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Press release

Very premature infants: towards better care

Born too soon, very premature infants are particularly vulnerable and need appropriate care. The European project EPICE (Effective Perinatal Intensive Care in Europe) examines how medical practices based on scientific evidence are incorporated into the care of these neonates¹. The study, coordinated by Inserm and published in *The British Medical Journal*, highlights the underuse of four effective practices for improving their survival and long-term health, and estimates its impact on mortality and morbidity.

Very premature infants, born before 32 weeks of gestation, (8th month of pregnancy), represent 1–2% of all births. For these neonates, the risks of mortality and long-term neurological disorders are higher than for infants born at full term. It is essential to provide them with appropriate care in order to guarantee them better health.

The EPICE project created a population cohort in 2011, comprising all very premature infants from 19 regions in 11 countries of the European Union (Belgium, Denmark, Estonia, France, Germany, Italy, the Netherlands, Poland, Portugal, Sweden and the United Kingdom). The goal of the project is to evaluate the “evidence-based medical practices” applied to these infants.

Evidence-based medicine, which takes research data, clinical expertise, and patient needs into consideration, enables health professionals to make care choices based on proven clinical efficacy. In this study, Jennifer Zeitlin, Inserm Research Director, studied four of these medical practices in particular, in order to measure their impact on neonatal mortality:

- transfer of pregnant women to specialised centres designed to accommodate very premature infants,
- antenatal administration of corticosteroids (for maturation of the lungs),
- prevention of hypothermia,
- administration of surfactant (an essential substance for respiratory function that lines the pulmonary alveoli) within 2 hours after birth, or nasal positive pressure ventilation, for infants born before 28 weeks of gestation

While there was frequent use of each practice individually (75–89%), only 58% of very premature infants received all four recommended practices.

The study simulated two models to measure the impact of this inadequate care. If every infant had received all four recommended practices, mortality would have been reduced by 18%. These results demonstrate the importance of evidence-based medical care in improving the health of very premature infants.

¹ <http://presse.inserm.fr/en/optimizing-the-care-of-very-preterm-infants-a-collective-european-initiative/4699/>

EPICE www.epiceproject.eu

“Effective Perinatal Intensive Care in Europe: translating knowledge into evidence-based practice”

The EPICE project is dedicated to the medical care of very preterm infants born before 32 weeks of gestation, in eleven European countries. The aim of the project is to assess practices in order to improve health care for this population of high risk babies.

The EPICE project was launched in 2011 and has been supported by the European Union (FP7) for five years. It is coordinated by Inserm, just like 27 other European “health” projects. The project involves 12 partners and 6 associate partners, based in 11 European countries.

The 12 partners:

[Inserm](#) (coordinator), France

[SPE](#), Belgium

[Hvidovre Hospital](#), Denmark

[Universitas Tartuensis](#), Estonia

[Philipps Universität Marburg](#), Germany

[Bambino Gesù Ospedale Pediatrico](#), Italy

[Laziosanita Agenzia Di Sanita Pubblica](#), Italy

[Radboud University Nijmegen Medical Centre](#), the Netherlands

[Poznan University of Medical Sciences](#), Poland

[U.Porto](#), Portugal

[University of Leicester](#), United Kingdom

[Karolinska Institutet](#), Sweden

EPICE in France

The EPICE project in France is part of a national study entitled EPIPAGE 2 (an epidemiological study on very preterm babies). It is a cohort study of very preterm infants, launched in 2011 in the 22 regions of mainland France and the French overseas departments. The study will monitor over 6000 premature children up to the age of 11 to 12. Three regions in France: Ile-de-France, Nord-Pas-de-Calais and Bourgogne participate in EPICE project.

The EPIPAGE 2 project is managed by the Inserm unit 953 (“Epidemiological research into perinatal health and the health of women and infants”), in collaboration with team 2, from UMRS 1027, directed by Dr Catherine Arnaud (Perinatal epidemiology, handicap of child and health of adolescents).

For further information on this study: www.epipage2.inserm.fr (Head of studies: Pierre-Yves Ancel, Inserm U953)

Sources

Use of evidence-based practices to improve survival without severe morbidity for very preterm infants: results from the EPICE population-based cohort

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