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EUROPEAN PERINATAL HEALTH REPORT
Better statistics for better health for pregnant women and their babies

EXECUTIVE SUMMARY OF THE HIGHLIGHTS FOR MALTA.

Promoting the health of women and infants is a very important aspect of all health care systems, not least in Malta. All countries strive to afford their population the best possible services and opportunities based on scientific evidence. The 'European Perinatal Health Report' (EPHR) is a document giving a comprehensive overview of perinatal health in 25 Member States of the European Union and Norway. This report is based on 2004 data and makes available important information that can serve as a tool to assess perinatal health and address any problems. Since 2005 Malta has participated actively in the development of this report and it is hoped that it will be extensively referred to locally.

The report provides an introduction to the surveillance systems present in the EU Member States and the various data sources available in each country. The diversity of methods of surveillance and data sources available within each country necessitate that comparisons are made with caution, keeping in mind the differences and limitations. Data for Malta has been provided by the National Obstetrics Information System (NOIS), the National Mortality Register and the Malta Congenital Anomalies Register. All these Registers reside within the Department of Health Information and Research.

The report highlights that Malta had the smallest annual number of births from all participating countries; hence the data for a single year may not always contain sufficient numbers of events to construct reliable rates to measure the rare events or outcomes. This also needs to be borne in mind when making comparisons with other countries.

Malta is also unique in that, along with Ireland, the country does not allow termination of pregnancy for fetal anomaly and thus infants with potentially fatal conditions will reach delivery and pass away soon after thus increasing rates of fetal, neonatal and infant adverse outcomes, mortality and morbidity.

The EPHR presents the results for perinatal health indicators in four chapters:

- i. Characteristics of childbearing women
- ii. The care of women and babies during pregnancy and the postpartum period
- iii. Maternal health
- iv. Fetal and infant health

Malta was able to provide over 90% of the indicators presented in this publication. The salient points relating to Malta's perinatal health indicators are summarised here.

CHARACTERISTICS OF CHILD BEARING WOMEN:

Maternal Age (Appendix B, Table C8)

Childbearing in both the lower and higher age groups is associated with an increased risk of preterm delivery, growth restriction and mortality in the perinatal period.

The highest rate of women giving birth falls within the 25-34 year age group for all countries; 14 countries (including Malta) registered their highest delivery rates in the 25-29 year age group while 15 countries registered their highest delivery rates within the 30-34 year age group.

Teenage delivery rates for mothers 19 years and under vary widely between the countries: from 1.3% in Denmark to 9.3% in Latvia. These variations reflect different cultures and practices. Malta has a teenage delivery rate of 5.8% of all women delivering.

A total of 11.7% of women were registered as delivering at 35 years or older in Malta. This rate ranged from 7.5% in Slovakia to 24.3% in Ireland.

Multiple births (Appendix B, Table C7)

Compared with singletons, multiple pregnancies are at a greater risk of preterm delivery (<37 weeks gestation), growth restriction and perinatal death. The increasing use of techniques to manage infertility has led to increases in the number of multiple births in many European countries. Furthermore, the rates of multiple birth rise with maternal age and the average age at childbirth is increasing.

The twin birth rate for Malta was reported as 13.0 per 1000 women in 2004. The highest rate reported was 23.5/1000 women for Cyprus and 10.8/1000 women for Lithuania. Triplets are rare events and so it is not possible to draw reliable conclusions from one year's data for a small population such as that of Malta.

Smoking during pregnancy (Appendix B, Table R4)

Smoking is a known risk factor during pregnancy. It has been associated with fetal growth restriction, preterm birth and perinatal death.

7.2% of women in Malta reported smoking during pregnancy. This is a comparatively low rate and may be an underestimate as many women are reluctant to report smoking habits at their antenatal visits when this information is collected. The highest rate reported was 22% for Wales and the lowest was 4.8% for Lithuania.

THE CARE OF WOMEN AND BABIES DURING PREGNANCY AND THE POST PARTUM PERIOD:

Mode of delivery (Appendix B, Table C10)

It is desirable that for the large majority of women, pregnancy and childbirth should be a natural process requiring minimal medical intervention. The challenge in obstetrics is to exploit new medical technology without the over medicalisation of pregnancy and childbirth. Caesarean section rates in developed countries have been shown to have increased in recent years.

In 2004 Malta registered 67.8% of total births as being vaginal, non-instrumental births. This varied greatly in the different countries from 82.8% in Slovenia to 53.8% in Portugal. 3.8% of total births were registered as vaginal, instrumental births including forceps, ventouse and breech extractions, while the rest (28.3%) were births by caesarean section.

The highest caesarean section rate was reported from Italy at 37.8% of total births, followed by Portugal (33.1%), Ireland (29.5%) and Malta (28.3%). The lowest rate was reported from Slovenia at 14.4%.

First Antenatal visit (Appendix B, Table R7)

The timing of the first antenatal visit provides an indication of access to antenatal care and it is advisable that it should start in the first trimester of pregnancy.

The National Obstetrics Information System in Malta can only date the time of the first antenatal visit at hospital, however it is known that most pregnant women start their antenatal care in the community and come for hospital antenatal visits later on. The low rate of 66.3% of women having their first antenatal visit in the 1st trimester (less than 15 weeks of gestation) reflects this limitation in data collection and it is difficult to interpret the rates for Malta.

Mode of Onset of Labour (Appendix B, Table R8)

Rates of induced labour and caesarean section have increased in the last decade. Both procedures are associated with risks for the mother and fetus and provide an indicator of obstetric practice.

Malta reports a low rate of spontaneous onset of labour (47.6% of total births) and a high rate of induced labour (37.9% of total births). These rates are most closely comparable to those reported by Northern Ireland. In some countries including Malta, Norway, England and Scotland, induced labour is taken to include both medical and surgical means of induction. This may negatively impact on the rates when comparing with countries that may be reporting only medical inductions.

Eleven countries, including Malta, gave information regarding births without obstetric intervention (Fig 5.8). Defining a 'straightforward' delivery as one with spontaneous onset of labour (no induction) and spontaneous delivery (with or without augmentation) the delivery rates ranged from 39.9% in Malta to 76.7% in Finland.

Place of birth (Appendix B, Table R9)

The organization of maternity care and size of maternity units differs greatly in Europe. Malta had a high rate of births (85.4%) occurring in a large maternity unit catering for 3000-3999 births per year. 14.5% of births occurred in small maternity units catering for less than 300 births per year, 0.1% were registered as occurring at home.

Breast feeding at birth (Appendix B, Table R10)

Breast feeding is considered of benefit to babies in terms of both nutrients and resistance to infection. Measures in the first 48 hours provide an indication of support to women and their newborns in the uptake or initiation of breastfeeding. The rate of newborns breastfed during the first 48 hours was reported as 68.4% for Malta. Four centres reported lower rates: Ireland (45.6%), France (62.3%), Northern Ireland (63.0%) and Wales (67.0%). The highest rate of breast feeding in the first 48 hours was reported from Sweden at 97.9%.

Trauma to the Perineum (Appendix B, Table F3_A)

Episiotomies (surgical incisions to the perineum aimed at facilitating delivery and avoiding tears) were reported in 36.4% of women delivering vaginally in Malta. These rates varied from 82.3% in Valencia, Spain to 9.7% in Denmark.

MOTHER'S HEALTH: MORTALITY AND MORBIDITY ASSOCIATED WITH CHILDBEARING**Maternal Mortality Ratios and Causes of Maternal Death (Appendix B, Table C6 and R3)**

Maternal deaths are nowadays rare events in all EU countries; in fact Malta did not register any maternal deaths in 2003 or 2004. Due to the rarity of this event and the relatively small number of annual deliveries it is impossible to comment on Malta's rates when considering only 2 years of data.

Severe maternal morbidity (Appendix B, Table F2)

This report used 5 maternal morbidity indicators to indicate severe morbidity. These indicators were: eclampsia (severe hypertension causing seizures), intensive care unit admission, blood transfusion, hysterectomy and embolisation (occlusion of a major blood vessel).

Maternal morbidity data is difficult to collect and measure. This report shows that most countries are not in a position to give data on several of the maternal morbidity indicators chosen. Malta is one of the countries that can provide 3 out of the above mentioned 5 indicators requested. Only France, Netherlands and Germany could provide data on all 5 maternal morbidity indicators.

BABIES' HEALTH: MORTALITY AND MORBIDITY DURING PREGNANCY AND IN THE FIRST YEAR OF LIFE.

Fetal and Neonatal and Infant Mortality Rates (Appendix B, Tables C1, C2 and C3)

The total fetal mortality rate (the number of fetal deaths at or after 22 weeks of gestation) was 3.8/1000 total births for Malta (highest 10.7/1000 total births for France and lowest 2.6/1000 total births for Slovak Republic). The fetal mortality rate computed at or after 28 weeks of gestation was 3.9/1000 live births for Malta (ranging from 1.7/1000 live births for Slovak Republic to 4.9/1000 live births in France and Latvia).

The neonatal mortality (number of deaths up to 28 completed days of birth) was 4.4/1000 live births for Malta (highest 5.7 for Latvia and lowest 1.6 for Cyprus). Most neonatal deaths are associated with preterm birth and congenital anomalies. As Malta does not allow termination of pregnancy for fetal anomaly, it is understandable that neonatal mortality rates will be increased. Ireland, the only other European country where induced abortion is illegal, did not report on total neonatal mortality until 28 days of life.

Infant mortality (number of deaths following live birth and until one year of age) for Malta was reported at 5.9/1000 live births (highest 9.4/1000 live births for Latvia and lowest 3.0/1000 live births for Sweden and Norway).

Birthweight distribution (Appendix B, Table C4)

Low birth weight is associated with both preterm birth and intra-uterine growth restriction and babies are at a greater risk of poor perinatal outcome and long term cognitive and motor impairments. For Malta, the percentage of live births born at low birth weight (<2500g) in 2004 was 7.7% of all live births. The highest reported rate was 8.5% in Greece and lowest 4.2% in Finland and Sweden.

Gestational Age distribution (Appendix B, Table C5)

Preterm birth (birth under 37 completed weeks of gestation) is a major complication of pregnancy and associated with morbidity and mortality in the perinatal period. The preterm birth rate in Malta was 7.4% of total births (range 5.6% in Lithuania and 12.4% in Czech Republic).

In Malta, a high proportion (96.9%) of the very preterm babies were born in a hospital with a specialised neonatal care unit (Table 5.2). It was similarly high in Denmark (94.0%) and Portugal (93.2%).

Apgar Score (Appendix B, Table R2)

This is a standardised score system assessing newborns on the basis of five parameters: heart rate, respiratory effort, muscle tone, reflex irritability and colour. A low Apgar score at 5 minutes is highly correlated with neonatal mortality. The percentage of live births with an Apgar score at 5 minutes of less than 7 was at 0.6% of live births. This ranged from 0.6% for Malta and Lithuania to 1.9% in Finland.

Selected Congenital Anomalies - live births, fetal deaths and terminations of pregnancy (Appendix B, Tables R1, R1.A, R1.B, R1.C and R1.D)

Congenital anomalies remain an important cause of mortality and morbidity in the perinatal period as well as having long term public health implications.

Specific major congenital anomalies are rare events and therefore one year's data for a small country like Malta may be unreliable. When comparing the frequency and mortality of babies with congenital anomalies with other countries it is important to know whether the other country collects reliable information regarding termination of pregnancy for fetal anomalies. It is not possible to compare Malta's rates (where termination of pregnancy is not legal) with the rates of those countries that do not have data on termination of pregnancy for fetal defects.

All Congenital Anomalies as a cause of fetal and neonatal death (Appendix B, Table F1)

Malta reports the highest rate of neonatal mortality (until 28 days of life) due to all congenital anomalies for live births (2.3/1000 live births). This may be explained by the fact that termination of pregnancy for fetal anomalies is illegal in Malta. Ireland, where induced abortions are also illegal, does not report its neonatal mortality due to congenital anomalies.

The percentage of early neonatal deaths (until 7 days of life) due to congenital anomalies (Fig 7.13) is also high at 41.7% in Malta. This is followed by Ireland at 40.1%.

CONCLUSION

This European Perinatal Health Report is a first attempt at bringing together standardized perinatal health indicators for Europe. It has proven that it is feasible to collect such indicators and will hopefully act as a catalyst for resourcing ongoing perinatal health indicator data collection and reporting across Europe.

Finally the Department would like to acknowledge the important contribution of all data providers to the National Obstetrics Information System (NOIS) register, who provide data on a voluntary basis and without whose co-operation such work would not be possible. The National Mortality Register and Malta Congenital Anomalies Register have also provided important data towards the compilation of this Report.

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