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Concern over number of premature babies not receiving potentially lifesaving care

*Study highlights an important shortfall in the uptake of evidence into practice*

Less than 60% of premature babies born in 11 European countries receive a package of four simple, widely available care measures known to improve survival, finds a study in *The BMJ* today.

Very preterm infants (born before 32 weeks' gestation) face high risks of death and serious illness compared with infants born at term. Effective strategies exist to improve survival and reduce illness, but it is not known how widely these are used in real life clinical settings.

So a team of researchers in 11 countries decided to investigate the use of four evidence based practices for the care of very preterm infants and measure their association with death and severe illness.

The four practices were delivery in a maternity unit with adequate on-site neonatal intensive care facilities, giving antenatal corticosteroids to reduce complications of prematurity, preventing hypothermia, and early treatment for breathing problems.

Using data from the EPICE (Effective Perinatal Intensive Care in Europe) project, coordinated by the French Institute of Health and Medical Research (INSERM), they identified 7,336 infants born between 24 to 31 weeks' gestation, without serious congenital anomalies, admitted to a specialised baby care unit in 19 regions of 11 European countries from 2011 to 2012.

Most infants received at least one of the evidence based practices. However, only 58.3% of infants received all four practices for which they were eligible.

The chances of receiving full evidence based care was lower for infants less than 26 weeks' gestation, infants who were small for their gestational age, and infants with a low Apgar score (a quick test of a baby's condition at birth).

After taking account of other factors that may have affected access to care and outcomes, the researchers found that receiving full evidence based care was associated with improved survival.

And they calculated that, if full evidence based care had been provided to all infants, there would be an 18% reduction in all deaths.

The study is observational, so no firm conclusions can be drawn about cause and effect. However, the authors say their findings "support the growing focus on bundling effective practices to improve processes of care and to achieve the best outcomes."

They conclude: "Maximising the number of very preterm infants who receive the complete set of these well proved practices could yield substantial gains in survival without increasing severe neonatal morbidity in survivors."

The gap between research findings and clinical practice is well recognised, writes Professor Peter Davis, Director of Neonatal Medicine at the Royal Women's Hospital in Melbourne, Australia, in a linked editorial.

"The EPICE group are to be congratulated on identifying an important shortfall in the uptake of neonatal evidence into practice," he says. "The next step is to develop and test interventions to overcome this shortfall and ultimately improve outcomes."

He adds: "Getting good evidence into practice is an urgent priority for the families of vulnerable premature babies, and for the professionals who care for them."

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