



National Obstetric Information System (NOIS)

Annual Report - 2008

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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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EXECUTIVE SUMMARY

Introduction

The National Obstetric Information System (NOIS) has since its inception in 1999, been collecting data on all deliveries taking place on the islands of Malta and Gozo. The following is a summary of the Annual NOIS report for 2008 relating to the deliveries and infant/fetal births reported to the Registry in 2008 together with trends related to obstetric care and outcomes.

Summary statistics and comparative trends

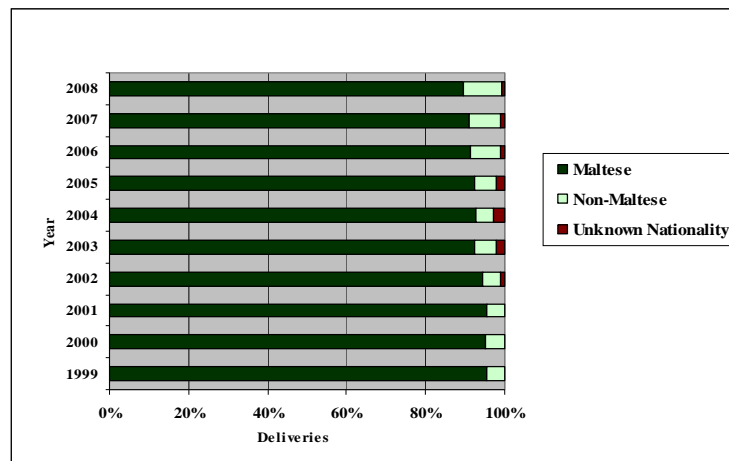
In 2008 there were 4154 deliveries and 4228 infant/fetal births. Following a trend of decreasing births spanning the seven-year period 1999 to 2005, there has been an increasing trend in number of births since 2006. There were 330 more births in 2008 when compared to 2007, this represents an 8.5% increase. There were 3849 deliveries (3919 births) in Malta and 305 deliveries (309 births) in Gozo.

The gender distribution of births was 52.4% (2216) male and 47.6% (2012) female.

Year	Deliveries	Total Births (Live & Stillbirths)	Livebirths
1999	4311	4382	4349
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

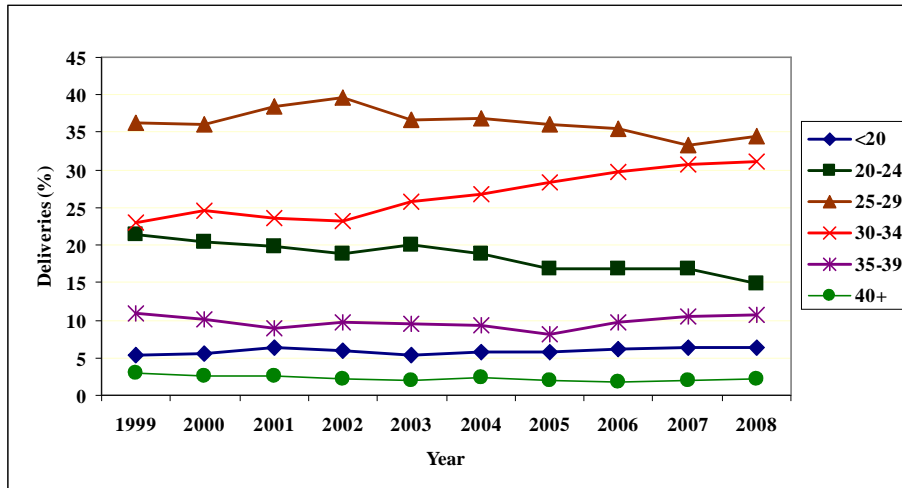
Number of deliveries and births in Malta and Gozo registered in NOIS since 1999

Deliveries to mothers of Maltese nationality made up 89.9% (3729) of all deliveries. The number of deliveries to mothers of non-Maltese nationality has doubled over a 10 year period, from 192 in 1999 to 402 in 2008.

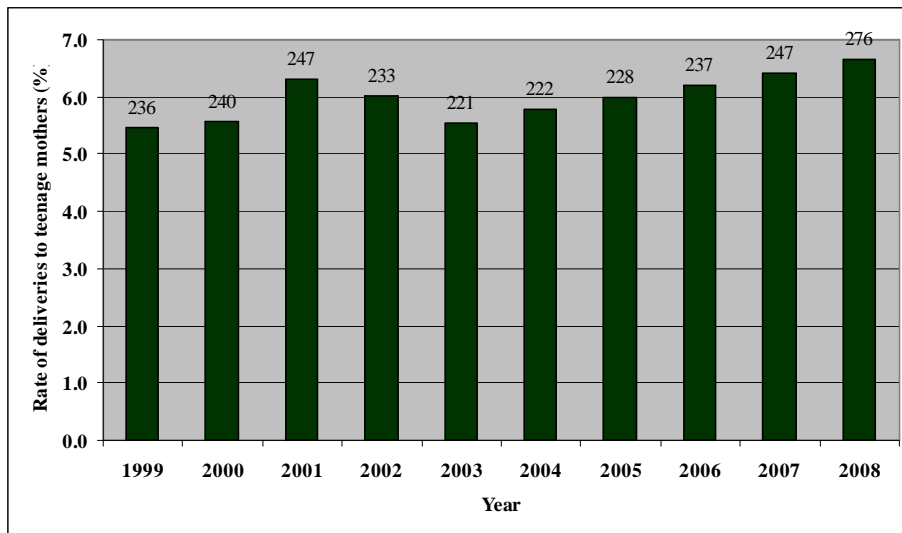


Deliveries by mothers of Maltese and Non-Maltese nationality

The maternal age group having the highest percentage of deliveries since 1999 has been the 25-29 year age group. There has been a steady increase in rate of deliveries in the 30-34 year age group. In fact, whereas in 1999 23% of births occurred within this age group, in 2008 this figure rose to 31%. Concomitantly, there has been a steady decrease in the rate of deliveries to mothers aged 20-24 years, from 21% in 1999 to 15% in 2008.



Percentage deliveries by maternal age group

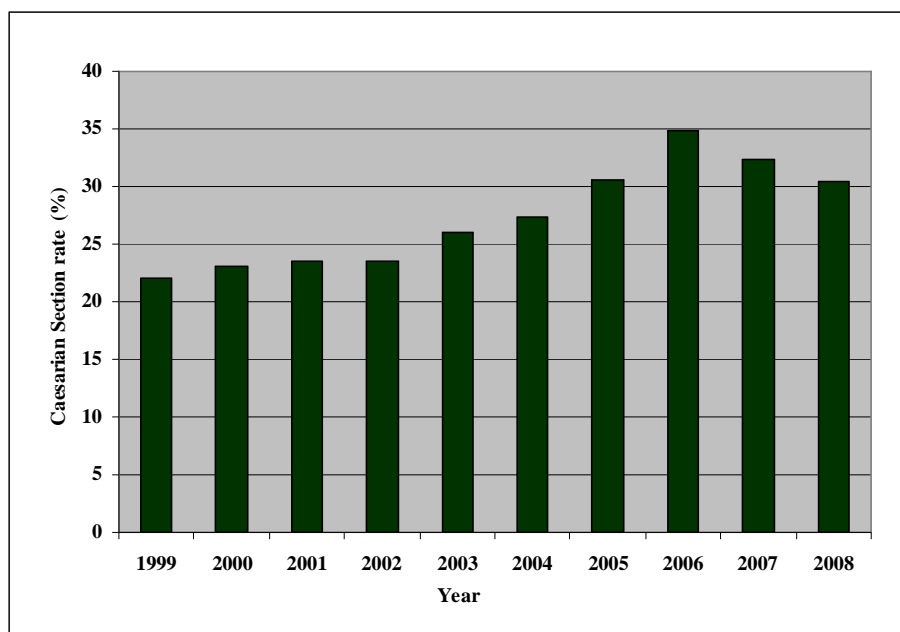


Rate (%) and number of teenage deliveries (<20 years)

Since 2003 there has been a steady increase in the rate and number of teenage deliveries i.e. mothers who are less than 20 years of age.

In 2008 there was a total of 4084 (98.3%) singleton and 66 (1.6%) twin deliveries, 4 triplet and no quadruplet deliveries.

Of the total 4228 infant/fetal births, 2699 (63.8%) were delivered as vertex delivery, 1328 (31.4%) by emergency or elective Caesarean section and 201 (4.8%) by assisted vaginal delivery and breech extraction.



Caesarean Section operation rate as a percentage of all deliveries

The Caesarean section rate has shown a steadily increasing trend between 1999 and 2006 which appears to have been reversed from 2006 - 2008.

2008 registered one maternal death. The number of live births registered was 4199 which accounted for 99.3% of the total births at national level. There were 29 still births of these 25 were of birth weight 500g and over. Of the live births, there were 21 cases of early neonatal deaths and 3 cases of late neonatal deaths. All births of 22 weeks and over irrespective of birth weight are registered into the system.

Year	Fetal mortality rate 500g and over Rate/1000 total births	Neonatal mortality rate 500g and over Rate/1000 live births
1999	6.2	4.8
2000	3.6	5.3
2001	5.1	3.0
2002	5.1	5.1
2003	3.9	5.0
2004	3.8	4.4
2005	2.1	4.4
2006	2.6	2.3
2007	2.8	4.4
2008	6.2	5.7

Fetal and Neonatal mortality rates for infants and fetuses of birth weight 500g or more

In 2008 there was a rise namely in fetal mortality, this may be due to better reporting of very small fetuses of 22-24 weeks gestation.

Annex I of the full NOIS Annual Report gives some selected comparative birth and perinatal mortality statistics for Malta and the EU.

NATIONAL OBSTETRIC INFORMATION SYSTEM - NOIS ANNUAL REPORT - 2008

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 Department of Health Information and Research (DHIR) on a regular basis. At the DHIR the relevant sheets are processed and entered into the NOIS database. The system registers all infants/fetuses of 22 weeks gestation and over or 500g birth weight or more.

The maternity centres actively participating in this information system in 2008 were: Mater Dei Hospital, Gozo General Hospital, St James Hospital Sliema and Zabbar and St. Philip's Hospital. Home deliveries which are not subsequently referred to a hospital are not captured by this system.

During 2008 methods of data collection at the main hospital Mater Dei Hospital were significantly upgraded and improved. A new Antenatal Booking Sheet was implemented to collect more extensive information and now for all deliveries the mothers' hospital files and antenatal notes are being traced. These changes have made data collection and reporting more comprehensive and accurate and may account for higher reporting and registration of certain exposures and conditions in pregnancy, delivery and infant outcome.

Report

This report analyses the national deliveries and infant/fetal births reported to the Registry that occurred in 2008 and compares it to the figures reported for 2007. The data in this report describes statistics for all deliveries and births reported to and registered into the system.

Data is sent to the Registry from all hospitals on the Maltese Islands. Accuracy and completeness of data is the responsibility of the hospital providing data.

ANALYSIS OF REPORTED DATA

There were a total of 4154 deliveries reported and registered for the Maltese Islands in 2008. These resulted in a total of 4228 infant/fetal births, this is an increase of 330 births when compared to 2007.

The table below gives the number of deliveries and births in Malta and Gozo and registered in NOIS since 1999.

<i>Year</i>	<i>Deliveries</i>	<i>Total Births*</i>	<i>Livebirths</i>
1999	4311	4382	4349
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

Total births include all reported live and still births

Table 1-Total births and deliveries 1999-2008

Of the registered 4154 deliveries (4228 births) in 2008, 3849 deliveries (3919 births) occurred in Malta and 305 deliveries (309 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 2008, the greatest number of deliveries 1430 (34%), occurred in the age group 25 to 29 years whilst the least number of deliveries 6 (<1%) occurred in the oldest age group 45+ years. There were 9 deliveries in the youngest age group less than 15 years. The minimum age at delivery of the mothers was 14 years while the maximum age was 48 years. The most frequent maternal age at delivery was 29 years and average maternal age was also 29 years.

The frequency distribution of deliveries in 2008 according to maternal age group is given in the following table.

<i>Age group (years)</i>	<i>2008</i>		<i>2007</i>	
	<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>
<15	9	<1	4	<1
15-19	267	6	243	6
20-24	615	15	649	17
25-29	1430	34	1282	33
30-34	1294	31	1182	31
35-39	442	11	407	11
40-44	87	2	77	2
45+	6	<1	3	<1
Unspecified	4	<1	6	<1

Table 2 – Deliveries according to maternal age group

Marital Status

This year, 997 (24.0%) of all deliveries occurred to mothers who were reported as never married (single); while 3005 (72.3%) of all deliveries occurred to mothers reported as married, and 152 (3.7%) were reported as being widowed, separated or divorced. All mothers had their marital status specified.

In 2008, according to the data registered in NOIS, only one mother was reported as ‘not having support at home to raise the infant’.

Nationality

89.8% (3729) of all deliveries this year, occurred to women of Maltese nationality while 9.7% (402) were Non-Maltese. In the remaining 0.6% (23) nationality was not specified. The table below gives the number of mothers of Maltese and non-Maltese Nationality delivering on the Maltese Islands.

<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>
1999	4116	95.5	192	4.5	3	0.1
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

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

Parity

There were 52.4% of mothers who were primiparas in 2008. The following table gives a breakdown of mothers by age and previous parity (includes all previous live and still births).

<i>Mother's Age Group</i>	<i>Delivery order (previous livebirths and still births are included)</i>							<i>Total</i>
	<i>1st</i>	<i>2nd</i>	<i>3rd</i>	<i>4th</i>	<i>5th</i>	<i>>5th</i>	<i>Unknown</i>	
Under 20	249	25	2	0	0	0	0	276
20-24	435	145	30	4	1	0	0	615
25-29	870	439	71	33	10	6	1	1430
30-34	492	581	150	46	15	10	0	1294
35-39	116	169	104	32	14	7	0	442
40-44	10	28	23	15	6	5	0	87
45+	0	1	2	1	1	1	0	6
Unknown	3	0	1	0	0	0	0	4
Total	2175	1388	383	131	47	29	1	4154

Table 4 – Parity of Mothers by age group

Educational Level reached

It is documented that maternal educational level has a bearing on outcomes of pregnancy. During 2008 efforts were made to improve the collection of maternal educational level data. In 2007 only 10.6% of mothers had their educational level reported; in 2008 this collection increased to 65 % of mothers and is presented in Table 5. Of the 2688 mothers whose level of education was reported 29.7% had a tertiary education, 69.7% had a secondary level of education and 0.6% were reported as having only primary or no education.

<i>Level of Education reached</i>	<i>2008</i>	
	<i>Number</i>	<i>%</i>
Primary or no education	17	0.4
Secondary	1874	45.1
Tertiary	797	19.2
Unknown	1466	35.3

Table 5 – Maternal Education distribution

MATERNAL LIFESTYLES

There were 264 (6.4%) of mothers who were reported to smoke one or more cigarettes during pregnancy this year. Three mothers were reported to drink alcohol regularly during pregnancy and 28 (0.7%) were reported as being drug abusers.

<i>Maternal Lifestyles</i>	<i>2008</i>	<i>2007</i>
<i>Cigarette smoking during pregnancy:</i>		
1 to 3/day	89	25
>than 3/day	175	90
Do not smoke	3827	3493
Unspecified	63	245
<i>Alcohol consumption during pregnancy:</i>		
Up to 1 unit/day	3	0
>than 1 unit/day	0	0
None	4088	3607
Unspecified	63	246
<i>Drug Abuse during pregnancy</i>		
Yes	28	19
No	4061	3589
Unspecified	65	245

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

MATERNAL PATHOLOGY DURING PREGNANCY

In 2008 there were 60 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 for this year and last year that were reported with specific obstetric pathology during pregnancy. The most frequently reported was gestational hypertension, with 6.5% of mothers registered as having gestational hypertension.

<i>Pathology during pregnancy</i>	<i>2008</i>			<i>2007</i>		
	<i>Yes</i>	<i>No</i>	<i>Unspec.</i>	<i>Yes</i>	<i>No</i>	<i>Unspec.</i>
Antepartum Haemorrhage	102	4046	6	36	3700	117
Gestational hypertension	268	3873	13	242	3500	111
Pre-eclampsia	66	4086	2	7	3729	117
Eclampsia	3	4149	2	1	3735	117
Placenta praevia	71	4072	11	56	3680	117
Abruption of placenta	7	4144	3	8	3728	117
Suspected IUGR*	232	3910	12	164	3574	115
Cardiovascular disease	23	4130	1	8	3729	116

*IUGR – intrauterine growth retardation

Table 7- Pathology during pregnancy

Diabetes in Pregnancy

In 2008 there were 18 mothers who were reported as being Insulin Dependent Diabetic before this pregnancy while there were 38 mothers reported with Non-Insulin Dependent diabetes prior to pregnancy. In addition, there were a total of 104 mothers registered with gestational diabetes who were controlled without the use of insulin, and no mothers registered as having gestational diabetes treated with insulin.

SINGLETON AND MULTIPLE DELIVERIES

For this year, there were a total of 4084 (98.3%) singleton and 66 (1.6%) twin deliveries, 4 triplet and no quadruplet deliveries.

<i>Multiplicity</i>	<i>2008</i>	<i>2007</i>
Singleton	4084	3811
Twin	66	40
Triplet	4	1
Quadruplet	0	1

Table 8 – Deliveries by multiplicity

SITE OF DELIVERY

In 2008 of the total 4154 deliveries registered by NOIS, 4149 (99.9%) occurred in a hospital while there were 5 deliveries that occurred at home or another site but were later referred to a hospital. 5 of the hospital deliveries were reported as occurring underwater.

ONSET OF DELIVERY

Of the total 4154 deliveries, 60.6% (2517) were reported as spontaneous onset of contractions, 22.3% (925) were induced by drugs or artificial rupture of membranes and 17.1% (712) were carried out as elective caesarean sections.

DAMAGE TO THE PERINEUM

A total of 2891 women were delivered by normal or assisted vaginal delivery. 2692 (93.1%) of these women were reported to have a normal vertex vaginal delivery, while 199 (6.9%) had assisted vaginal delivery (including ventouse, forceps and breech). A total of 1129 (39.2%) were reported to have sustained no damage to the perineum.

<i>Damage to perineum</i>	<i>Normal Vaginal Delivery</i>		<i>Assisted Vaginal Delivery**</i>	
	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>
No Damage	1116	41.5	13	6.5
Episiotomy* only	616	22.9	141	70.9
Tear only	884	32.8	19	9.5
Episiotomy and tear	76	2.8	24	12.1
Unknown	0	0	2	1.0

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

**These include ventouse, forceps and breech extraction

Table 9 – Damage to perineum in vaginal deliveries

INFANT / FETAL BIRTHS

METHOD OF BIRTH

In 2008 there were a total of 4228 infant/fetal births. Of these 2699 (63.8%) were delivered as a vertex delivery, 1328 (31.4%) by emergency or elective Caesarean Section and 201 (4.8%) by assisted vaginal delivery (includes forceps, ventouse and breech).

<i>Mode of Delivery*</i>	<i>2008</i>	<i>2007</i>
Vertex delivery	2699	2458
Elective/emergency Caesarean Section	1328	1287
Forceps	14	15
Ventouse	181	136
Breech deliveries	6	2

*Data analysed according to total infant/fetal births

Table 10 – Mode of delivery

For 2008 there were 1328 infants/fetuses delivered by caesarean section but 1263 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 2008 was 30.4% of the total 4154 maternal deliveries.

The Caesarean section operation rate has increased in all developed countries over the past years. The table below gives the reported caesarean section rates for Malta and Gozo since 1999.

<i>Year</i>	<i>Deliveries by Caesarean section</i>	<i>Caesarean section operation rate (% of all deliveries)</i>
1999	951	22.1
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

Table 11 – Caesarean Section rates 1999-2008

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>2008</i>		<i>2007</i>	
	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>
Male	2216	52.4	2063	53
Female	2012	47.6	1835	47

Table 12 – Gender distribution of infants delivered

BIRTHWEIGHT OF INFANTS/FETUSES

In 2008, there were 3899 (92.2%) of the total births that occurred in the birth weight range of 2500g to 4999g. 250 (5.9%) of the total births were in the low birth weight range of 1500g to 2499g, while 51 (1.2%) of births were of very low birth weight 500g to 1499g. This year there were 3 babies of birth weight less than 500g but 22 completed weeks gestation. 17 babies were of birth weight 4500g and over. In 21 babies, the birth weight was not recorded.

The lowest birth weight recorded this year was 280g and this baby was a stillbirth at 22 completed weeks gestation. The highest birth weight recorded was 5190g. The average birth weight was 3204g. All infants / fetuses of 22 weeks gestation and over are registered into the system.

<i>Birth weight</i>	<i>2008</i>		<i>2007</i>	
	<i>Number*</i>	<i>%</i>	<i>Number*</i>	<i>%</i>
<500g	3	0.1	4	0.1
500-999g	29	0.7	12	0.3
1000-1499g	22	0.5	19	0.5
1500-1999g	57	1.3	36	0.9
2000-2499g	193	4.6	187	4.8
2500-2999g	909	21.5	850	21.8
3000-3499g	1829	43.3	1750	44.9
3500-3999g	957	22.6	877	22.5
4000-4499g	191	4.5	126	3.2
4500-4999g	13	0.3	17	0.4
5000+	4	0.1	0	0
Unspecified	21	0.5	20	0.5

Table 13 – Birthweight distribution of infants/fetuses

GESTATIONAL AGE AT DELIVERY

Prematurity is associated with adverse obstetric outcomes and long term health problems. In 2008, 309 (7.3%) of babies born were premature <37 weeks. 61 (1.4%) were born very or extremely preterm (<32 weeks).

<i>Gestational age</i>	<i>2008</i>		<i>2007</i>	
	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>
Extremely preterm 22-27 weeks	31	0.7	15	0.4
Very preterm 28-31 weeks	30	0.7	22	0.6
Moderately preterm 32-36 weeks	248	5.9	229	5.9
Term 37 – 41 weeks	3913	92.5	3619	92.8
Post term 42+ weeks	6	0.1	13	0.3
Unspecified	0	0	0	0

Table 14 – Gestational age at delivery

OUTCOME OF BIRTH

The number of live births registered in 2008 was 4199 which accounted for 99.3% of the total births at a national level. The remaining 29 births were reported as stillbirths. Of the livebirths, there were 21 cases of early neonatal deaths and 3 cases of late neonatal deaths (see tables below). All births of 22 weeks and over irrespective of birth weight are registered into the system.

<i>Outcome of Birth</i>	<i>2008</i>	<i>2007</i>
Livebirths	4199	3886
Stillbirths	29	12

<i>Neonatal deaths</i>		
Early Neonatal deaths	21	17
Late Neonatal deaths	3	3

Table 15 – Birth outcomes – livebirths, fetal, early and late neonatal deaths

INFANT FEEDING METHODS AT DISCHARGE

Infant feeding habits are recorded by hospital staff at the time of discharge from hospital, 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>2008</i>	<i>2007</i>
Breast only	2407	2143
Bottle only	1370	1019
Mixed (Breast & Bottle)	384	521
Other*	62	68
Unspecified	5	147

* '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, FETAL, PERINATAL AND NEONATAL MORTALITY INDICATORS

(Compiled in conjunction with the National Mortality Register of the Department of Health Information and Research)

Maternal, fetal, perinatal and neonatal mortality statistics are good indicators of the quality of health care and these statistics are presented since 1999 when the NOIS database was started in the format it is today.

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 of birthweight 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
1999	1
2000	0
2001	2
2002	0
2003	0
2004	0
2005	0
2006	0
2007	0
2008	1

Table 17 – Maternal Deaths 1999-2008

Year	Fetal death rate 500g and over	
	Number	Rate/1000 total births
1999	27	6.2
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

Table 18 – Fetal Death Rates 1999-2008

Year	Neonatal mortality rate (500g and over)	
	Number	Rate/1000 live births
1999	21	4.8
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

Table 19 – Neonatal Mortality rates 1999-2008

Year	Early neonatal mortality rate (500g and over)	
	Number	Rate/1000 live births
1999	16	3.7
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

Table 20 – Early Neonatal Mortality rates 1999-2008

Year	Late neonatal mortality rate (500g and over)	
	Number	Rate/1000 live births
1999	5	1.2
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

Table 21 – Late Neonatal Mortality Rates 1999-2008

Year	Perinatal mortality rate (500g and over)	
	Number	Rate/1000 total births
1999	43	9.9
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

Table 22 – Perinatal Mortality Rates 1999-2008

Fetal, Neonatal and Perinatal mortality rates 1999-2008 (including only fetuses of birth weight 500g and over)

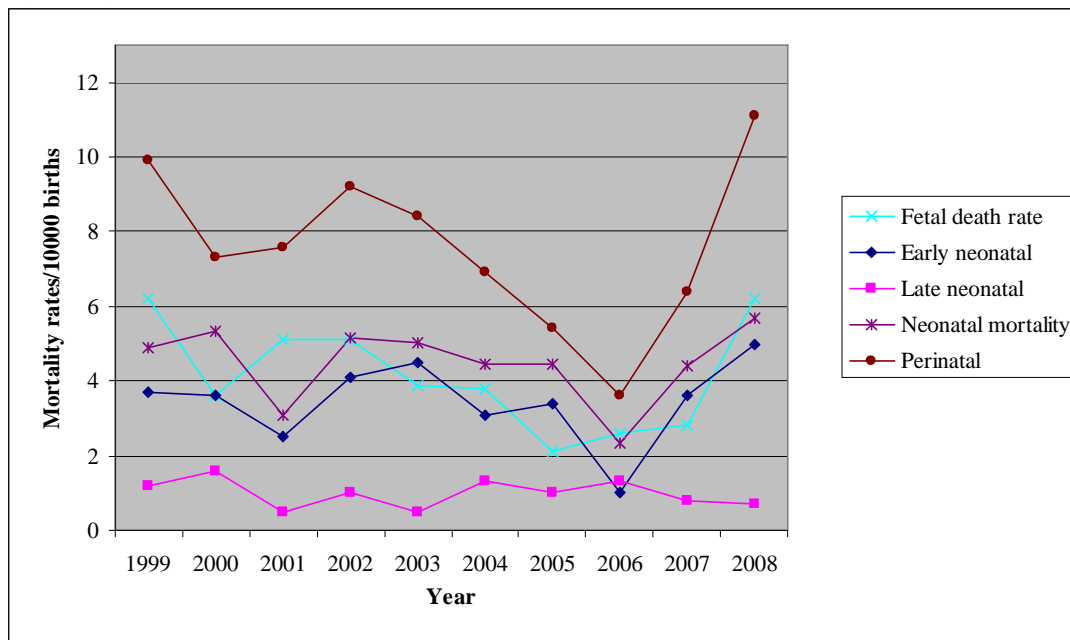


Figure 1 – Fetal, neonatal and perinatal mortality rates 1999-2008
(include only fetuses of birth weight 500g and over)

Improved 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 perinatal 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 2009. Only data until 2007 is completed as of May 2009, 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	9.42
2002	9.86	10.52	9.27
2003	10.12	10.57	9.32
2004	9.69	10.67	9.50
2005	9.56	10.59	9.72
2006	9.55	10.68	9.87
2007	9.50	na	9.94

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	1.55	1.26
2005	1.37	1.56	1.28
2006	1.41	1.57	1.31
2007	1.37	1.58	1.32

Table 24 – Total Fertility Rate

Year	Malta	EU members before May 2004	EU members since 2004 or 2007
2001	50.83*	5.26	16.38
2002	0	5.36	12.00
2003	0	5.40	13.26
2004	0	5.68	11.67
2005	0	4.94	8.79
2006	0	5.56	8.03
2007	0	na	7.30

*There were 2 maternal deaths in 2001

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	4.40	5.40
2002	5.09	4.36	5.36
2003	3.95	4.24	5.23
2004	3.84	4.15	5.13
2005	2.07	4.05	4.99
2006	2.57	4.02	4.78
2007	3.08	na	4.79

na= not available

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	3.12	6.13
2002	5.38	3.02	5.83
2003	5.20	2.94	5.64
2004	4.37	2.88	5.74
2005	4.41	2.76	5.22
2006	2.32	2.72	4.96
2007	5.15	na	4.7

na= not available

Table 27 – Neonatal Deaths per 1000 live births

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.

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

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.

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

