

The background of the lower two-thirds of the cover is a faded, grayscale photograph of a woman with dark hair holding a young child with light hair. The woman is looking towards the camera, and the child is looking slightly to the side. The image is semi-transparent, allowing the text to be overlaid clearly.

*National Obstetric
Information System
(NOIS)*

Annual Report - 2014

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Comments

The accuracy of information contained in this document may be limited by factors beyond the author's control. Some data in this document may be subject to interpretation.

Data presented in this report is based on data which has been made available to the Department of Health Information and Research from the collaborating hospitals. Accuracy and completeness of data is the responsibility of the hospital providing data.

Users should always acknowledge the source in all works based on information supplied in this document.

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COMMENTARY

For the 16th consecutive year the National Obstetric Information System (NOIS) has systematically collected and analyzed all obstetric and perinatal data from all public and private hospitals in Malta and Gozo. It serves as a valuable resource for healthcare providers, researchers and policy makers by providing the latest information and evolving trends.

Key Facts:

In 2014, there were 4275 deliveries with a total of 4335 births, which includes 4308 live births and 27 still births. There was an increase of 186 total births in 2014 as compared to the previous year, continuing the rising trend seen in the past decade (Figure 1).

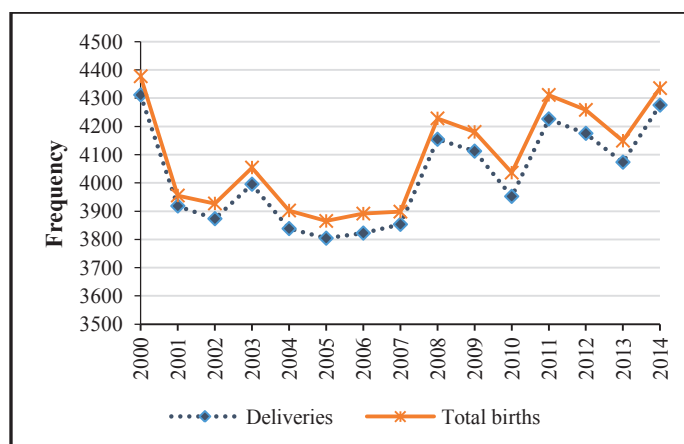


Figure 1 – Total births and deliveries 2000-2014

General Information for 2014

4275 deliveries
4335 total births
4308 live births
27 still births

58 twin and **1** triplet pregnancy

4269 (**99.9%**) of deliveries occurred in hospital

131 mothers registered as having made use of assisted reproduction

In 2014, there were a total of 4216 (98.6%) singleton and 58 (1.4%) twin deliveries, and 1 triplet delivery. 4269 (99.9%) occurred in hospital, while 4 deliveries occurred at home and 2 deliveries occurred at other sites but were later transferred to hospital.

Maternal Characteristics:

Age

In 2014, the greatest number of deliveries 1423 (33.3%), occurred in the age group 30 to 34 years, this reflects the trend of increasing maternal age at delivery.

Marital Status

Of all deliveries, 1100 (25.7%) of mothers were reported as never married, 2987 (69.9%) were reported as married and 188 (4.4%) were reported as being widowed, separated or divorced.

Maternal Nationality

The proportion of deliveries in non-Maltese mothers has increased from 13.8% to 17.1% from 2013 to 2014. There has been an overall decline in deliveries to Maltese nationals and an increase in deliveries to Non-Maltese nationals (Figure 2).

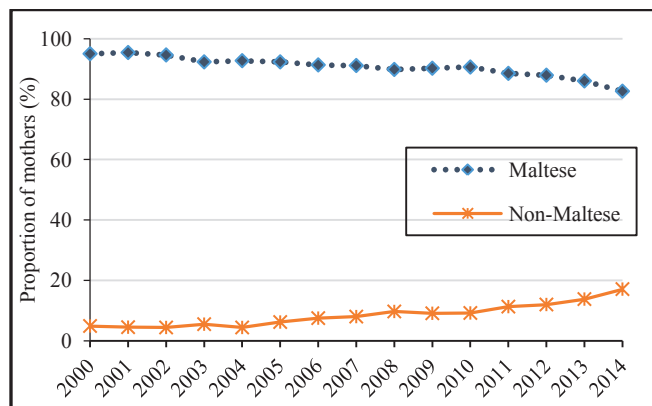


Figure 2 – Deliveries by reported Nationality of Mother

Educational level

33.2% of mothers were reported as having tertiary level education and 22.7% reported having a post-secondary education. 34.2% were reported as having completed secondary education, while 2.9% were reported to have primary or no education. In 7.0% maternal education level was unspecified.

Maternal lifestyle

In 2014, 7.3% of mothers reported to smoke one or more cigarettes during their pregnancy. The proportion of mothers reported to smoke during their pregnancy and those reported to drink some alcohol or use drugs of abuse have essentially remained the same as in the past 3 years.

Pathology during pregnancy

The commonest specific obstetric pathology reported during pregnancy in 2014 was gestational hypertension, which was reported in 5.8% of mothers. This was followed by suspected intrauterine growth retardation which was recorded in 3.7% of mothers. 135 (3.1%) of mothers were diagnosed with impaired glucose tolerance or gestational diabetes.

Method of Birth

In 2014, 2731 (63%) births were delivered as a normal vertex delivery. 179 (4.1%) were delivered by assisted vaginal delivery and 1425 (32.9%) were delivered by emergency or elective Caesarean Section.

As shown in Figure 3, the Caesarian section operation rate between 2000 and 2014 has risen,

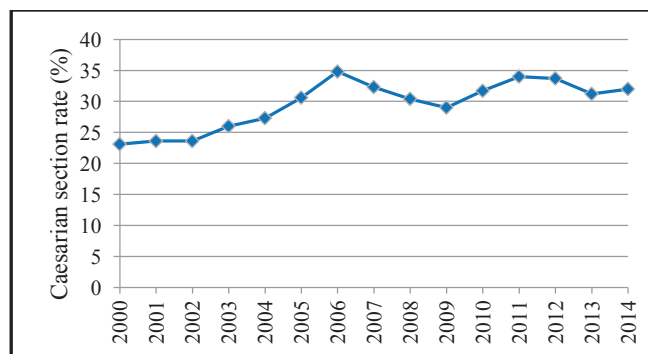


Figure 3 – Proportion of deliveries by Caesarian Section

Maternal facts and figures for 2014

Maternal age

Commonest age group: 30-34 years (33.3%)

Range: 15-48 years

Mode: 31 years

Mean: 30 years

Mean for primipara: 28 years

Nationality

82.6% Maltese nationality

17.1% non-Maltese nationality

0.2% not specified

Education

33.2% of mothers have reached Tertiary level of education

Maternal lifestyle

313 (7.3%) mothers reported having smoked during their pregnancy

8 mothers reported drinking some alcohol during their pregnancy

19 mothers used drugs of abuse during their pregnancy

Pathology during pregnancy

The commonest specific obstetric pathology: gestational hypertension (5.8%)

however over the past 5 years this rate has remained steady at an average of 32.5%.

A total of 1026 (35.3%) of all the normal or assisted vaginal deliveries were reported to have sustained no damage to the perineum, while the remaining 1881 (64.7%) had an episiotomy, tear/laceration or both.

In the 5-year period 2010-2014, the proportion of normal vaginal deliveries with no damage to the perineum rose from 31.3% in 2010 to 37.1% in 2014.

The proportion of assisted vaginal deliveries with no damage to the perineum also rose from 5.7% in 2010 to 7.8% in 2014.

Infant birth weight & gestational age

The trends for the infant birth weight and gestational age at delivery have remained unchanged from 2010 to 2014.

Maternal and perinatal mortality indicators

In 2014, there were no maternal deaths. The fetal mortality, perinatal and neonatal mortality rates are shown in Figure 4 below, no significant trends are seen in this time period.

Further information and comparisons with EU data can be found in the Annex of the Annual Report.

Infant facts and figures for 2014

6 infants/fetuses born weighing **<500g** but 22 weeks completed gestation

48 (1.1%) infants/fetuses born in **very low birth weight** range **500-1499g**

244 (5.6%) infants born in **low birth weight** range of **1500-2499g**

17 infants born weighing **4500g and over**

Commonest birth weight range: 2500g to 4499g (92.6%)

Range: 250-5160g

Mean: 3222g

307 (7.1%) babies born **premature:** <37 weeks gestational age

56 (1.3%) babies born **very or extremely preterm:** <32 weeks gestational age

Fetal death rate*: 6.0/1000 total births
Neonatal mortality rate*: 2.6/1000 live births

Early neonatal mortality rate*: 2.3/1000 live births

Late neonatal mortality rate*: 0.2/1000 live births

Perinatal mortality rate*: 8.36/1000 total births

*500g and over

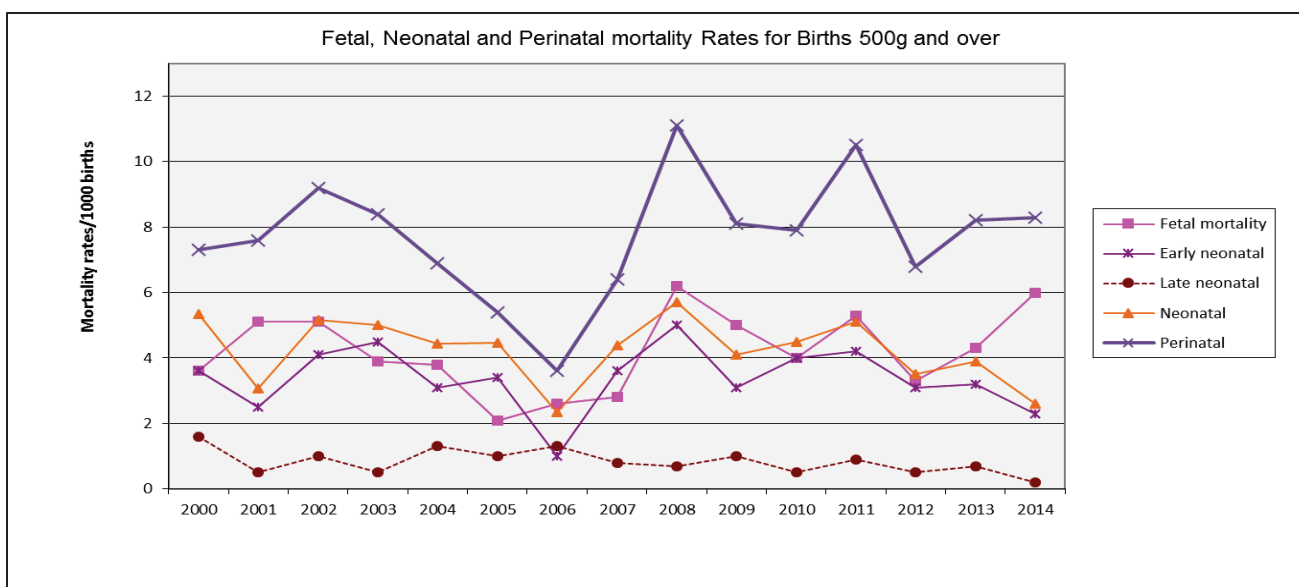


Figure 4 – Fetal, Neonatal and Perinatal Mortality rates for all live births and still births weighing 500g and over 2000-2014

NATIONAL OBSTETRIC INFORMATION SYSTEM - NOIS ANNUAL REPORT - 2014

A National Obstetric Information System (NOIS) was launched in the beginning of 1999 and now covers all deliveries, to residents and non-residents, taking place on the islands of Malta and Gozo.

Data collection and Sources of Information

Systematic data collection for NOIS commences once the mother delivers her baby. Information regarding the course and outcome of each pregnancy is recorded by the relevant staff at each centre on a standard NOIS sheet. Once the data are recorded, the sheets are forwarded to the Directorate for Health Information and Research (DHIR). At the DHIR the relevant sheets are processed and entered into the NOIS database. The system registers all infants/fetuses of 22 completed weeks gestation and more.

The maternity centres actively participating in this information system in 2014 were: Mater Dei Hospital, Gozo General Hospital, St James Hospital Sliema and Zabbar. Home deliveries which are not subsequently referred to a hospital may not be captured by this system.

The Antenatal Booking Sheet and NOIS Data Collection Sheet implemented in 2008 are used to collect extensive and comprehensive information for all deliveries and births.

Data at the DHIR is kept in accordance with the Data Protection Act (2001) and confidentiality is protected at all times.

Report

This report analyses all deliveries and infant/fetal births occurring on the Maltese Islands and reported to the Registry and compares figures to those reported for previous years where appropriate. The data in this report includes all births occurring irrespective of residency of the parents.

Data is sent to the Registry from all hospitals on the Maltese Islands. Accuracy and completeness of data provided to DHIR is the responsibility of the hospital providing data. This report includes the latest updated data as at time of release of report.

ANALYSIS OF REPORTED DATA

There were a total of 4275 deliveries reported and registered for the Maltese Islands in 2014. These resulted in a total of 4335 infant/fetal births; this is an increase of 186 births when compared to 2013.

The table below gives the number of deliveries and births in Malta and Gozo and registered in NOIS since 2000.

| <i>Year</i> | <i>Deliveries*</i> | <i>Total Births**</i> | <i>Livebirths</i> |
|-------------|--------------------|-----------------------|-------------------|
| 2000 | 4311 | 4377 | 4361 |
| 2001 | 3918 | 3955 | 3935 |
| 2002 | 3873 | 3927 | 3906 |
| 2003 | 3995 | 4054 | 4036 |
| 2004 | 3838 | 3902 | 3887 |
| 2005 | 3804 | 3865 | 3857 |
| 2006 | 3822 | 3891 | 3880 |
| 2007 | 3853 | 3898 | 3886 |
| 2008 | 4154 | 4228 | 4199 |
| 2009 | 4112 | 4180 | 4152 |
| 2010 | 3952 | 4036 | 4018 |
| 2011 | 4226 | 4311 | 4283 |
| 2012 | 4175 | 4258 | 4239 |
| 2013 | 4073 | 4149 | 4127 |
| 2014 | 4275 | 4335 | 4308 |

* Deliveries refer to maternal confinements irrespective of number of infants delivered.

** Total births include all reported live and still births

Table 1 - Total births and deliveries 2000-2014

Of the registered 4275 deliveries (4335 births) in 2014, 4002 deliveries (4060 births) occurred in Malta and 273 deliveries (275 births) occurred in Gozo.

DELIVERIES

DEMOGRAPHY

Maternal Age

The maternities have been grouped into 5-year age groups and the frequency distribution of deliveries according to maternal age group is given. In 2014, the greatest number of deliveries 1423 (33.3%), occurred in the age group 30 to 34 years while there were no deliveries occurring in the youngest age group of less than 15 years. The minimum age at delivery of the mothers was 15 years while the maximum age was 48 years. The most frequent maternal age at delivery was 31 years and average maternal age was 30 years. The average age of first time mothers was 28 years.

The frequency distribution of deliveries in 2014 according to maternal age group is given in the following table.

| <i>Age group (years)</i> | <i>2014</i> | | <i>2013</i> | |
|--------------------------|------------------|----------|------------------|----------|
| | <i>Frequency</i> | <i>%</i> | <i>Frequency</i> | <i>%</i> |
| <15 | 0 | 0 | 3 | 0.1 |
| 15-19 | 152 | 3.6 | 161 | 4.0 |
| 20-24 | 576 | 13.5 | 529 | 13.0 |
| 25-29 | 1298 | 30.4 | 1229 | 30.2 |
| 30-34 | 1423 | 33.3 | 1449 | 35.6 |
| 35-39 | 709 | 16.6 | 614 | 15.1 |
| 40-44 | 110 | 2.6 | 85 | 2.1 |
| 45+ | 7 | 0.2 | 3 | 0.1 |
| Unspecified | 0 | 0 | 0 | 0 |

Table 2 – Deliveries according to maternal age group

Marital Status

This year, 1100 (25.7%) of all deliveries occurred to mothers who were reported as never married (single); while 2987 (69.9%) of all deliveries occurred to mothers reported as married, and 188 (4.4%) were reported as being widowed, separated or divorced. All mothers had their marital status specified.

Maternal Nationality

82.6% (3533) of all deliveries this year occurred to women of Maltese nationality while 17.1% (733) were Non-Maltese. In the remaining 0.2% (9) did not have a nationality specified. The table below gives the number of mothers of Maltese and non-Maltese Nationality delivering on the Maltese Islands since 2000.

| <i>Nationality</i> | <i>Maltese</i> | | <i>Non-Maltese</i> | | <i>Unknown</i> | |
|--------------------|----------------|----------|--------------------|----------|----------------|----------|
| | <i>Number</i> | <i>%</i> | <i>Number</i> | <i>%</i> | <i>Number</i> | <i>%</i> |
| 2000 | 4096 | 95.0 | 211 | 4.9 | 4 | 0.1 |
| 2001 | 3737 | 95.4 | 178 | 4.5 | 3 | 0.1 |
| 2002 | 3662 | 94.6 | 170 | 4.4 | 41 | 1.1 |
| 2003 | 3687 | 92.3 | 220 | 5.5 | 88 | 2.2 |
| 2004 | 3558 | 92.7 | 168 | 4.4 | 112 | 2.9 |
| 2005 | 3512 | 92.3 | 237 | 6.2 | 55 | 1.4 |
| 2006 | 3491 | 91.3 | 288 | 7.5 | 43 | 1.1 |
| 2007 | 3511 | 91.1 | 308 | 8.0 | 34 | 0.9 |
| 2008 | 3729 | 89.8 | 402 | 9.7 | 23 | 0.6 |
| 2009 | 3711 | 90.2 | 376 | 9.1 | 25 | 0.6 |
| 2010 | 3581 | 90.6 | 365 | 9.2 | 6 | 0.2 |
| 2011 | 3740 | 88.5 | 479 | 11.3 | 7 | 0.2 |
| 2012 | 3668 | 87.9 | 501 | 12.0 | 6 | 0.1 |
| 2013 | 3501 | 86.0 | 564 | 13.8 | 8 | 0.2 |
| 2014 | 3533 | 82.6 | 733 | 17.1 | 9 | 0.2 |

Table 3 – Deliveries by reported Nationality of Mother for all deliveries on the Maltese Islands

Parity

There were 50.6% (2163) of mothers who were primiparas in 2014. The following table gives a breakdown of mothers by age and previous parity (includes all previous live and still births). Parity and maternal age were specified for all mothers.

| <i>Mother's Age Group</i> | <i>Maternal Parity (previous livebirths and still births are included)</i> | | | | | | | |
|---------------------------|--|-------------|------------|------------|-----------|---------------------------|----------------|--------------|
| | <i>Primipara</i> | <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>>4th</i> | <i>Unknown</i> | <i>Total</i> |
| Under 20 | 133 | 16 | 3 | 0 | 0 | 0 | 0 | 152 |
| 20-24 | 375 | 151 | 38 | 9 | 3 | 0 | 0 | 576 |
| 25-29 | 769 | 379 | 106 | 30 | 10 | 4 | 0 | 1298 |
| 30-34 | 629 | 577 | 155 | 44 | 9 | 9 | 0 | 1423 |
| 35-39 | 216 | 276 | 148 | 41 | 19 | 9 | 0 | 709 |
| 40-44 | 40 | 31 | 18 | 11 | 6 | 4 | 0 | 110 |
| 45+ | 1 | 3 | 1 | 0 | 0 | 2 | 0 | 7 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2163 | 1433 | 469 | 135 | 47 | 28 | 0 | 4275 |

Table 4 – Parity of Mothers by age group for 2014

Educational Level reached

It is documented that maternal educational level has a bearing on outcomes of pregnancy. In recent years, efforts have been made to improve the collection of maternal educational level data. In fact in 2007 only 10.6% of mothers had their educational level reported, in 2008 this collection increased to 65 % of mothers, and in 2014 it now stands at 93.0% of mothers having their educational level reported. Distribution of maternal educational level is presented in Table 5. 33.2% of mothers were reported as having a tertiary education.

| <i>Level of Education reached</i> | <i>2014</i> | |
|---|---------------|----------|
| | <i>Number</i> | <i>%</i> |
| Primary or no education | 124 | 2.9 |
| Secondary | 1462 | 34.2 |
| Post Secondary/Vocational non-tertiary | 971 | 22.7 |
| Tertiary | 1420 | 33.2 |
| Unspecified | 298 | 7.0 |

Table 5 – Maternal Education distribution

MATERNAL LIFESTYLES

There were 313 (7.3%) of the mothers who were reported to smoke one or more cigarettes during their pregnancy this year. 8 mothers were reported to drink some alcohol during their pregnancy, while 19 mothers were reported as being illicit drug abusers.

Details are given in Table 6 below.

| <i>Maternal Lifestyles</i> | <i>2014</i> | <i>2013</i> |
|---|-------------|-------------|
| <i>Cigarette smoking during pregnancy:</i> | | |
| 1 to 3/day | 80 | 61 |
| >than 3/day | 233 | 257 |
| Do not smoke | 3962 | 3755 |
| Unspecified | 0 | 0 |
| <i>Alcohol consumption during pregnancy:</i> | | |
| Up to 1 unit/day | 7 | 5 |
| >than 1 unit/day | 1 | 0 |
| None | 4267 | 4068 |
| Unspecified | 0 | 0 |
| <i>Drug Abuse during pregnancy</i> | | |
| Yes | 19 | 19 |
| No | 4256 | 4054 |
| Unspecified | 0 | 0 |

Table 6 – Reported smoking, alcohol and drug habits of mothers

Maternal smoking is a well-established risk factor for adverse perinatal outcomes including low birth weight (EuroPeristat, 2013). In 2014, the average birthweight of all infants born was 3222g, with 7.0% (298) of these babies being less than 2500g.

The average birth weight of babies born to mothers reported to have smoked at sometime during their pregnancy (317 babies) was 3161g, with 6.9% (22) of these babies being less than 2500g.

MATERNAL PATHOLOGY DURING PREGNANCY

In 2014 there were 131 mothers registered as having made use of assisted reproduction (ART), this includes all forms of ART namely ovulation stimulation, IVF and ICSI.

The table below gives the number of mothers reported with specific obstetric pathology during pregnancy. 5.8% of mothers were registered as having gestational hypertension.

| <i>Pathology during pregnancy</i> | <i>2014</i> | | <i>2013</i> | |
|-----------------------------------|---------------|----------|---------------|----------|
| | <i>Number</i> | <i>%</i> | <i>Number</i> | <i>%</i> |
| Antepartum Haemorrhage | 57 | 1.3 | 61 | 1.5 |
| Gestational hypertension | 250 | 5.8 | 219 | 5.4 |
| Pre-eclampsia | 24 | 0.6 | 40 | 1.0 |
| Eclampsia | 1 | 0.02 | 1 | 0.02 |
| Placenta praevia | 38 | 0.9 | 27 | 0.7 |
| Abruption of placenta | 16 | 0.4 | 19 | 0.5 |
| Suspected IUGR* | 159 | 3.7 | 159 | 3.9 |
| Cardiovascular disease | 11 | 0.3 | 12 | 0.3 |

*IUGR – intrauterine growth retardation

Table 7- Pathology during pregnancy

Diabetes in Pregnancy

In 2014 there were 18 mothers who were reported as being Insulin Dependent Diabetics before this pregnancy while there were 6 mothers reported with Non-Insulin Dependent diabetes prior to pregnancy. There was a total of 135 mothers registered with impaired glucose tolerance or gestational diabetes.

SINGLETON AND MULTIPLE DELIVERIES

For this year, there were a total of 4216 (98.6%) singleton, 58 (1.4%) twin deliveries and 1 triplet delivery.

| <i>Multiplicity</i> | <i>2014</i> | <i>2013</i> |
|---------------------|-------------|-------------|
| Singleton | 4216 | 3998 |
| Twin | 58 | 75 |
| Triplet | 1 | 0 |
| Quadruplet | 0 | 0 |

Table 8 – Deliveries by multiplicity

SITE OF DELIVERY

In 2014 of the total 4275 deliveries registered by NOIS, 4269 (99.9%) occurred in a hospital, 4 deliveries occurred at home and 2 deliveries occurred at other sites but later transferred to hospital.

ONSET OF DELIVERY

Of the total 4275 deliveries, 54.4% (2326) were reported as spontaneous onset of contractions, 27.1% (1157) were induced by drugs or artificial rupture of membranes and 17.2% (734) were carried out as elective caesarean sections, while 1.4% (58) were carried out as emergency caesarian sections for pathological conditions including antepartum haemorrhage, pre-eclampsia, fetal distress etc.

DAMAGE TO THE PERINEUM

A total of 2907 women were delivered by normal or assisted vaginal delivery. 2728 (93.8%) of these women were reported to have a normal vertex vaginal delivery, while 179 (6.2%) had assisted vaginal delivery (including ventouse, forceps and breech). A total of 1026 (35.3%) of these normal or assisted vaginal deliveries were reported to have sustained no damage to the perineum, while the remaining 1881 (64.7%) had an episiotomy, tear/laceration, or both.

| <i>Damage to perineum</i> | <i>Normal Vaginal Delivery (n= 2728)</i> | | <i>Assisted Vaginal Delivery** (n= 179)</i> | |
|----------------------------|--|----------|---|----------|
| | <i>Number</i> | <i>%</i> | <i>Number</i> | <i>%</i> |
| No Damage | 1012 | 37.1 | 14 | 7.8 |
| Episiotomy* only | 377 | 13.8 | 98 | 54.7 |
| Tear only | 1250 | 45.8 | 35 | 19.6 |
| Episiotomy and tear | 89 | 3.3 | 32 | 17.9 |

Table 9 – Damage to perineum in vaginal deliveries

* Episiotomy is defined as a surgical incision through the perineum to enlarge the vagina to assist delivery

**These include ventouse, forceps and breech extraction

INFANT / FETAL BIRTHS

METHOD OF BIRTH

In 2014 there were a total of 4335 infant/fetal births. Of these 2731 (63.0%) were delivered as a normal vertex delivery, 1425 (32.9%) by emergency or elective Caesarean Section and 179 (4.1%) by assisted vaginal delivery (includes forceps, ventouse and breech).

| <i>Mode of Delivery*</i> | <i>2014</i> | <i>2013</i> |
|---|-------------|-------------|
| Vertex delivery | 2731 | 2607 |
| Elective/emergency Caesarean Section | 1425 | 1340 |
| Forceps | 23 | 19 |
| Ventouse | 152 | 175 |
| Breech deliveries | 4 | 8 |

**Data analysed according to total infant/ fetal births*

Table 10 – Mode of delivery

For 2014 there were 1425 infants/fetuses delivered by caesarean section but 1368 caesarean operations performed, this due to the fact that a number of caesareans are done in multiple birth deliveries. The Caesarean section operation rate in 2014 was 32.0% of the total 4275 maternal deliveries.

The table below gives the reported caesarean section rates for Malta and Gozo since 2000.

| <i>Year</i> | <i>Deliveries by Caesarean section</i> | <i>Caesarean section operation rate (% of all deliveries)</i> |
|-------------|--|---|
| 2000 | 994 | 23.1 |
| 2001 | 926 | 23.6 |
| 2002 | 914 | 23.6 |
| 2003 | 1039 | 26.0 |
| 2004 | 1048 | 27.3 |
| 2005 | 1165 | 30.6 |
| 2006 | 1329 | 34.8 |
| 2007 | 1243 | 32.3 |
| 2008 | 1263 | 30.4 |
| 2009 | 1194 | 29.0 |
| 2010 | 1252 | 31.7 |
| 2011 | 1435 | 34.0 |
| 2012 | 1409 | 33.7 |
| 2013 | 1270 | 31.2 |
| 2014 | 1368 | 32.0 |

Table 11 – Caesarean Section rates 2000-2014

GENDER DISTRIBUTION OF BIRTHS

The gender distribution of births is given in the table below. As usually seen, there were more male infants/fetuses delivered than female.

| <i>Gender</i> | <i>2014</i> | | <i>2013</i> | |
|----------------|---------------|----------|---------------|----------|
| | <i>Number</i> | <i>%</i> | <i>Number</i> | <i>%</i> |
| Male | 2307 | 53.2 | 2174 | 52.4 |
| Female | 2028 | 46.8 | 1975 | 47.6 |
| Unknown | 0 | 0 | 0 | 0 |

Table 12 – Gender distribution of infants delivered

BIRTHWEIGHT OF INFANTS/FETUSES

In 2014, there were 4015 (92.6%) of the total births that occurred in the birth weight range of 2500g to 4499g. 244 (5.6%) of the total births were in the low birth weight range of 1500g to 2499g, while 48 (1.1%) of births were of very low birth weight 500g to 1499g. This year there were 6 babies of birth weight less than 500g but 22 completed weeks gestation, while another 17 babies were of birth weight 4500g and over. Birth weight was not recorded for 5 births.

The lowest birth weight recorded this year was 250g in a 23 week gestation, antepartum stillbirth. The highest birth weight recorded was 5160g. The average birth weight was 3222g. All infants / fetuses of 22 weeks gestation and over are registered into the system.

| <i>Birth weight</i> | <i>2014</i> | | <i>2013</i> | |
|---------------------|---------------|----------|---------------|----------|
| | <i>Number</i> | <i>%</i> | <i>Number</i> | <i>%</i> |
| <500g | 6 | 0.1 | 6 | 0.1 |
| 500-999g | 17 | 0.4 | 19 | 0.5 |
| 1000-1499g | 31 | 0.7 | 21 | 0.5 |
| 1500-1999g | 42 | 1.0 | 43 | 1.0 |
| 2000-2499g | 202 | 4.7 | 201 | 4.8 |
| 2500-2999g | 918 | 21.2 | 855 | 20.6 |
| 3000-3499g | 1827 | 42.1 | 1791 | 43.2 |
| 3500-3999g | 1070 | 24.7 | 1016 | 24.5 |
| 4000-4499g | 200 | 4.6 | 172 | 4.1 |
| 4500-4999g | 15 | 0.3 | 16 | 0.4 |
| 5000+ | 2 | 0.04 | 3 | 0.1 |
| Unspecified | 5 | 0.1 | 6 | 0.1 |

Table 13 – Birth weight distribution of infants/fetuses

GESTATIONAL AGE AT DELIVERY

Preterm births are associated with adverse obstetric outcomes and long term health problems. In 2014, 307 (7.1%) of babies born were preterm, having a gestational age of <37 weeks. 56 (1.3%) were born very or extremely preterm (<32 weeks).

| <i>Gestational age</i> | <i>2014</i> | | <i>2013</i> | |
|--|---------------|----------|---------------|----------|
| | <i>Number</i> | <i>%</i> | <i>Number</i> | <i>%</i> |
| Extremely preterm 22-27 weeks | 23 | 0.5 | 22 | 0.5 |
| Very preterm 28-31 weeks | 33 | 0.8 | 26 | 0.6 |
| Moderately preterm 32-36 weeks | 251 | 5.8 | 234 | 5.6 |
| Term 37 – 41 weeks | 4022 | 92.8 | 3864 | 93.1 |
| Post term 42+ weeks | 6 | 0.1 | 3 | 0.1 |
| Unspecified | 0 | 0 | 0 | 0 |

Table 14 – Gestational age at delivery

OUTCOME OF BIRTH

The number of live births registered in 2014 was 4308, which accounted for 99.4% of the total births at a national level. The remaining 27 births were reported as stillbirths. Of the live births, there were 15 cases of early neonatal deaths (of which 5 weighed less than 500g at birth) and 1 case of late neonatal deaths (see table below). All births of 22 weeks and over irrespective of birth weight are registered into the system.

| <i>Outcome of Birth</i> | <i>2014</i> | <i>2013</i> |
|-------------------------|-------------|-------------|
| Livebirths | 4308 | 4127 |
| Stillbirths | 27 | 22 |

| <i>Neonatal deaths</i> | <i>2014</i> | <i>2013</i> |
|------------------------------|-------------|-------------|
| Early Neonatal deaths | 15 | 15 |
| Late Neonatal deaths | 1 | 3 |

Table 15 – Birth outcomes – livebirths, fetal, early and late neonatal deaths (22+ wks gestation)

INFANT FEEDING METHODS AT DISCHARGE

Infant feeding habits are recorded by hospital staff at the time of discharge from hospital, which is usually 2-5 days after delivery. Little can be said on the actual infant feeding habits as these may change soon after discharge from the birthing facilities.

| <i>Infant feeding methods at time of discharge</i> | <i>2014</i> | <i>2013</i> |
|--|-------------|-------------|
| Breast only | 2513 | 2415 |
| Bottle only | 1232 | 1162 |
| Mixed (Breast & Bottle) | 547 | 532 |
| Other* | 43 | 40 |
| Unspecified | 0 | 0 |

* 'Other' - include babies who are still at hospital after 28 days and those who die before discharge

Table 16 – Infant feeding methods at time of discharge

MATERNAL AND PERINATAL MORTALITY INDICATORS

(Compiled in conjunction with the National Mortality Register, DHIR)

Maternal, fetal, perinatal and neonatal mortality statistics are indicators of the quality of health care and these statistics are presented as of 2000. Definitions of the various rates presented are given below and follow the definitions given by WHO ICD-10 (International Statistical Classification of Diseases and Related Health Problems – Tenth Revision). Indicators given in the tables below refer to fetuses having a birth weight 500g and over to allow for comparison with the WHO – European Health for All Database (HFA-DB): <http://data.euro.who.int/hfad/>.

| Year | Maternal Deaths |
|-------------|------------------------|
| 2000 | 0 |
| 2001 | 2 |
| 2002 | 0 |
| 2003 | 0 |
| 2004 | 0 |
| 2005 | 0 |
| 2006 | 0 |
| 2007 | 0 |
| 2008 | 1 |
| 2009 | 0 |
| 2010 | 1 |
| 2011 | 0 |
| 2012 | 0 |
| 2013 | 0 |
| 2014 | 0 |

Table 17 – Maternal Deaths 2000-2014

| Year | Fetal death rate 500g and over | |
|-------------|---------------------------------------|-------------------------------|
| | Number | Rate/1000 total births |
| 2000 | 16 | 3.6 |
| 2001 | 20 | 5.1 |
| 2002 | 20 | 5.1 |
| 2003 | 16 | 3.9 |
| 2004 | 15 | 3.8 |
| 2005 | 8 | 2.1 |
| 2006 | 10 | 2.6 |
| 2007 | 11 | 2.8 |
| 2008 | 26 | 6.2 |
| 2009 | 21 | 5.0 |
| 2010 | 16 | 4.0 |
| 2011 | 23 | 5.3 |
| 2012 | 14 | 3.3 |
| 2013 | 18 | 4.3 |
| 2014 | 26 | 6.0 |

Table 18 – Fetal Death Rates 2000-2014

| Year | Neonatal mortality rate (500g and over) | |
|------|---|-----------------------|
| | Number | Rate/1000 live births |
| 2000 | 23 | 5.3 |
| 2001 | 12 | 3.0 |
| 2002 | 20 | 5.1 |
| 2003 | 20 | 5.0 |
| 2004 | 17 | 4.4 |
| 2005 | 17 | 4.4 |
| 2006 | 9 | 2.3 |
| 2007 | 17 | 4.4 |
| 2008 | 24 | 5.7 |
| 2009 | 17 | 4.1 |
| 2010 | 18 | 4.5 |
| 2011 | 22 | 5.1 |
| 2012 | 14 | 3.3 |
| 2013 | 16 | 3.9 |
| 2014 | 11 | 2.6 |

Table 19 – Neonatal Mortality rates 2000-2014

| Year | Early neonatal mortality rate (500g and over) | |
|------|---|-----------------------|
| | Number | Rate/1000 live births |
| 2000 | 16 | 3.6 |
| 2001 | 10 | 2.5 |
| 2002 | 16 | 4.1 |
| 2003 | 18 | 4.5 |
| 2004 | 12 | 3.1 |
| 2005 | 13 | 3.4 |
| 2006 | 4 | 1.0 |
| 2007 | 14 | 3.6 |
| 2008 | 21 | 5.0 |
| 2009 | 13 | 3.1 |
| 2010 | 16 | 4.0 |
| 2011 | 18 | 4.2 |
| 2012 | 12 | 2.8 |
| 2013 | 13 | 3.2 |
| 2014 | 10 | 2.3 |

Table 20 – Early Neonatal Mortality rates 2000-2014

| Year | Late neonatal mortality rate (500g and over) | |
|------|--|-----------------------|
| | Number | Rate/1000 live births |
| 2000 | 7 | 1.6 |
| 2001 | 2 | 0.5 |
| 2002 | 4 | 1.0 |
| 2003 | 2 | 0.5 |
| 2004 | 5 | 1.3 |
| 2005 | 4 | 1.0 |
| 2006 | 5 | 1.3 |
| 2007 | 3 | 0.8 |
| 2008 | 3 | 0.7 |
| 2009 | 4 | 1.0 |
| 2010 | 2 | 0.5 |
| 2011 | 4 | 0.9 |
| 2012 | 2 | 0.5 |
| 2013 | 3 | 0.7 |
| 2014 | 1 | 0.2 |

Table 21 – Late Neonatal Mortality Rates 2000-2014

| Year | Perinatal mortality rate (500g and over) | |
|------|--|------------------------|
| | Number | Rate/1000 total births |
| 2000 | 32 | 7.3 |
| 2001 | 30 | 7.6 |
| 2002 | 36 | 9.2 |
| 2003 | 34 | 8.4 |
| 2004 | 27 | 6.9 |
| 2005 | 21 | 5.4 |
| 2006 | 14 | 3.6 |
| 2007 | 25 | 6.4 |
| 2008 | 47 | 11.1 |
| 2009 | 34 | 8.1 |
| 2010 | 32 | 7.9 |
| 2011 | 45 | 10.5 |
| 2012 | 28 | 6.6 |
| 2013 | 34 | 8.2 |
| 2014 | 36 | 8.3 |

Table 22 – Perinatal Mortality Rates 2000-2014

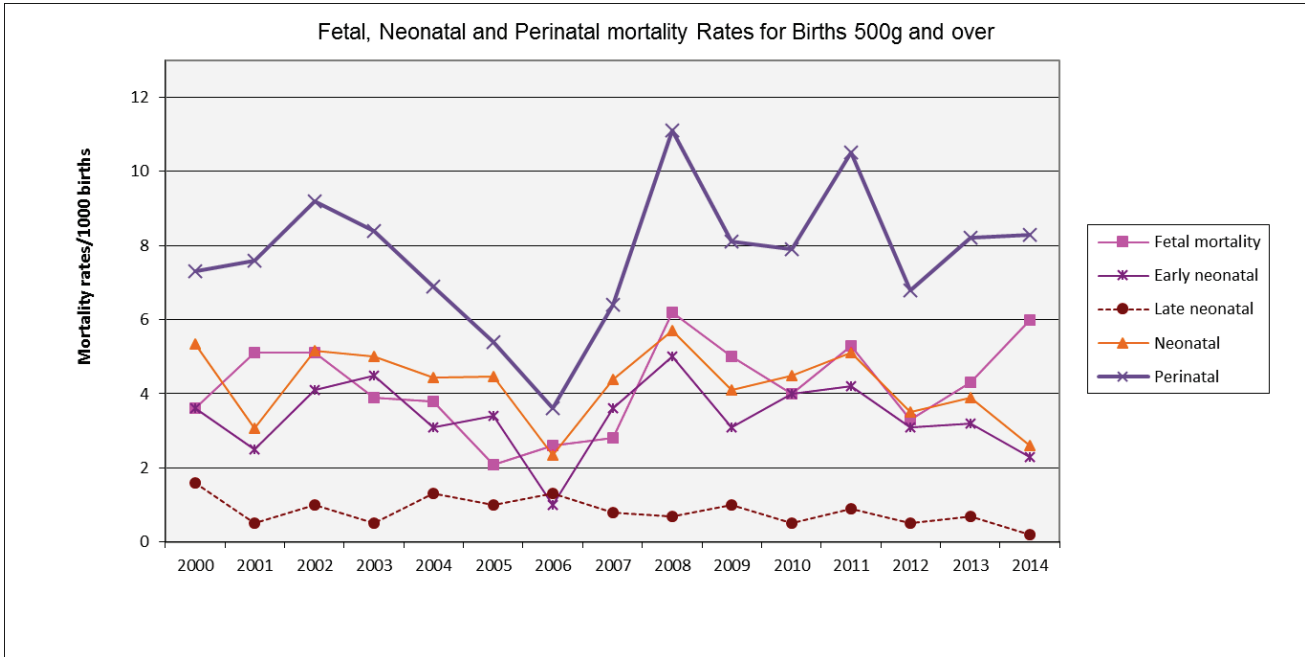


Figure 1 – Fetal, neonatal and perinatal mortality rates 2000-2014
(fetal deaths include only fetuses of birth weight 500g and over)

Varying data collection systems and reporting of smaller babies (namely 22-24 weeks gestation) may account for some of the changes in mortality rates.

Annex I gives some selected comparative birth and mortality statistics for Malta and the EU.

ANNEX I

Selected comparative statistics for Malta and EU – taken from the WHO – European Health for All Database (HFA-DB): <http://data.euro.who.int/hfad/> as available at May 2015. Only data until 2012 is completed as of May 2015, data in the HFA database is continually updated as necessary.

| Year | Malta | EU members before May 2004 | EU members since 2004 or 2007 |
|------|-------|----------------------------|-------------------------------|
| 2001 | 10.01 | 10.59 | 9.45 |
| 2002 | 9.86 | 10.52 | 9.27 |
| 2003 | 10.12 | 10.57 | 9.32 |
| 2004 | 9.69 | 10.66 | 9.50 |
| 2005 | 9.56 | 10.58 | 9.74 |
| 2006 | 9.55 | 10.69 | 9.94 |
| 2007 | 9.50 | 10.74 | 10.15 |
| 2008 | 10.19 | 10.90 | 10.62 |
| 2009 | 10.03 | 10.71 | 10.68 |
| 2010 | 9.66 | 10.75 | 10.36 |
| 2011 | 10.30 | 10.54 | 9.82 |
| 2012 | 10.09 | 10.39 | 9.84 |

Table 23 – Live births per 1000 population

| Year | Malta | EU members before May 2004 | EU members since 2004 or 2007 |
|------|-------|----------------------------|-------------------------------|
| 2001 | 1.50 | 1.50 | 1.25 |
| 2002 | 1.40 | 1.50 | 1.25 |
| 2003 | 1.50 | 1.53 | 1.24 |
| 2004 | 1.37 | 1.56 | 1.26 |
| 2005 | 1.37 | 1.56 | 1.28 |
| 2006 | 1.41 | 1.57 | 1.31 |
| 2007 | 1.37 | 1.60 | 1.34 |
| 2008 | 1.40 | 1.62 | 1.40 |
| 2009 | 1.40 | 1.61 | 1.43 |
| 2010 | 1.40 | 1.62 | 1.39 |
| 2011 | 1.50 | 1.60 | 1.35 |
| 2012 | 1.40 | 1.59 | 1.36 |

Table 24 – Total Fertility Rate

| Year | Malta | EU members before May 2004 | EU members since 2004 or 2007 |
|------|--------|----------------------------|-------------------------------|
| 2001 | 50.83* | 5.23 | 17.79 |
| 2002 | 0 | 5.38 | 14.29 |
| 2003 | 0 | 5.39 | 15.56 |
| 2004 | 0 | 5.62 | 13.85 |
| 2005 | 0 | 4.90 | 10.23 |
| 2006 | 0 | 5.49 | 9.15 |
| 2007 | 0 | 5.05 | 8.30 |
| 2008 | 23.82* | 5.11 | 10.14 |
| 2009 | 0 | 6.20 | 9.73 |
| 2010 | 24.89 | 5.16 | 9.30 |
| 2011 | 0 | 4.68 | 9.30 |
| 2012 | 0 | 4.78 | 6.16 |

*There were 2 maternal deaths in 2001, and 1 maternal death in each of 2008 and 2010.

Table 25 – Maternal Deaths per 100 000 live births

| Year | Malta | EU members before May 2004 | EU members since 2004 or 2007 |
|------|-------|----------------------------|-------------------------------|
| 2001 | 5.06 | 4.38 | 5.40 |
| 2002 | 5.09 | 4.32 | 5.36 |
| 2003 | 3.95 | 4.23 | 5.23 |
| 2004 | 3.84 | 4.14 | 5.13 |
| 2005 | 2.07 | 4.03 | 4.99 |
| 2006 | 2.57 | 4.03 | 4.78 |
| 2007 | 3.08 | 4.82 | 4.64 |
| 2008 | 6.86 | 5.03 | 4.49 |
| 2009 | 6.70 | 5.44 | 4.43 |
| 2010 | 3.97 | 5.07 | 4.19 |
| 2011 | 5.34 | 4.98 | 4.31 |
| 2012 | 3.30 | 5.0 | 4.18 |

Table 26 – Fetal Deaths (500g and over) per 1000 births

| Year | Malta | EU members before May 2004 | EU members since 2004 or 2007 |
|-------------|--------------|---------------------------------------|--|
| 2001 | 3.05 | 3.11 | 6.13 |
| 2002 | 5.38 | 3.01 | 5.83 |
| 2003 | 5.20 | 2.93 | 5.64 |
| 2004 | 4.37 | 2.86 | 5.74 |
| 2005 | 4.41 | 2.74 | 5.20 |
| 2006 | 2.32 | 2.69 | 4.83 |
| 2007 | 5.15 | 2.64 | 4.53 |
| 2008 | 5.72 | 2.55 | 4.13 |
| 2009 | 4.34 | 2.52 | 4.07 |
| 2010 | 4.48 | 2.49 | 3.72 |
| 2011 | 5.10 | n/a | 3.68 |
| 2012 | 3.50 | n/a | 3.57 |
| 2013 | | | |

Table 27 – Neonatal Deaths per 1000 live births

n/a = not available as at May 2015

DEFINITIONS

(Following the International Statistical Classification of Diseases and Related Health Problems – Tenth Revision, Volume II ICD-10, WHO, Geneva)

Maternal Death

A maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

Birth Weight

The first weight of the fetus or newborn obtained after birth.

Low birth weight is less than 2500g (up to and including 2499g).

Very low birth weight is less than 1500g (up to and including 1499g).

Extremely low birth weight is less than 1000g (up to and including 999g)

Gestational Age

The duration of gestation is measured from the first day of the last menstrual period. Gestational age is expressed in complete days or completed weeks.

For the purposes of calculation of gestational age from the date of the first day of the last normal menstrual period to the date of delivery, it should be borne in mind that the first day is day zero and not day one; days 0-6 therefore correspond to completed week zero;

Fetal Death

Fetal death is the death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy; the death is indicated by the fact that after such separation, the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

Fetal Death Rate

The number of fetal deaths in a year expressed as a proportion of the total number of births (live births plus fetal deaths) in the same year. Rates are usually expressed per 1000 total births.

$$\text{Fetal death rate} = \frac{\text{no. of fetal deaths in a year}}{\text{no. of live births plus fetal deaths in that year}} * 1000$$

Live Birth

Live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which, after separation, breathes or shows any evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of the voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each product of such a birth is considered live born.

Neonatal Period

The neonatal period commences at birth and ends 28 completed days after birth. Neonatal deaths (deaths among live births during the first 28 completed days of life) may be subdivided into early neonatal deaths, occurring during the first seven days of life, and late neonatal deaths, occurring after the seventh day but before 28 completed days of life.

Age at death during the first day of life (day 0) should be recorded in units of completed minutes or hours of life. For the second (day 1), third (day 2) and through 27 completed days of life, age at death should be recorded in days.

Neonatal Mortality Rate

The number of deaths during the neonatal period in that year expressed as a proportion of the total number of live births in the same year. Rates are expressed per 1000 live births.

$$\text{Neonatal mortality rate} = \frac{\text{no. of neonatal deaths in a year}}{\text{no. of live births in that year}} * 1000$$

Early Neonatal Mortality Rate

The number of deaths during the early neonatal period (during first 7 days of life) in that year expressed as a proportion of the total number of live births in the same year. Rates are expressed per 1000 live births.

$$\text{Early Neonatal mortality rate} = \frac{\text{no. of early neonatal deaths in a year}}{\text{no. of live births in that year}} * 1000$$

Late Neonatal Mortality Rate

The number of deaths during the late neonatal period (ie occurring after the seventh day but before 28 completed days of life) in that year, expressed as a proportion of the total number of live births in the same year. Rates are expressed per 1000 live births.

$$\text{Late Neonatal mortality rate} = \frac{\text{no. of early neonatal deaths in a year}}{\text{no. of live births in that year}} * 1000$$

Perinatal Period

The perinatal period commences at 22 completed weeks (154 days) of gestation (the time when birth weight is normally 500g) and ends at seven completed days after birth.

Perinatal Mortality Rate

The number of deaths during the perinatal period in a year expressed as a proportion of the total number of births (live births plus fetal deaths) in the same year.

$$\text{Perinatal mortality rate} = \frac{\text{no. of perinatal deaths in a year}}{\text{no. of live births plus fetal deaths in that year}} * 1000$$

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