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A United Kingdom perspective on the The European Perinatal Health Report

Better Statistics for Better Perinatal Health
in England, Wales, Scotland and Northern Ireland

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European Perinatal Health Report: Highlights from a United Kingdom perspective

Background

The EURO-PERISTAT European Perinatal Health Report contains statistical information from 103 data sources in 25 member states of the European Union plus Norway. The aim was to compare the outcomes of pregnancy in the participating countries, and relate them to demographic and health care factors which might be associated with poor outcomes. In making the comparisons, differences in the way data are recorded in the participating member states and the definitions they use were documented and their impact was discussed. This document highlights some of the key points.

The publication of this European report coincides with the announcement by the Department of Health for England that it is creating a new National Quality Board. It will publish an annual report comparing statistical indicators from the English health service with services in other countries. The EURO-PERISTAT report illustrates both what can be learned from such an exercise and the challenges and its Chapter 3 documents the problems inherent in undertaking it.

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.[1] 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.[1]

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, acknowledged on page 207 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 24 other participating member states plus Norway. In doing so, account should be taken of the differences in data collection and particularly of the methodological problems summarised on pages 33-35 and described in fuller detail for each individual indicator. Statistical variability 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 have fewer births than Northern Ireland.

Comparing the outcomes of pregnancy (Pages 111-140)

Stillbirth / fetal mortality rates (Pages 111-116)

Overall, stillbirth rates ranged from around 3 fetal deaths per 1000 live and stillbirths in Spain, the Slovak Republic, Luxembourg, Germany and Sweden to 7.0 per 1000 in the Netherlands and 9.1 in France. In the UK, the rates of 5.7 for England and Wales, 6.7 in Scotland and 6.3 in Northern Ireland fell between these two extremes. The rate for England and Wales did not include the voluntary notifications of late fetal death at 22 and 23 weeks of gestation to the Confidential Enquiry into Maternal and Child Health. Including these would have increased the fetal death rate to 7.4

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 weighing under 1000 g were excluded, to make comparisons on a more consistent basis, the range was narrower. Rates were under 2.5 per 1000 in Germany, Estonia, Spain, Austria,

the Slovak Republic and Finland and over 4.0 in France, Latvia and Scotland. Rates of 3.7 for England and Wales and 3.6 for Northern Ireland were below this level. The general conclusion is that rates for the countries of the United Kingdom are not the highest in Europe but are well above the median.

Neonatal and infant mortality (Pages 117 to 124)
Neonatal mortality rates, that is deaths in the first 28 days of life per 1,000 live births ranged from around 2.5 per 1000 live births in Luxembourg, Cyprus, Sweden and Norway to over 4.5 in Estonia, Latvia and Poland. The UK rates, 3.4 in England and Wales, 3.0 in Scotland and 2.9 in Northern Ireland fell between these limits.

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 babies weighing under 500g were excluded from neonatal mortality rates in Figure 7.5, to improve comparability, this led to a substantial reduction in rates for countries of the United Kingdom, notably Northern Ireland and England and Wales, along with the Czech Republic, Denmark, Germany, Hungary, Slovenia and Finland. Infant mortality rates were not adjusted in the same way in the report as many member states did not have sufficiently detailed data.

Low birthweight and preterm birth (Pages 125 to 132)
The extent to which babies are born too soon or too small has a marked association with stillbirth and infant mortality rates as the smallest babies are the most likely to die. The percentage of babies born weighing less than 2500g, the definition of low birthweight, ranged from 4.2 to 8.5 per cent of live births in the areas for which data were available, with rates tending to be lower in the Nordic and Baltic countries and higher in Southern Europe. The countries of the United Kingdom tended to be towards the higher end of this range, with 7.5 per cent of live births in England and Wales, 7.2 per cent in Scotland but only 5.8 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 per cent to 11 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 countries of the UK ranged from the middle to the higher end of the spectrum, with 7.6 per cent of babies born alive in England and Wales and in Scotland and 6.5 of those in Northern Ireland being born preterm. Data for England and Wales relate to 2005, the first year for which data about preterm birth became available at a national level.[2]

The percentage of babies born before 32 weeks of gestation ranged from 0.8 in Spain to 1.4 per cent in England and Wales, Hungary and Austria, while 1.1 per cent of live births in Northern Ireland and 1.2 per cent in Scotland were born before 32 weeks.

In the light of the association between low birthweight, preterm birth and neonatal and infant mortality, it is not surprising that countries of the United Kingdom had some of the higher mortality rates in Europe. Northern Ireland, with its lower proportions of low birthweight and preterm births had a lower infant mortality rate, but the difference was much less marked for neonatal mortality. 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 94-108)

Because the numbers of maternal deaths in Europe are now so low, the report based rates on data for two years. Even then, only six 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 'Saving mothers' lives'[3] the rates were restricted to those published in routine death statistics, rather than the enhanced data reported to the Confidential Enquiry. The long tradition of good ascertainment of maternal deaths in the United Kingdom is likely to have contributed to the relatively high rates reported for the United Kingdom.

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 43-59)

Mothers' ages (Pages 46-48)
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 ranged from 1.3 per cent in Denmark to 9.3 in Latvia. Once again the countries of the United Kingdom did not have the highest rates but were nearer the top than the bottom of the range, with 7.1 per cent of mothers in England and Wales, 7.8 per cent in Scotland and 6.7 per cent in Northern being aged under 20.

At the other end of the age range, the percentage of mothers aged 35 or older varied from 7.5 per cent in Slovakia to 24.3 per cent in Ireland. The percentages in the United Kingdom were lower than in Ireland but still high, 19.3 per cent in Northern Ireland, 19.4 per cent in Scotland and 19.1 per cent in England and Wales. Thus the countries of the UK have relatively high proportions of mothers at both extremes of the age range.

England also appeared to have the lowest proportion of first time mothers in Europe and the highest proportion of mothers having fourth or higher order births, both of which are associated with high stillbirth and neonatal mortality rates. This is based on relatively poor quality data, however, so this comparison on pages 49-50 should be interpreted with caution.

Multiple births (Pages 43-45)
Compared with singletons, babies from multiple births are at much higher risk of being born preterm or of low birthweight and of being stillborn or dying in the first year of life. Overall, multiple birth rates varied between under 12 per 1000 women with live or stillbirths in Lithuania, Poland and Latvia to more than 20 per 1000 in the Netherlands, Denmark and Cyprus. The rates for the United Kingdom fell in the middle of this range, being 15.0 per 1000 in England and Wales, 14.3 in Scotland and 15.3 in Northern Ireland. 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 section 5.2 on pages 68-70 shows, these data are very patchy and few countries collect the data required on a population basis to enable comparisons to be made.

Inequalities (Pages 53-59)
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 59. Of the countries for which some data are recorded, England and Wales had a relatively high proportion of mothers of foreign origin, with over a fifth being born outside the United Kingdom.

Care of women and babies during pregnancy and the postnatal period (Pages 63-92)

The development of 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 63-67)
Rates of caesarean section varied widely in Europe, from well over 30 per cent in Italy and Portugal to under 20 per cent in Slovenia, the Netherlands, Flanders, Brussels, , the Czech Republic, Estonia, Latvia, Lithuania, Finland, Sweden and Norway. Rates for countries of the UK were in the middle of the range but still high, 23.0 in England, 25.1 in Wales, 24.7 in Scotland and 27.6 in Northern Ireland.

There was no inverse correlation with rates of operative vaginal delivery using forceps or ventouse. These exceeded 10 per cent in Flanders, Spain, France, the Netherlands, Portugal, England, Scotland and Northern and the rate for Wales, 9.6 per cent was only marginally lower.

Onset of labour (Pages 74-76)
Only 17 countries or regions had complete data on this subject. Rates of induced labour were wide, ranging from less than 9 per cent in the Baltic countries and the Czech Republic to 30.7 per cent in Northern Ireland and 37.9 per cent in Malta. Rates were 19.6 per cent in England and 23.8 per cent in Scotland. No data were available for Wales.

Rates of caesarean section planned or undertaken before labour were under 8 per cent in Estonia, the Netherlands, Slovenia, Finland and Sweden and over 14 per cent in Malta, Lithuania and Northern Ireland, where the rate was 14.9 per cent. Elsewhere in the United Kingdom, rates were 10.7 per cent in England and 9.2 per cent in Scotland.

In eight of the 17 countries or regions with data, including England, Scotland and Northern Ireland, fewer than three quarters of women started labour spontaneously.

Timing of first antenatal visit (Pages 71-73)
This indicator is of particular relevance in England, where the government has set 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 which did, there were considerable inconsistencies in methods of data collection and the methods used. In particular, data recorded for Malta formerly a British colony, England and Scotland, the proportions of women recorded as starting antenatal care in the first trimester of pregnancy were low, between two thirds and just over three quarters. In these countries, the first encounter with a midwife or general practitioner and much subsequent antenatal care take place outside hospital. The data included in the report were derived from hospital systems and were likely to relate to the first visit to hospital for an ultrasound scan. This calls into question the use of this indicator as a basis for international collaborations.

Breast feeding at birth (Pages 80 to 82)
This indicator used the WHO definition of exclusive breast feeding during the first 48 hours after birth, but many countries were unable to provide data in this form or at all. This included the countries of the United Kingdom where targets relate to breastfeeding at birth. The data provided came from the 2005 Infant Feeding Survey which uses the latter definition. Scotland also provided its own data. Since 2004 ad- hoc collection of local data on this has stared in England but the data are still incomplete. In 2008/09, a new target, relating to breastfeeding at six weeks after birth was introduced in England, but collection of data on this subject will be even more challenging, especially in areas with problem with child health systems. Even if the situation improves, the prospects for consistent international comparisons are not good.

Implications for the countries of the United Kingdom

This reports 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[1] and further harmonisation is a priority for the new UK Statistics Authority, 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, data sharing and record linkage is high on the agenda and a project to develop further linkage of maternity data is about to start, building on the work already done.[2]

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 as chapters 8 and 9, 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 on firm funding for these local registers. A third European project, EURONEOSTAT, described in Chapter 10, shows the value of hospital-based comparisons of care for very preterm and very low birthweight babies.

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, although in England and Wales, neonatal mortality has remained static since 2001and it is postneonatal mortality which has fallen. There is little sign 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 similar to those in the late 1990s, having risen from 2001 to 2003 and then fallen slightly. 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 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 second EURO-PERISTAT project. Each project has been a snapshot for a single year, 2000 and 2004. 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.

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