised before 48h. Primary outcomes were necrotising enterocolitis (NEC) ≥Bell stage 2, late onset sepsis (LOS) and death. Results are presented by intention to treat adjusted for sex, gestation and randomisation within 24 h and allowing for clustering of multiples.