

# Fantoms

Ben Stenson, Deputy Editor

## LESS POSTNATAL STEROIDS, MORE BRONCHOPULMONARY DYSPLASIA

Shinwell and colleagues report data from the Israel National very low birth weight (VLBW) database. Between 1997 and 2004, the mortality of VLBW infants born at

24–32 weeks of gestation fell from 21.5 to 18.4%. During the same time period postnatal steroid administration fell from 23.5% to 11% and bronchopulmonary dysplasia (BPD), defined as oxygen dependency at 36 weeks, rose from 12.9% to 18.7%. The rise in BPD is too large to be explained solely by the falling mortality amongst the highest risk infants. The authors call for further studies to identify infants in whom the potential benefits of steroid treatment in reducing BPD and its associated neurodevelopmental impairment may exceed the risks. Doyle and colleagues have shown that pooled follow-up data from 20 studies of postnatal steroids suggests that steroids may reduce the risk of death or cerebral palsy in infants at highest risk of BPD<sup>1</sup>.

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## PULSE OXIMETRY IN THE DELIVERY ROOM

Dawson and colleagues discuss the use of oxygen saturation monitoring immediately after birth. Even the healthiest term and preterm infants have relatively low saturation in the early minutes of life. Since the pros and cons of different therapeutic targets have not been investigated, the authors rightly call for more research before the technology is used routinely in the delivery room. It is interesting to note that studies show little difference in oxygen saturation during the early minutes after birth between infants resuscitated with 100% oxygen and those resuscitated with air. If this is true, what then is the mechanism for the differences in 5-minute Apgar

scores between infants resuscitated with air or with 100% oxygen that have been shown consistently in randomised controlled trials?

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## CONTINUOUS NEGATIVE EXTRATHORACIC PRESSURE — LONG-TERM RESPIRATORY OUTCOME

Telford and colleagues report long-term respiratory outcome data from a randomised trial of continuous negative extrathoracic pressure (CNEP) versus standard treatment for neonatal respiratory distress syndrome. They found no statistically significant or clinically important difference in long-term respiratory outcome between the study groups. With this report and the earlier report of the long-term neurodevelopmental outcomes<sup>1</sup> it must be concluded that there is no evidence that CNEP was a harmful treatment in comparison with the standard treatment that was available at the time of the original trial. Unlike the original trial, the intense media storm that followed it has led to a decade of harm through its negative impact on clinical research. The health outcomes of newborn infants can only improve as long as clinical research remains a high priority for all those involved in caring for newborn infants, and as long as regulation, however well-intentioned, does not prevent it from happening.

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## SOCIOECONOMIC INEQUALITIES IN VERY PRETERM BIRTH RATES

Data from the Trent Neonatal Survey indicate that the incidence of very preterm (22–32 weeks) singleton birth rose from 11.9 per 1000 births in 1994 to 13.7 per 1000 births in 2003. Those from the most deprived decile of the population were at nearly twice the risk of very preterm birth as those from the least deprived decile, throughout the 10-year period. The study represents almost a tenth of births in England and Wales and suggests that there remains a substantial deprivation gap in perinatal mortality and morbidity in the UK. The increase in preterm births reported here cannot be accounted for by increased multi-fetal pregnancies because this study focuses on singleton births.

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## CONSENT FOR PERINATAL AND INFANT AUTOPSY

In Wales during the 10-year period 1994–2003 the perinatal and infant autopsy rate fell by almost 16%. There was no change in the number of parents asked to consent but fewer agreed to the procedure. The retention of organs after autopsies, centralisation of perinatal pathology services and the new detailed consenting procedure may all have contributed to the continuing decline in the number of parents choosing this important investigation.

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## THERMAL STABILITY

With regional transport services springing up everywhere and hypothermia a common problem amongst transferred infants, sodium acetate gel thermal mattresses are increasingly used during transports. A helpful study by Carmichael and colleagues shows that these mattresses reach a wide range of operating temperatures and this is critically dependent on the temperature of the mattress when it is activated. A mattress stored in a cold ambulance might never reach an appropriate operating temperature, whereas a mattress kept in a pre-heated incubator could get dangerously hot on activation. The manufacturer's latest instructions for use are consistent with these findings.

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## REFERENCES

- 1 Telford K, Waters L, Vyas H, *et al.* Outcome after neonatal continuous negative-pressure ventilation: follow-up assessment. *Lancet* 2006;**367**:1080–5.
- 2 Doyle LW, Halliday HL, Ehrenkranz RA, *et al.* Impact of postnatal systemic corticosteroids on mortality and cerebral palsy in preterm infants: effect modification by risk for chronic lung disease. *Pediatrics* 2005;**115**:655–61.



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