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**European Perinatal Health Report  
Health and care of pregnant women and babies in Europe in 2010**

**A United Kingdom perspective**

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# **European Perinatal Health Report: highlights from a United Kingdom perspective**

## **Background**

The EURO-PERISTAT European Perinatal Health Report includes 10 core indicators that are considered essential for monitoring perinatal health and 20 recommended indicators that are considered desirable for a more complete picture of perinatal health in European countries. These indicators are grouped into four themes: (i) fetal, neonatal, and child health, (ii) maternal health, (iii) population characteristics and risk factors, and (iv) health services. The indicators are based on 2010 data compiled at a national level, where possible, from routine data sources including civil registration, administrative or health systems, hospital discharge systems, or routine surveys.. Twenty-nine countries participated including all current EU member states, except Bulgaria, plus Iceland, Norway and Switzerland. In making the comparisons, differences in the way data are recorded in the participating member states and the definitions they use are documented and their impact discussed. The report highlights some of the key findings.

## **Compiling data for the United Kingdom**

England, Wales and Scotland have had separate health ministries since 1919 and health care is organised differently in Northern Ireland with closer links to social care. This has led to differences both in the services provided and in the data collected, making it difficult to derive consistent aggregated data for the United Kingdom as a whole.<sup>1</sup> The United Kingdom has three separate birth and death registration systems, one for England and Wales, one for Scotland and one for Northern Ireland. They record a basic core of data in a comparable way but have different arrangements for compiling and adding in further items, notably data about birthweight and gestational age.

As a consequence, in the EURO-PERISTAT report, most of the indicators for the United Kingdom are either shown separately for each of the four countries or for England and Wales combined, Scotland and Northern Ireland. This contrasts with the approach adopted by some other organisations, notably UNICEF, where data for England are used as proxy measures for the UK as a whole. Our approach has involved active collaboration with the relevant statistical organisations in all four countries, and retrieval of data from web sites of other organisations. In all, 17 separate data sources were used for the UK and its constituent countries.

## **The United Kingdom in Europe**

This brief summary focuses specifically on what can be learned by comparing the countries of the UK with the 28 other participating member states. In doing so, account should be taken of the differences in data collection and particularly of the methodological problems described in fuller detail for each individual indicator. Statistical variation is also a major issue, as some member states are relatively small. Six EU member states, Estonia, Cyprus, Latvia, Luxembourg, Malta and Slovenia plus the Brussels region of Belgium and also Iceland have fewer births than Northern Ireland.

## **Comparing the outcomes of pregnancy (Pages 125-160)**

### ***Stillbirth / fetal mortality rates (Pages 126-133)***

Variations in national legislation about the registration of stillbirths and the extent to which late terminations of pregnancy are included contribute to the differences between European countries. When stillbirths under 28 weeks were excluded, to make comparisons on a more consistent basis, the rates ranged from under 2.0 per 1,000 live and stillbirths in the Czech Republic and Iceland to 4.0 or more per 1,000 in France, Latvia, the region of Brussels in Belgium, and Romania. Countries within the United Kingdom also had relatively high stillbirth rates, 3.8 per 1,000 live and stillbirths in England and Wales, 3.6 in Scotland and 3.4 in Northern Ireland.

### ***Neonatal mortality (Pages 134 to 140)***

Neonatal mortality rates, that is deaths in the first 28 days of life per 1000 live births ranged from 1.2 per 1000 live births in Iceland to 4.5 per 1000 in Malta and 5.5 per 1000 in Romania. The rate for England and Wales and for Scotland was 2.5 per 1,000 whereas for Northern Ireland it was 3.8.

Because of differences in thresholds for registering live births, these rates are sensitive to the extent to which very preterm or very small babies are included. When births and deaths before 24 weeks of gestation were excluded to achieve greater consistency, the rates were lower, ranging from 0.8 per 1000 live births in Iceland to 4.3 in Romania. On this basis UK neonatal mortality rates were 2.0 in England and Wales, 2.1 in Scotland and 3.0 in Northern Ireland.

### ***Infant mortality (Pages 141-146)***

Infant mortality rates at or after 22 completed weeks of gestation in 2010 ranged from 2.3 per 1000 live births in Iceland and Finland to 5.5 in Malta, 5.7 in Latvia, and 9.8 in Romania. There was also wide variation in rates between countries of the UK with 3.8 in England and Wales, 3.7 in Scotland and 5.4 in Northern Ireland.

### ***Low birthweight and preterm birth (Pages 147-156)***

The extent to which babies are born too soon or too small has a marked association with infant mortality rates as the smallest babies are the most likely to die. The percentage of live births with a birthweight under 2500g, the definition of low birthweight, ranged from 3.4 to 9.8 per cent of live births in the countries providing data for this indicator. Countries from northern Europe, Denmark, Estonia, Ireland, Latvia, Lithuania, Finland, Sweden, Iceland, and Norway, had the lowest percentages of low birth weight. The countries of the United Kingdom tended to be towards the higher end of this range, with 7.0 per cent of live births in England and Wales, 6.5 per cent in Scotland but only 5.7 per cent of live births in Northern Ireland being of low birthweight.

The rates of preterm birth, before 37 weeks of gestation, ranged from around 5.7 per cent to 10.5 per cent and did not show the same clear geographical pattern as

birthweight. They can also be influenced by the way in which gestational age is measured. The rates for the UK were 7.1 per cent in England and Wales, 7.0 per cent in Scotland and 7.2 per cent in Northern Ireland.

As there is an association between low birthweight, preterm birth and neonatal and infant mortality, it is not surprising that countries of the United Kingdom were not among the lowest in Europe but the association is not totally clear and Northern Ireland, with its lower proportions of low birthweight had higher neonatal and infant mortality rates. On the other hand with small numbers, rates fluctuate from year to year and neonatal and infant mortality rates for Northern Ireland in 2010 were higher than those in both 2009 and 2011.

Rates of low birthweight and preterm birth for a population, in their turn, vary according to demographic factors such as the distribution of mothers' ages and the multiple birth rate.

## **Outcomes for mothers (Pages 107 to 123)**

Because the numbers of maternal deaths in Europe are now so low, the report based rates on data for five years, 2006-2010. Even then, only eleven countries' rates were based on more than twenty deaths. This, together with differences in ascertainment of maternal deaths made comparisons difficult to interpret. For the United Kingdom, as recommended in 'the rates were restricted to those published in routine death registration statistics, rather than the enhanced data reported to the confidential enquiries. The long tradition of good ascertainment of maternal deaths in the United Kingdom is likely to have contributed to the relatively high rates reported. Where countries had enhanced reporting systems, such as confidential enquiries, data from these were also compared, but in the United Kingdom data were only available for the last published report covering the years 2006-08, as there has been a break in confidential enquiries but they are now under way again and the MBRRACE-UK collaboration led by the National Perinatal Epidemiology Unit has been formed to take them forward.

Because of the small numbers of maternal deaths, attempts were made to collect data on severe maternal morbidity, but few countries had reliable data. Scotland is one country which has made a concerted attempt to collect such data. Improvements are needed in data collection in the other countries of the UK, as in many other parts of Europe.

## **The characteristics of childbearing women (Pages 51-74)**

### ***Mothers' ages (Pages 56-60)***

The babies born to the youngest and the oldest mothers are at the highest risk of being stillborn or dying in the first year of life. The percentage of mothers aged under 20 varied from 1.1 in Switzerland to 10.6 in Romania. Latvia, Malta, Hungary, Slovakia, and the UK, each with about five per cent of mothers in this age group, are in an intermediate position.

The percentage of older mothers, defined as women giving birth at 35 years or older, ranged from 10.9 per cent in Romania to 34.7 in Italy. In the United Kingdom, 19.9 per cent of mothers in Northern Ireland, 19.9 per cent in Scotland and 19.7 per cent in England and Wales were in this age group. Thus the countries of the UK have relatively high proportions of mothers at both extremes of the age range.

### ***Multiple births (Pages 52-55)***

Babies from multiple births are 10 times more likely than singletons to be delivered preterm and as a result have higher risks of neonatal and infant death. There are wide differences in rates of multiple pregnancy in Europe. This ranges from 9 per 1000 women with live births or stillbirths in Romania to 27 per 1000 in Cyprus whereas in the UK the rate was 16 per 1,000 women. Multiple births are more common among older mothers, particularly those aged 35-39. As procedures used for subfertility management can also contribute to multiple birth rates, EURO-PERISTAT attempted to compare data about these. As can be seen on pages 83-86, these data are very patchy and few countries collect the data required on a population basis to enable comparisons to be made.

### ***Inequalities (Pages 66-71)***

Attempts were made to develop measures of social inequalities within member states. The extent to which member states measured inequality and the data items used varied widely. Some countries, like the United Kingdom use social class based on occupation while others use measures based on the mothers' level of education. As the latter was chosen and is not routinely recorded at birth in the United Kingdom, it was not included in the comparisons.

Similarly, member states vary in the extent to which they record mothers' countries of birth, ethnicity or nationality, as can be seen in Table 4.2 on page 71. Of the countries which record the percentage of mothers born outside the country, the highest were Luxembourg and the Brussels region of Belgium where, two thirds of mothers were born outside the country. Between 20 and 30 per cent of mothers giving birth in the Flanders and Wallonia regions of Belgium, Ireland, Spain, Austria, Sweden and Norway were born abroad. In England and Wales with 25.2 per cent of mothers were born outside the UK, compared with 13.9 per cent in Scotland and 13.5 per cent in Northern Ireland.

### **Care of women and babies during pregnancy and the postnatal period (Pages 75-103)**

The development of initiatives to promote evidence based health care began in the late 1980s in the field of maternity care, so it might be expected that this would lead to greater consensus and consistency in the care provided.. Chapter 5 of the report attempted to assess whether this was the case. Four of the indicators related to care during labour and delivery as these are the items most fully recorded in official data collection systems.

### ***Mode of delivery (Pages 77-82)***

Caesarean section rates increased in most countries between 2004 and 2010 with the exception of Finland and Sweden where rates declined. Increases were widespread ranging from under 0.2% in Italy to over 7% in Lithuania, Slovakia, and Poland. In general, increases were most marked in the countries of central and eastern Europe and in Germany and Austria. In 2010, rates ranged from 14.8 per cent in Iceland, 16.8 per cent in Finland, 17.0 per cent in the Netherland and 17.1 per cent in Norway and Sweden to 36.3 per cent in Poland, 36.9 per cent in Romania, 38.0 per cent in Italy and 52.2 per cent in Cyprus. In the United Kingdom, caesarean section rates were 24.6 per cent in England, 26.1 per cent in Wales, 27.8 per cent in Scotland and 29.9 per cent in Northern Ireland. There was no inverse association with rates of operative vaginal delivery by ventouse or forceps.

### ***Onset of labour (Pages 74-76)***

Rates of induced labour were wide, ranging from less than 10 per cent in Latvia and Lithuania to 33.0 per cent in Wallonia. Rates varied in the UK from 21.6 per cent in England, 22.3 per cent in Wales, 22.7 per cent in Scotland and 27.6 per cent in Northern Ireland.

Rates of caesarean section planned or undertaken before labour ranged from under 7 per cent in Iceland and Finland to 38.5 per cent in Cyprus. In the United Kingdom, rates were 11.4 per cent in England, 10.7 in Wales, 16.8 per cent in Scotland and 16.4 per cent in Northern Ireland.

In only three of the 25 countries or regions with data, more than three quarters of women started labour spontaneously. In the UK, the percentages were 67.6 in England, 67.0 in Wales, 60.5 in Scotland and 56.0 in Northern Ireland.

### ***Timing of first antenatal visit (Pages 71-73)***

This indicator is of particular interest in England, where the government a target for women to begin antenatal care by 12 weeks of pregnancy. Many participating countries, including Wales and Northern Ireland, had no data on the subject and many data for England were missing. For those with, there were considerable inconsistencies in methods of data collection and the methods used. In particular, where antenatal care mainly takes place outside hospital, it is unclear whether relate to initiation of care or the first visit to hospital.

### ***Place of birth (Pages 93-97)***

There has been a move towards concentrate births into larger maternity units but while the proportion of births in larger maternity units has increased in many countries, the size of maternity units still varies widely. Overall, few births occurred in maternity units with under 500 births in 2010, but this proportion was higher in some countries at 16.1 per cent in Germany, 17.6 per cent in Estonia, 18.3 per cent in Switzerland, and 61.9 per cent in Cyprus. At the other end of the spectrum, over a

quarter of births take place in maternity units with 5000 or more deliveries per year in Denmark, Ireland, Latvia, Slovenia, Sweden, England and Scotland.

Home births are rare in most European countries with some exceptions. In many European countries fewer than one per cent of births take place at home. In England, this figure was 2.7 per cent, in Wales 3.7 per cent, in Iceland 1.8 per cent, and in Scotland 1.4 per cent. In the Netherlands, where home births have been a usual option for women with uncomplicated pregnancies, only 16.3 per cent of all births occurred at home in 2010, compared with over 30 per cent in 2004. In 2010, a further 11.4 per cent of births occurred in birth centres in or adjacent to hospitals.

## **Implications for the countries of the United Kingdom**

This reports documents wide differences in maternity care and the outcome as well as differences in the populations of women giving birth. It also highlights the many gaps in routine data in Europe in general and in the countries of the United Kingdom, particularly in England, Wales and Northern Ireland. Although advances have been made in the harmonisation of UK health statistics, this has slowed due to lack of resources. and little progress has been made to date in data about maternity care. On the other hand, new developments in data collection systems are under way in all four countries. In addition and data sharing and record linkage is high on the agenda.

Even if significant improvements are made, routine data collection has its limitations. Reports from two other collaborative European projects the Surveillance of Cerebral Palsy in Europe (SCPE) and European Surveillance of Congenital Anomalies (EUROCAT), included in chapter 8, show the strengths of an approach using population based registers for monitoring specific topics. A cause for concern in the United Kingdom is the lack of firm funding for these local registers.

Despite their limitations, however, the comparative data in this report have useful messages for the United Kingdom. The findings that stillbirth and neonatal mortality rates, especially the former, are on the high side are not surprising, given the relatively high rates of low birthweight and preterm birth. These in their turn reflect that characteristics of the population and the substantial proportions of women in the oldest and youngest age groups.

There are no grounds for complacency, however. A number of national and local policy initiatives are focussing on the reduction of infant mortality. In Scotland and England and Wales, infant mortality rates have fallen over the past ten years. In England and Wales, neonatal mortality remained fairly static up to the middle of the decade while postneonatal mortality fell but from 2007 onwards both rates have fallen. There are signs of decline in Northern Ireland.

Unlike infant mortality rates, stillbirth rates do not usually feature in government targets, despite the lack of any marked decline. Stillbirth rates for England and Wales are slightly lower than those in the late 1990s, having risen from 2001 to 2003 and then fallen slightly again. Rates for Scotland showed a similar pattern, but because numbers of events are small, they fluctuate from year to year, as do rates for Northern Ireland, which show some slight evidence of decline since 2004.

The wide range of rates of obstetric intervention in Europe and the lack of any clear correlation with outcome suggests that the messages about the need for evidence based health care have not been widely implemented. The relatively high intervention rates in the countries of the United Kingdom, compared with low intervention rates in Nordic countries with good outcomes, raises questions about whether these levels of intervention are clinically necessary.

## The future

This report is the product of the third EURO-PERISTAT project. Each project has been a snapshot for a single year, 2000, 2004 and 2010. As well as making a case for improvements in collection of data and harmonisation of definitions, it has identified the need to develop an ongoing European perinatal reporting system to monitor and compare trends over time in a more timely way. The challenge now is to find further resources to continue this work.

## The report and how to access it

On May 27th, the EURO-PERISTAT project released the **European Perinatal Health Report: The health and care of pregnant women and their babies in 2010**. It can be downloaded free of charge as a PDF from <http://www.euoperistat.com>. Support comes from the European Union's Health Programme. The EURO-PERISTAT project is coordinated by the Institut de la santé et de la recherche médicale (INSERM) in Paris. Data collection is coordinated by TNO, the Netherlands

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