

Hospital Mortality in 2,437 Infants in the Australian, New Zealand and UK Boost II Trials of Neonatal Oxygen Saturation Targeting

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Background

The optimal oxygen saturation (SpO₂) for preterm infants is unknown. Three BOOST II trials in Australia, New Zealand and UK are comparing outcomes in infants < 28 weeks after randomisation to SpO₂ targeting of 85–89% vs 91–95%, using masked oximeters.¹ In interim analysis the high target increased 36 week survival in infants whose oximeter had been upgraded with new, more accurate software.^{2,3}

Methods

Pooled analysis of hospital mortality by target, overall and by old or new software.

Results

There was no significant mortality difference between SpO₂ targets overall. There was significant heterogeneity between old and new software on mortality (test for interaction $p=0.006$).^{*} Using new software, targeting 91–95% increased hospital survival by 7.4% (from 76.8% to 84.2%) versus targeting 85–89% ($p=0.0015$).^{**}

Conclusions

Pending the primary outcome of disability free survival at 2 years it appears wise not to target 85–89%.

References

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