



Perinatal Statistics Report

Health Research and
Information Division
December 2010

2008



ACKNOWLEDGEMENTS

The production of this annual report requires commitment and hard work from many individuals. Responsibility for the collection of perinatal data for the National Perinatal Reporting System (NPRS) rests with colleagues in maternity hospitals and units throughout Ireland together with independent midwives. We gratefully acknowledge the input of medical records staff, IT personnel, and administrative departments, together with hospital managers. We are much indebted to these individuals for their support and efforts.

In addition to financing the NPRS, the Department of Health and Children and the Health Service Executive continues to provide essential support for the operation and development of this system. In particular, we would like to express our gratitude to Professor Michael Turner and Lorna Collins for their valuable contributions and comments on an early draft of this report.

The NPRS team within the Economic and Social Research Institute's Health Research and Information Division (HRID) oversees a wide range of tasks related to the management of this system including personnel training, data quality and audit, data management and analysis, and information dissemination. We acknowledge gratefully the dedication, skill and expertise that all the members of this team bring to their work on this scheme. The IT Department of the HRID supports the development of the NPRS software system for data entry and validation and this is gratefully acknowledged. We would also like to thank, specifically, Eoin Feeney, Rachel Joyce, Conor Keegan, Siobhan Kenny, Deirdre Murphy, and Jacqueline O'Reilly for reviewing and commenting on earlier drafts of this report.

Inevitably, a small number of individuals have to carry most of the responsibility for producing a report of this type. In this case Aisling Mulligan, Sinead O'Hara, and Sheelagh Bonham were to the fore in the preparation of the report for publication. We wish to express our sincere thanks to these colleagues for all of their hard work on the report. Their commitment, enthusiasm and professionalism are gratefully acknowledged and sincerely appreciated.

TABLE OF CONTENTS

LIST OF TABLES	iii
LIST OF FIGURES	v
KEY FINDINGS	viii
SECTION ONE	1
INTRODUCTION	
Introduction	2
Purpose of this Report	2
Structure of this Report	2
Conventions used in this Report	3
National Minimum Data Set	4
Data Collection and Quality	5
SECTION TWO	7
TIME TRENDS AND INTERNATIONAL COMPARISONS	
Introduction	8
Trends in Selected Statistics, 1999–2008	8
Perinatal Mortality	11
Birth Rates	13
Fertility	15
Singleton and Multiple Births	16
Method of Delivery for Primiparous and Multiparous Women.....	18
SECTION THREE	21
GENERAL CHARACTERISTICS	
Introduction	22
Maternal Age	23
Mother’s Marital Status	24
Occupation	27
Mother’s Occupation	27
Father’s Occupation	29
Nationality	32
Mother’s Nationality	32
Father’s Nationality	35
Maternal Parity	37
Number of Previous Stillbirths	41
Interval Since Last Birth	42
Birthweight	43
Gestational Age	47
Month of Birth	48

SECTION FOUR	51
PERINATAL CARE	
Introduction	52
Type of Antenatal Care	53
Duration of Pregnancy at First Antenatal Visit	54
Advance Hospital Bookings	55
Mother’s Antenatal Length of Stay	56
Mother’s Postnatal Length of Stay	57
Rubella Immunity Status of Mother	60
Method of Delivery	61
Method of Delivery for Total Maternities by Parity.....	61
Method of Delivery for Total Births by Parity.....	62
Method of Delivery by Plurality.....	64
Distribution of Births by Size of Maternity Unit	68
Inter-Hospital Transfer of Infants	69
Infant’s Length of Stay	70
Infant’s Type of Feeding.....	72
 SECTION FIVE	 79
PERINATAL OUTCOMES	
Introduction	80
Mortality by Birthweight Category and Parity.....	80
Cause of Death by Birthweight	84
Mortality by Gestational Age	89
Cause of Death	92
Age at Death	101
Post-Mortem Examinations.....	102
 SECTION SIX	 103
DOMICILIARY BIRTHS	
Introduction	104
Domiciliary Births, 1999–2008.....	104
Maternal Age.....	106
Marital Status.....	108
Gestational Age.....	108
Birthweight.....	109
Occupation.....	110
Infant’s Type of Feeding.....	111
Domiciliary births by Mother’s County of Residence.....	112
 APPENDICES	 113
Appendix A: Definitions	114
Appendix B: Copy of Part 3 of the Birth Notification Form	118
Appendix C: Classification of Occupation	119
Appendix D: Cause of Death Classification	120
Appendix E: Classification of County of Residence	124
Appendix F: Classification of Nationality.....	125
Appendix G: Source Data for Figures	129

LIST OF TABLES**Tables for Time Trends and International Comparisons :**

2.1	Trends in Selected Statistics, 1999–2008.....	9
2.2	Live Births, Stillbirths, Early Neonatal Deaths, and Perinatal Deaths, 1999–2008.....	11
2.3	Singleton and Multiple Births, 1999–2008.....	17
2.4	Live Births, Stillbirths and Early Neonatal Deaths, Numbers and Rates, Singleton and Multiple Births, 1999–2008.....	17
2.5	Percentage Distribution of Maternities by Method of Delivery, Primiparous and Multiparous Women, 1999–2008.....	18

Tables for General Characteristics:

3.1	Age of Mother.....	23
3.2	Mother's Marital Status.....	25
3.3	Mother's Occupation.....	28
3.4	Father's Occupation.....	30
3.5	Mother's Nationality.....	33
3.6	Father's Nationality.....	36
3.7	Maternal Parity	38
3.8	Previous Stillbirths.....	41
3.9	Interval in Years Since Last Birth.....	42
3.10	Birthweight.....	44
3.11	Gestational Age at Delivery.....	47
3.12	Month of Birth.....	49

Tables for Perinatal Care:

4.1	Type of Antenatal Care.....	53
4.2	Time of First Visit to Doctor or Hospital during Pregnancy.....	54
4.3	Advance Hospital Bookings.....	55
4.4	Mother's Antenatal Length of Stay.....	56
4.5	Mother's Postnatal Length of Stay.....	58
4.6	Rubella Immunity Status of Mother, Numbers and Percentages.....	60
4.7a	Method of Delivery for Total Maternities by Parity.....	61
4.7b	Method of Delivery for Total Births by Parity.....	63
4.8a	Method of Delivery, Total Births.....	64
4.8b	Method of Delivery by Mother's Age	66
4.9	Size of Maternity Unit (number of live births and stillbirths annually).....	68
4.10	Inter-Hospital Transfer of Infants.....	69
4.11	Percentage Distribution of Live Births by Infant's Length of Stay in Hospital.....	70
4.12	Age of Mother by Infant's Type of Feeding, Numbers and Percentages, Total Live Births.....	73
4.13	Mother's Occupation by Infant's Type of Feeding , Total Live Births.....	76

Tables for Perinatal Outcomes:

5.1	Total Births, Antepartum and Intrapartum Stillbirths, Early Neonatal Deaths, and Mortality Rates by Birthweight and Parity.....	81
5.2	Perinatal Mortality: Numbers and Rates by Birthweight and Cause of Death.....	85
5.3	Total Births, Antepartum, and Intrapartum Stillbirths, Early Neonatal Deaths and Mortality Rates by Gestational Age.....	89
5.4	Stillbirths, Early Neonatal Deaths and Mortality Rates by Cause of Death by ICD-10 Chapter and Selected Sub-Categories.....	93
5.5	Age at Death, Early Neonatal Deaths.....	101
5.6	Stillbirths and Early Neonatal Deaths undergoing Post-Mortem Examinations.....	103

Tables for Domiciliary Births:

6.1	Trends in Domiciliary Births - Selected Statistics, 1999-2008.....	105
6.2	Age of Mother by Maternal Parity.....	107
6.3	Mother's Marital Status by Age of Mother.....	108
6.4	Age of Mother by Gestational Age at Delivery.....	108
6.5	Birthweight by Gestational Age at Delivery.....	109
6.6	Mother's Occupation by Birthweight.....	110
6.7	Domiciliary Births by Mother's County of Residence.....	112

Appendix Tables:

D1	Cause of Death Coding Rules.....	122
D2	ICD-10, Cause of Death Codes.....	123

Tables for Source Data for Figures:

G1	Percentage Distribution of Total Births by Mother's Marital Status, 2004–2008.....	129
G2	Mother's County of Residence by Mother's Marital Status, Total Births.....	130
G3	Percentage Distribution of Total Births by Mother's Nationality, 2004–2008.....	131
G4	Mother's Average Age by Mother's Nationality, Total Births	132
G5	Percentage Distribution of Total Births to Primiparous Women by Maternal Age, 2004 and 2008.....	132
G6	Percentage Distribution of Total Births to Multiparous Women by Maternal Age, 2004 and 2008.....	133
G7	Age of Mother by Maternal Parity, Total Maternities.....	133
G8	Birthweight Groups for Primiparous Women.....	134
G9	Birthweight Groups for Multiparous Women.....	135
G10	Birthweight Groups, Numbers and Percentages, Total Live Births.....	136
G11	Birthweight Groups by Sex, Total Live Births.....	136
G12	Gestational Age at Delivery, Primiparous Women.....	137
G13	Gestational Age at Delivery, Multiparous Women.....	138
G14	Method of Delivery by Mother's Postnatal Length of Stay, Singleton and Multiple Births.....	139
G15	Method of Delivery by Parity, Total, Singleton and Multiple Births.....	140
G16	Mother's County of Residence by Infant's Type of Feeding, Total Live Births	141
G17	Total Births, Antepartum and Intrapartum Stillbirths, Early Neonatal Deaths, and Mortality Rates by Birthweight.....	143
G18	Type of Feeding by Place of Birth, Total Live Births.....	144

LIST OF FIGURES

1.1	National Perinatal Reporting System, Data Collection.....	6
-----	---	---

Figures for Time Trends and International Comparisons:

2.1	Stillbirth, Early Neonatal and Perinatal Mortality Rates, Ireland, 1999–2008.....	12
2.2	Perinatal Mortality Rates for Selected EU Countries, 2008.....	13
2.3	Trends in Birth Rates for Selected EU Countries, 1999-2008.....	14
2.4	Birth Rates per 1,000 Population for Selected EU Countries, 2008.....	14
2.5	Age-Specific Fertility Rates (ASFRs) and Total Period Fertility Rates (TPFRs), Ireland, 1999-2008.....	15
2.6	Total Period Fertility Rates for Selected EU Countries, 2008.....	16
2.7	Percentage Distribution of Maternities Delivering by Caesarean Section, for Total, Primiparous and Multiparous Women, 1999–2008.....	19

Figures for General Characteristics:

3.1	Age-specific Stillbirth, Early Neonatal and Perinatal Mortality Rates, Total Births...	24
3.2	Percentage of Births by Mother's Marital Status, Total Births, 2004–2008.....	26
3.3	Percentage of Births to Single Mothers by Mother's County of Residence, Total Births.....	26
3.4	Perinatal Mortality Rates by Mother's Occupation, Total Births.....	29
3.5	Perinatal Mortality Rates by Father's Occupation, Total Births.....	31
3.6	Percentage Distribution of Births by Nationality for Non-Irish Mothers, Total Births, 2004–2008.....	34
3.7	Average Age of Mother by Mother's Nationality, Total Births.....	34
3.8	Total Births to Primiparous Women by Mother's Age Group, 2004 and 2008.....	39
3.9	Total Births to Multiparous Women by Mother's Age Group, 2004 and 2008.....	39
3.10	Parity by Age of Mother, Total Maternities.....	40
3.11	Birthweight: Cumulative Percentages of Total Live Births.....	45
3.12	Percentage of Births by Birthweight Groups, Total Live Births.....	45
3.13	Percentage Distribution for Males and Females across Birthweight Groups, Total Live Births.....	46
3.14	Perinatal Mortality Rates by Gestational Age at Delivery, Total Births.....	48
3.15	Percentage of Births by Month of Birth, Total Births.....	50

Figures for Perinatal Care:

4.1	Mother's Postnatal Length of Stay by Method of Delivery, Singleton Births.....	59
4.2	Mother's Postnatal Length of Stay by Method of Delivery, Multiple Births.....	59
4.3	Percentage Distribution of Maternities by Method of Delivery.....	62
4.4	Percentage Distribution of Total Live Births by Method of Delivery.....	65
4.5	Percentage Distribution of Total Births by Method of Delivery and Mother's Age...	67
4.6	Percentage Distribution of Births by Size of Maternity Unit, Total Births.....	68
4.7	Percentage Distribution of Total Live Births by Infant's Length of Stay.....	71
4.8	Infant's type of feeding by Age of Mother, Total Live Births.....	74
4.9	Percentage Distribution of Breastfed Infants by Mother's County of Residence, Total Live Births.....	75
4.10	Percentage Distribution of Infants Feeding by Mother's Occupation, Total Live Births.....	77

Figures for Perinatal Outcomes:

5.1	Deaths by Birthweight Groups and Parity.....	82
5.2	Perinatal Mortality Rates by Birthweight Groups, Total Births.....	83
5.3	Total Deaths < 2,500 grams by Cause of Death.....	88
5.4	Total Deaths ≥ 2,500 grams by Cause of Death.....	88
5.5	Deaths by Gestational Age Groups, Total, Singleton and Multiple Births.....	90
5.6	Perinatal Mortality Rates by Gestational Age at Delivery, Total Births.....	91
5.7	Stillbirths by Cause of Death, Total, Singleton and Multiple Births.....	98
5.8	Early Neonatal Deaths by Cause of Death, Total, Singleton and Multiple Births....	99
5.9	Perinatal Deaths by Cause of Death, Total, Singleton and Multiple Births.....	100

Figures for Domiciliary Births:

6.1	Number and Percentage of Domiciliary Births Reported, 1999–2008.....	106
6.2	Age of Mother.....	107
6.3	Birthweight Groups.....	109
6.4	Infant's Type of Feeding by Place of Birth.....	111
6.5	Domiciliary Births by Mother's County of Residence.....	112

KEY FINDINGS

The Perinatal Statistics Report 2008 presents national statistics on perinatal events in Ireland. This report is based on data collected for the National Perinatal Reporting System (NPRS) and provides information on mothers giving birth and babies born in 2008.

SUMMARY STATISTICS, 2008

Live Births, Stillbirths, Early Neonatal Deaths, Perinatal Deaths, and Adjusted Perinatal Deaths

	Total Births		Live Births		Stillbirths		Early Neonatal Deaths		Perinatal Deaths		Adjusted Perinatal Deaths*	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Singleton	72,916		72,582	4.6	334	4.6	138	1.9	472	6.5	342	4.7
Multiple	2,671		2,647	9.0	24	9.0	21	7.9	45	16.8	42	15.7
Total	75,587		75,229	4.7	358	4.7	159	2.1	517	6.8	384	5.1

* In this and subsequent tables, 'Adjusted Perinatal Rate' excludes all deaths due to congenital anomalies.

BABIES:

Of the babies born in 2008

- 6.2% were preterm (less than 37 weeks gestation), the highest reported since 1999 (5.7%)
- 5.3% of live births were low birthweight (less than 2,500 grams)
- 44.3% of babies were breastfed at discharge from hospital, compared to 42.5% in 2004 and 36% in 1999
- 26.7% of total live births were delivered by caesarean section, with 25.3% of singleton and 64.0% of multiple live births were delivered by this method. In 1999 20.4% of total live births were delivered by caesarean section.
- the average length of stay in hospital was 3.1 days for a singleton birth and 9.9 days for multiple births
- the perinatal mortality rate was 6.8 per 1,000 live births and stillbirths. This has fallen by 17.1% since 1999, when it was 8.2 per 1,000 live and still births (6.5 per 1,000 singleton births and 16.8 per 1,000 multiple births)
- at 11.3 per 1,000 live births and stillbirths, the perinatal mortality rate was highest for babies born to mothers aged 40 to 44 years. The lowest perinatal mortality rate of 5.8 per 1,000 live and stillbirths was for babies born to mothers aged 35 to 39 years.

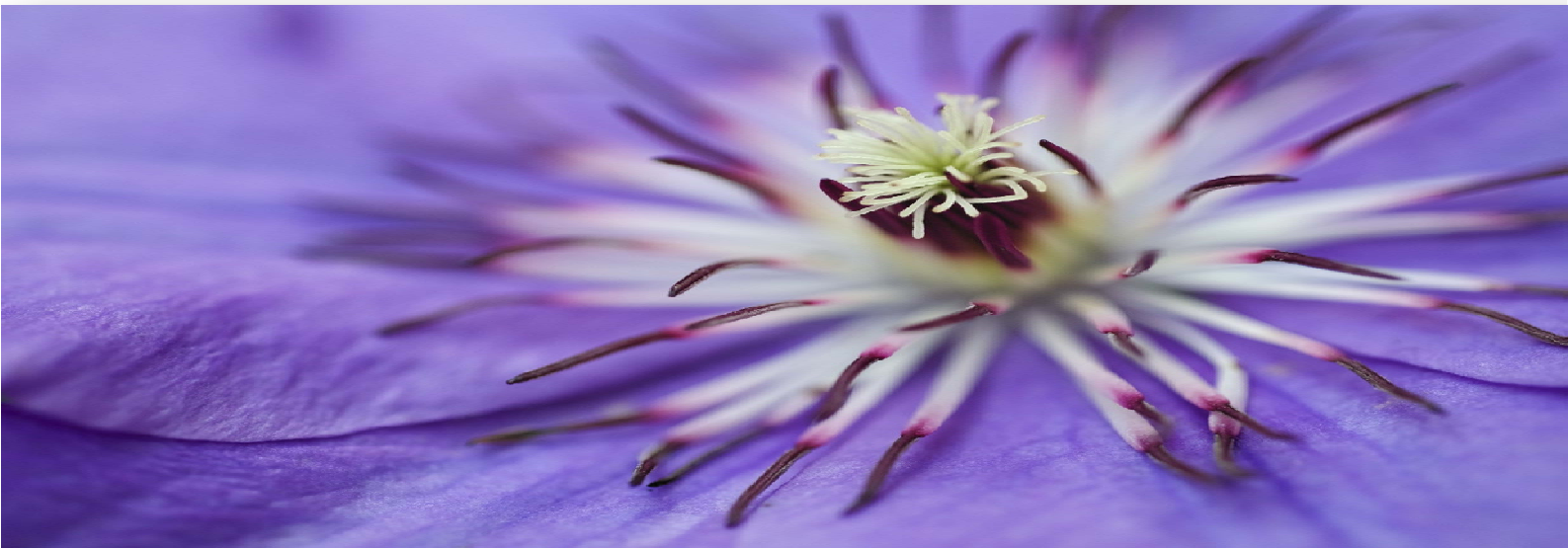
MOTHERS:

Of the women who gave birth in 2008

- average age of mother has increased from 30.1 years in 1999 to 31.1 years in 2008
- 26.6% of mothers were aged 35 years or older, up from 20.7% in 1999
- 14.2% of first births were to women aged 35 years or older compared to 8.6% in 1999
- 3.2% of total mothers giving birth were aged 19 years or less, compared to 6.2% in 1999
- 42.4% gave birth for the first time, with an average age for first time mothers of 28.9 years
- 32.4% of births were to single mothers, who had an average age of 27.3 years
- 1.8% had a multiple pregnancy
- 57.9% of women having a singleton live birth delivered spontaneously, while deliveries using forceps accounted for 4.1%, vacuum extractions for 12.6%, and 26% by caesarean section
- the total average length of stay in hospital was 3.5 days but was longer for women who had a caesarean section (average length of stay 5.5 days). Total postnatal length of stay in hospital was 2.7 days; for women who had a caesarean section this was 4.3 days
- 22.5% of births in 2008 were to mothers from outside Ireland compared to 15.6% in 2004.

SECTION ONE

INTRODUCTION



INTRODUCTION

Annual reports on perinatal statistics in Ireland are compiled from the statistical data collected in Part 3 of the standard Birth Notification Form (BNF01/2003) used to notify local registrars of all live births and stillbirths occurring in Ireland. This statistical data set, known as the National Perinatal Reporting System (NPRS), is a valuable resource and is the only complete national reporting system on births. Since 1999 the Economic and Social Research Institute (ESRI) has managed the collection, processing and reporting of data submitted to the NPRS on behalf of the Department of Health and Children and the Health Service Executive. Previous reports in this series can be downloaded from http://www.esri.ie/health_information/nprs/nprs_reports/

PURPOSE OF THIS REPORT

The principal aim of this report is the presentation of national statistics on perinatal events for the year 2008.

This report aims to

- describe the fundamental social and biological characteristics of mothers and their babies
- report on pregnancy outcomes with particular reference to perinatal mortality
- highlight important aspects of perinatal care
- stimulate a wider interest in research in the area of perinatal epidemiology
- promote a general recognition of the importance of having an accurate and complete perinatal reporting system at a national level.

STRUCTURE OF THIS REPORT

SECTION ONE

This chapter provides background information relating to the NPRS system, it explains conventions used in the report, and provides details relating to the data elements collected in the system.

SECTION TWO contains summary data on selected variables since 1999 and trends in international comparisons.

SECTION THREE contains tables relating to the following variables: maternal age, marital status, socio-economic group of mother and father (derived from collection of data on occupations), nationality of mother and father, maternal parity, distribution of previous stillbirths, interval since last birth, birthweight, gestational age, and month of birth.

SECTION FOUR presents tables relating to variables which fall more naturally into the category of the use of health care facilities, and deals in particular with the following: type of antenatal care received, timing of first antenatal visit, length of mother's antenatal and postnatal stay, whether hospital admission was booked or not, mother's immunity to rubella, method of delivery, classification of outcome according to size of maternity unit, transfer of infants between hospitals, length of infant's hospital stay, and type of feeding.

SECTION FIVE deals with perinatal outcomes in detail, examining perinatal deaths by birthweight and gestational age, with particular focus on cause of death. In this section tables are presented on the following variables: numbers of antepartum and intrapartum stillbirths and early neonatal deaths by birthweight groups and gestational age, numbers and rates for cause of death, age at death for early neonatal deaths, and numbers and percentages of stillbirths and early neonatal deaths undergoing post-mortem examinations.

SECTION SIX deals with domiciliary births, including trends since 1999. Tables are provided that examine the maternal characteristics of maternal age, parity, and marital status, and details of perinatal characteristics and care, including gestational age, birthweight and type of feeding.

APPENDICES include source data tables for figures, definitions and other relevant information for use when reading the report.

CONVENTIONS USED IN THIS REPORT

- All tables report total, singleton and multiple births for each variable and, where applicable, numbers of maternities are presented.
- Caution should be exercised when interpreting rates based on small numbers. *Rates calculated from 20 observations or less are distinguished by italic type as a warning to the user that their reliability as a measure may be affected by the small number of observations.*
- Throughout this report 'Not Stated' values are not included in the calculation of percentages used in discussion or in compilation of figures. 'Not Stated' values are shown in data tables.
- Unless otherwise stated, discussion on total births in this report includes live births and stillbirths for singleton and multiple births.

NATIONAL MINIMUM DATA SET

The NPRS data set provides for a national minimum data set, and is intended to serve as a basis for the development of a series of analyses over time. Births are registered and notified on a standard four-part Birth Notification Form (BNF01/2003) used to notify local registrars of all live births and stillbirths occurring in Ireland. The third part of the form has all identifying information removed and is sent to the Health Research and Information Division (HRID) at the ESRI (see Appendix B). Figure 1.1 provides a diagrammatic representation of the information system around the registration of births. All the tables in this report are based on data contained in the third part of the standard form.

The data collected by the NPRS can be grouped logically into demographic, clinical and administrative data as follows:

DEMOGRAPHIC DATA

- Date of infant's birth, sex of infant, multiple birth indicator
- Date of father's birth, father's county and country of residence, father's occupation, father's nationality (from 2004)
- Date of mother's birth, mother's county and country of residence, mother's occupation, mother's nationality (from 2004)
- Marital status of mother and date of present marriage

CLINICAL DATA

- Infant's birthweight and period of gestation, and mother's obstetric history (including parity)
- Autopsy indicator – whether stillbirth occurred before or during labour
- Main cause of death and one secondary cause of death for infant
- Maternal immunity to rubella, method of delivery
- Infant's BCG vaccination
- Main maternal disease or condition and one secondary maternal disease or condition affecting the infant or foetus
- Main disease or congenital malformation and one secondary disease or congenital malformation affecting the infant or foetus

ADMINISTRATIVE DATA

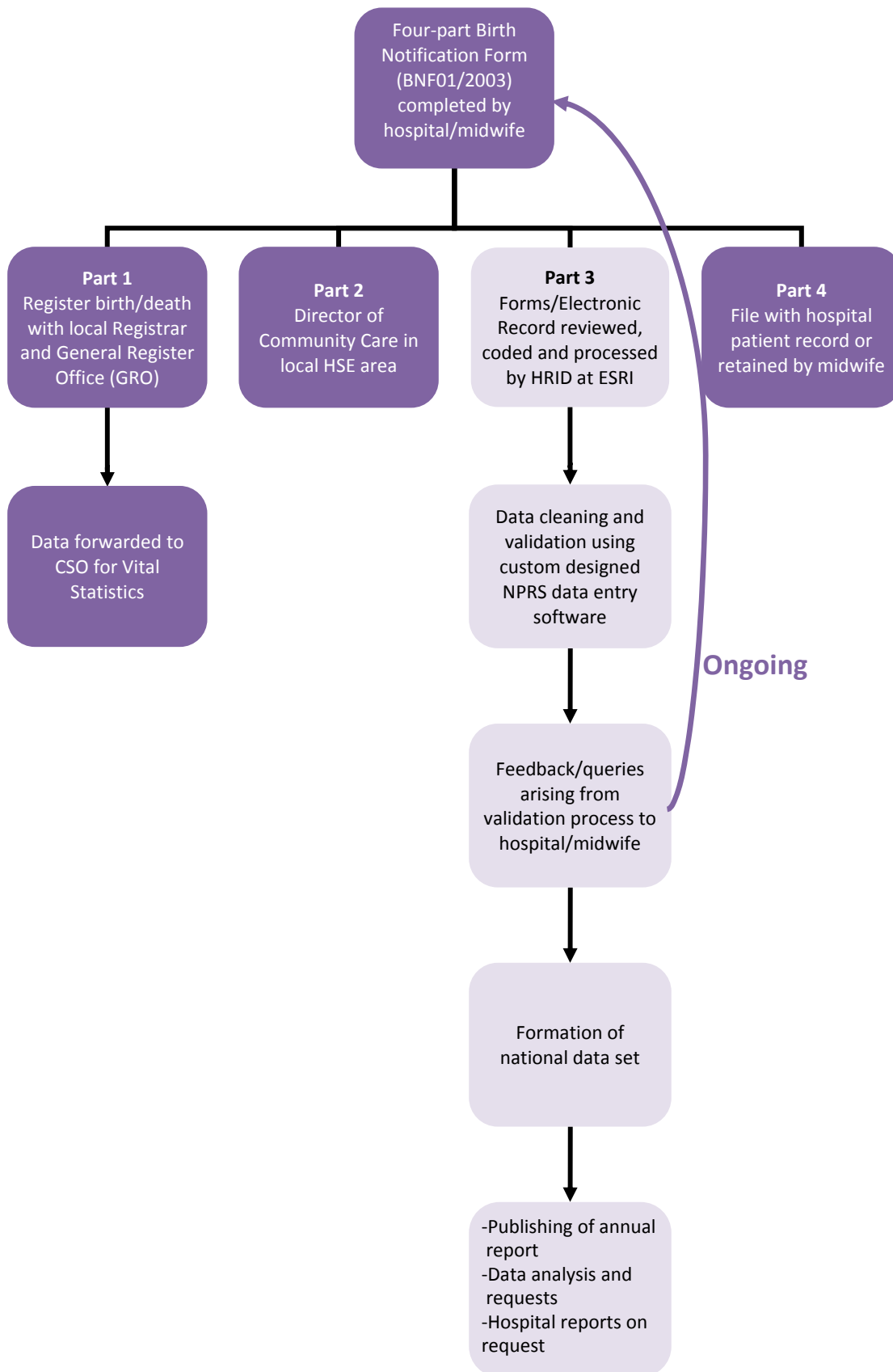
- Hospital number, case number (unique to hospital of birth)
- Type of birth indicator, place of birth
- Date of last birth (live birth or stillbirth)
- Type of death indicator, place of death
- Type of antenatal care received, dates of first visits to doctor and hospital during pregnancy
- Type of feeding, pre-booked admission indicator, dates of mother's admission and discharge, date of infant's discharge
- Infant transfer indicator, hospital number for hospital to which infant was transferred.

DATA COLLECTION AND QUALITY

The link between the Birth Notification Form and the birth registration process for the General Register Office (GRO) ensures complete coverage of all births for the NPRS (see Figure 1.1). With the objective of preserving confidentiality, each birth is recorded using case reference numbers unique to each hospital/maternity unit. Missing records can be identified using this unique case reference number system. Where a record is found to be missing, a request is made to the hospital/maternity unit to provide the birth notification form for any missing records. Similarly, independent midwives are requested to submit an annual summary of all births attended for a specified year, which is crosschecked against the birth notification forms received.

The Information Technology and Support team at the HRID has developed a custom-designed data entry and validation software system for NPRS data. Data are received, either in electronic or paper format, from the hospitals/independent midwives and entered in the NPRS data system. Quality checks include the application of a comprehensive series of edits, which are built into this software system to check for completeness, validity, logical, and coding errors. Once problems are identified, corrections can be made at the point of data entry. The completeness of each record is dependent on the commitment of those persons responsible for notification and registration of the births in each hospital/maternity unit throughout the country and each independent midwife working in the community.

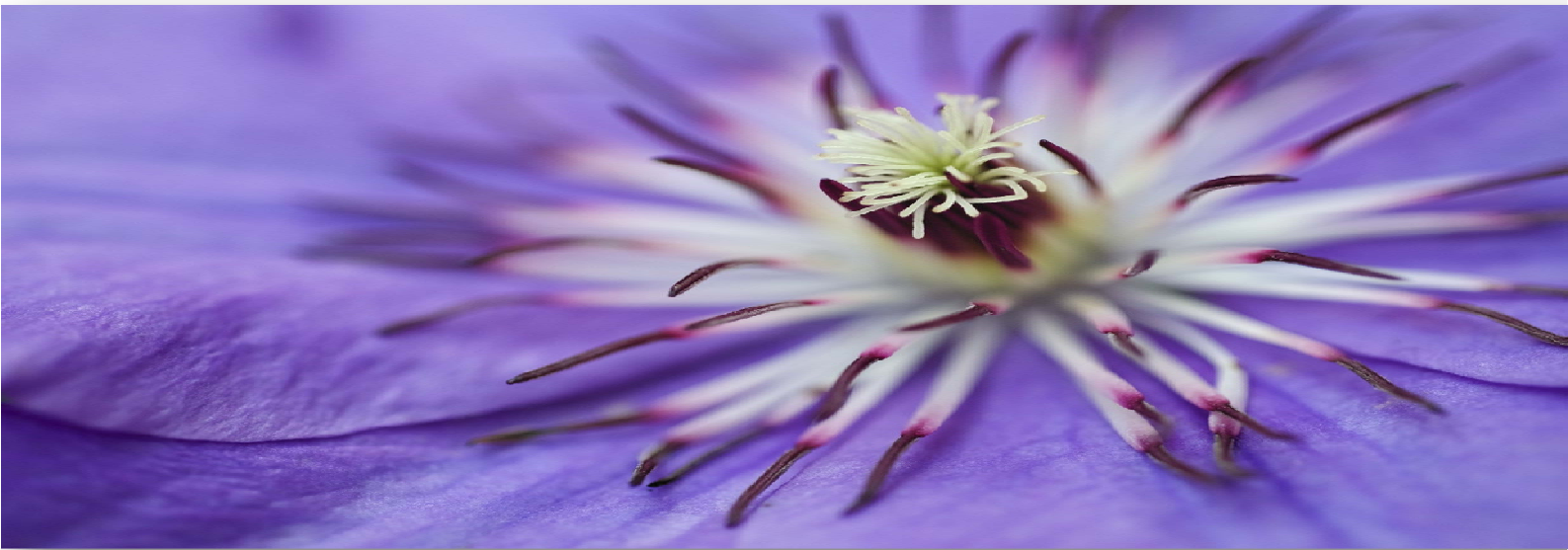
FIGURE 1.1 NATIONAL PERINATAL REPORTING SYSTEM, DATA COLLECTION



Notes: CSO denotes Central Statistics Office.
HSE denotes Health Service Executive.

SECTION TWO

TIME TRENDS AND INTERNATIONAL COMPARISONS



INTRODUCTION

This section presents selected statistics and data on three key indicators: perinatal mortality, birth rate and fertility. At a national level, data presented here show how these parameters have changed over time. International comparisons then allow the most recent statistics for Ireland to be compared with those for other European countries. The indicators for Ireland were calculated using data from the NPRS for the period 1999 to 2008¹.

TRENDS IN SELECTED STATISTICS, 1999–2008

Table 2.1 outlines trends in selected statistics for the period 1999 to 2008. Over the decade the average age of all mothers giving birth increased by just over one year from 30.1 years to 31.1 years. For single mothers, the average age increased from 24.7 years in 1999 to 27.3 years in 2008, while the percentage of total births to single mothers increased from 29.7 to 32.4 per cent. Average parity (number of previous live births and stillbirths) has declined slightly from 1.1 to 1.0 over the period and the interval in years since delivery of the last birth has remained relatively stable, ranging from 3.7 to 3.9 years. These data indicate that, on average, women giving birth in Ireland are doing so at an older age and having fewer births.

Trends in babies' characteristics have been largely consistent over the decade 1999 to 2008. While the average birthweight for singleton births did not record any significant change from year to year, the average birthweight for multiple births varied somewhat. The average birthweight for multiple births ranged from a high of 2,509.9 grams in 2000 to a low of 2,421.4 grams in 2007 and was recorded at 2,424.5 grams in 2008. The average birthweight for all babies was 3,464.0 grams in 2008 which is consistent with previous years. The percentage of total births recording low birthweights ranged between 4.9 per cent and 5.3 per cent over the period.

Additional statistics relating to the birth episode and the period following delivery are also outlined in Table 2.1. Booked admissions for 2008 are estimated at 98.9 per cent. The number of women choosing combined antenatal care has also increased over the period, with 2008 recording the highest percentage to date at 79.4 per cent. Average lengths of stay for both mother and baby have declined between 1999 and 2008. Mother's average length of stay was recorded at 4.7 days in 1999 and has fallen steadily to 3.5 days in 2008. For babies, average length of stay fell from 4.3 days in 1999 to 3.4 days in 2008. The percentage of women breastfeeding at discharge from hospital has risen from 36.2 per cent in 1999 to 44.7 per cent in 2008.

While in previous reports method of delivery was just reported by total births, in this report it is also reported by total maternities. Both spontaneous and forceps deliveries record declining trends over the decade. The percentage of spontaneous deliveries fell from 64.5 per cent in 1999 to 56.6 per cent in 2008 for total live births, (for maternities 65.0 per cent in 1999 and 57.4 per cent in 2008). The trend in delivery by caesarean section has increased from 20.4 per cent in 1999 to 26.7 per cent for total live births in 2008, (for total maternities 20.0 per cent in 1999 and 25.9 per cent in 2008).

¹ All 'Perinatal Statistics' annual reports are available for download at www.esri.ie/health_information/latest_hipe_nprs_reports

TABLE 2.1: TRENDS IN SELECTED STATISTICS, 1999-2008

Selected Statistics	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
General Characteristics										
Average Age of Mother in years ¹	30.1	30.2	30.3	30.4	30.6	30.8	31.0	31.0	31.1	31.1
Average Maternal Parity ¹	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0
Single Mothers (%) ^{1,2}	29.7	30.1	30.1	30.0	30.2	30.6	30.7	31.5	31.8	32.4
Average Age of Single Mothers in years ^{1,2}	24.7	25.0	25.4	25.7	26.1	26.4	26.6	26.8	27.1	27.3
Average Number of Previous Stillbirths per 1,000 maternities ¹	14.0	13.1	13.6	12.4	12.0	12.6	12.8	10.6	10.8	10.9
Average Weight in grams ³										
Singleton Births	3,505.4	3,517.3	3,509.4	3,503.7	3,500.6	3,508.0	3,503.2	3,503.9	3,499.3	3,501.9
Multiple Births	2,467.2	2,509.9	2,470.4	2,489.7	2,487.1	2,471.2	2,469.2	2,464.8	2,421.4	2,424.5
Total Births	3,477.2	3,491.1	3,477.0	3,474.1	3,471.1	3,476.6	3,472.0	3,473.0	3,465.4	3,464.0
Low Birthweight <2500 grams (%) ³										
Singleton Births	3.8	3.8	3.8	3.8	3.9	3.7	3.8	3.7	3.8	3.8
Multiple Births	47.7	43.4	46.5	44.2	45.1	45.6	45.6	46.4	50.4	48.4
Total Births	5.0	4.9	5.2	4.9	5.1	5.0	5.0	5.0	5.3	5.3
Average Gestational Age at delivery in weeks ¹	39.5	39.5	39.5	39.5	39.4	39.4	39.4	39.4	39.4	39.4
Average Interval since last birth in years ¹	3.8	3.8	3.8	3.9	3.8	3.7	3.8	3.8	3.9	3.9
Perinatal Care										
Hospital & G.P. combined antenatal care (%) ¹	72.5	72.4	73.3	74.1	75.9	77.3	77.5	79.0	77.5	79.4
Mother's Average Length of Stay in days ⁴	4.7	4.5	4.4	4.1	4.0	3.9	3.8	3.7	3.6	3.5
Immunity to Rubella (%) ¹	89.6	87.8	86.8	86.5	87.3	90.5	90.3	92.2	92.4	90.0
Booked Hospital Admissions (%) ¹	96.6	96.5	98.2	97.6	97.5	98.1	98.4	99.0	99.0	98.9
Mothers Breastfeeding (%) ⁵	36.2	38.4	39.1	41.1	41.3	42.5	44.1	44.5	45.2	44.7
Post-mortems for Early Neonatal Deaths (%) ⁶	44.4	39.4	33.6	42.1	41.7	38.2	24.4	26.9	30.8	29.7

TABLE 2.1: TRENDS IN SELECTED STATISTICS, 1999-2008 (CONTD.)

Selected Statistics	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Perinatal Care										
Method of Delivery (%)⁷										
<i>Total Live Births⁸</i>										
Spontaneous	64.5	63.8	63.2	62.4	61.2	59.6	59.0	58.8	57.3	56.6
Caesarean	20.4	21.3	22.0	22.4	24.2	25.2	25.9	25.4	26.2	26.7
Forceps ⁹	4.2	3.7	3.2	3.2	2.9	2.5	2.8	3.0	3.7	3.7
<i>Total Maternities</i>										
Spontaneous	65.0	64.3	63.9	63.0	61.9	60.2	59.7	59.4	58.0	57.4
Caesarean	20.0	20.9	21.5	21.9	23.6	24.6	25.3	24.8	25.5	25.9
Forceps ⁹	4.2	3.8	3.2	3.2	2.9	2.5	2.8	3.0	3.7	3.7
Infant's Average Length of Stay in days¹⁰										
Singleton Births	4.2	4.1	3.9	3.7	3.6	3.6	3.5	3.5	3.3	3.1
Multiple Births	10.7	10.7	11.5	10.2	10.1	10.6	10.1	9.9	10.0	9.9
Total Births	4.3	4.3	4.1	3.9	3.8	3.8	3.7	3.7	3.5	3.4

Notes: ¹ Not Stated' or 'Not Known' values are not included in the calculation of percentages.

¹ Based on maternities.

² Data recording marital status as 'never married' are classified as 'single' marital status in this report.

³ Based on live births.

⁴ Based on maternities with live births.

⁵ Based on maternities with live births. Excludes early neonatal deaths.

⁶ Based on early neonatal deaths.

⁷ See also 'Method of Delivery for Primiparous and Multiparous Women', page 18. See Section 4, Tables 4.7a, 4.7b and 4.8 for data on all Methods of Delivery.

⁸ These figures were based on total live births, as each infant in a multiple pregnancy can have a different method of delivery.

⁹ Excludes breech deliveries.

¹⁰ Based on live births. Excludes early neonatal deaths.

PERINATAL MORTALITY

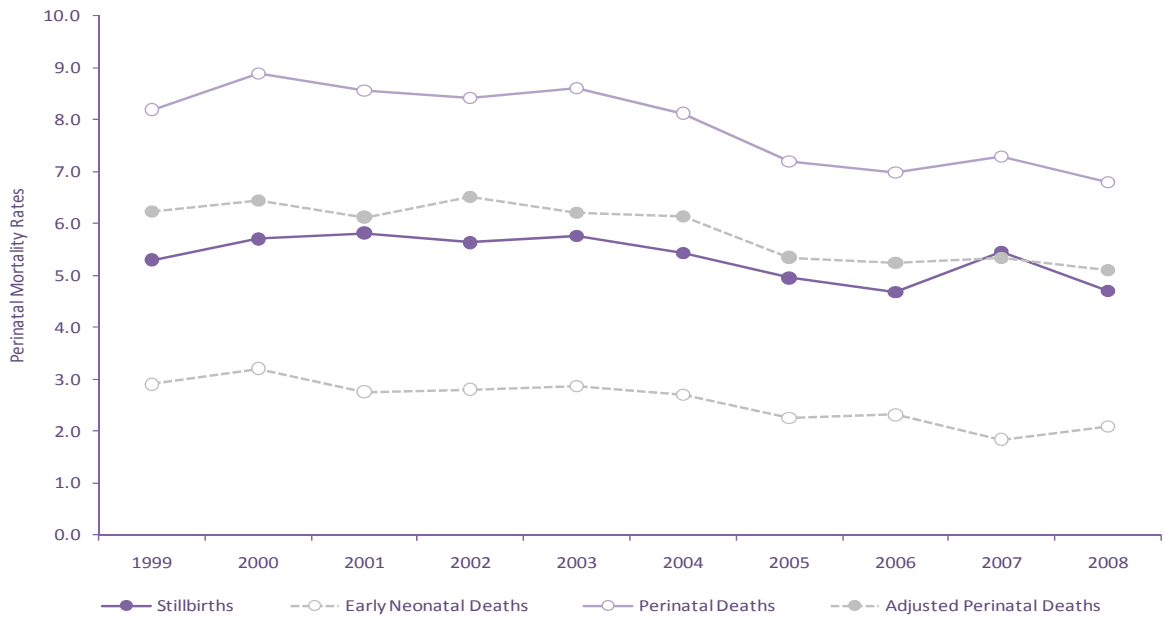
In 2008 approximately 1 in every 200 births were stillborn and 1 in every 470 live births died in the first week of life. Despite improvements in reducing perinatal mortality in recent decades, the perinatal period continues to be a time of relatively high risk. Table 2.2 shows the numbers and rates for total births and perinatal deaths for Ireland from 1999 to 2008. The perinatal mortality rate is the ratio of total stillbirths and early neonatal deaths to total live births and stillbirths, and is expressed as the rate per 1,000 live births and stillbirths. Stillbirths account for almost 70 per cent of perinatal deaths and are over twice as common as early neonatal deaths. Set in this context, analysis of the foetal mortality rate is clearly a public health concern. Section 5 of this report focuses on perinatal outcomes in more detail, examining perinatal deaths by birthweight and gestational age, with particular focus on cause of death. In 1999 the perinatal mortality rate was 8.2 per 1,000 live births and stillbirths. This rate peaked at 8.9 per 1,000 in 2000 and has declined to a low of 6.8 per 1,000 in 2008 (see Figure 2.1). For numbers and rates by singleton and multiple births see Section Two ‘Singleton and Multiple Births’.

TABLE 2.2: LIVE BIRTHS, STILLBIRTHS, EARLY NEONATAL DEATHS, AND PERINATAL DEATHS, 1999-2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number of Births and Perinatal Deaths										
Total Births	54,307	55,186	58,261	60,865	61,989	62,406	61,786	65,810	71,963	75,587
Live Births	54,019	54,871	57,922	60,522	61,632	62,067	61,480	65,502	71,570	75,229
Stillbirths	288	315	339	343	357	339	306	308	393	358
Early Neonatal Deaths	157	176	160	170	177	168	139	152	132	159
Perinatal Deaths	445	491	499	513	534	507	445	460	525	517
Adjusted Perinatal Deaths	338	355	356	396	384	382	330	345	383	384
Rates*										
Stillbirths	5.3	5.7	5.8	5.6	5.8	5.4	5.0	4.7	5.5	4.7
Early Neonatal Deaths	2.9	3.2	2.8	2.8	2.9	2.7	2.3	2.3	1.8	2.1
Perinatal Deaths	8.2	8.9	8.6	8.4	8.6	8.1	7.2	7.0	7.3	6.8
Adjusted Perinatal Deaths	6.2	6.4	6.1	6.5	6.2	6.1	5.4	5.3	5.3	5.1

Note: * For stillbirths, perinatal deaths and adjusted perinatal deaths, rates are calculated on total live births and stillbirths. For early neonatal deaths, rates are calculated on total live births. See Appendix A for further details on calculation of rates.

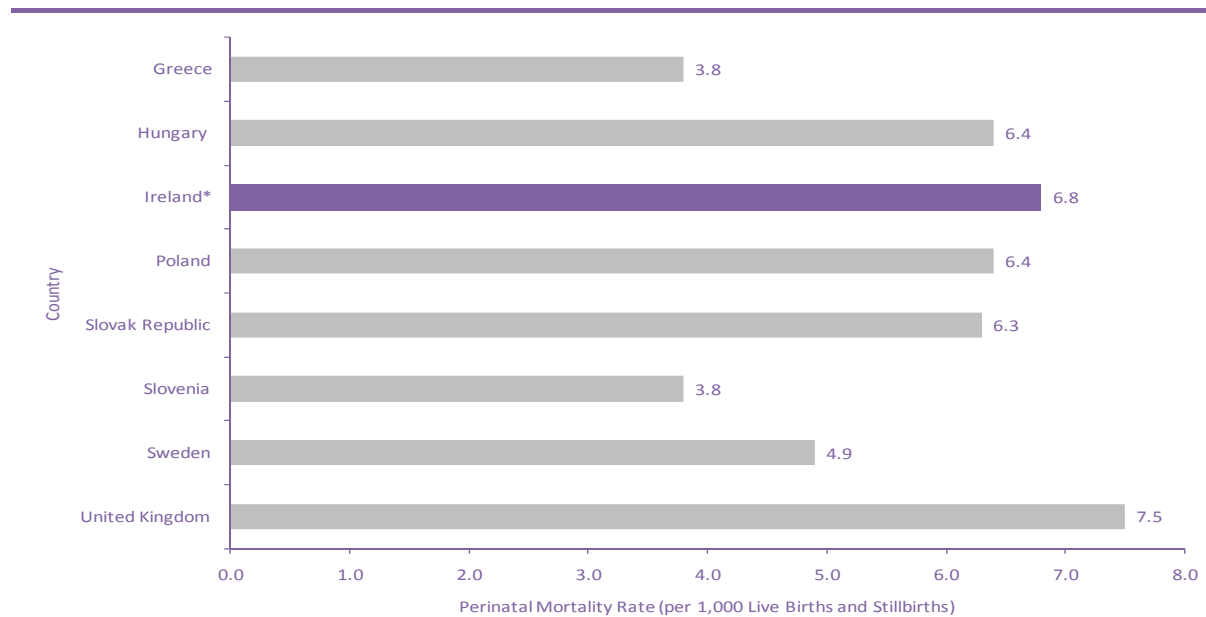
FIGURE 2.1
STILLBIRTH, EARLY NEONATAL AND PERINATAL MORTALITY RATES, IRELAND, 1999-2008



Note: See Table 2.2 for data.

Figure 2.2 presents the 2008 perinatal mortality rate for the eight European countries, including Ireland, for which data were available. Of these countries, the United Kingdom recorded the highest perinatal mortality rate for 2008, at 7.5 per 1,000 live births and stillbirths. Greece and Slovenia had the lowest perinatal mortality rate recording 3.8 per 1,000 live births and stillbirths. When countries are compared it should be remembered that rates are affected by many factors, such as national policies on abortion, screening for congenital anomalies, availability of services related to fertility treatment, differences in the comprehensiveness and accuracy of registration and notification systems, and variations in definitions employed (in particular, for stillbirth).

FIGURE 2.2
PERINATAL MORTALITY RATES FOR SELECTED EU COUNTRIES, 2008



Sources: OECD Health Data 2010, date consulted December 2010. <http://www.sourceoecd.org/>

* National Figure compiled by NPRS. See Table 2.2 for data.

BIRTH RATES²

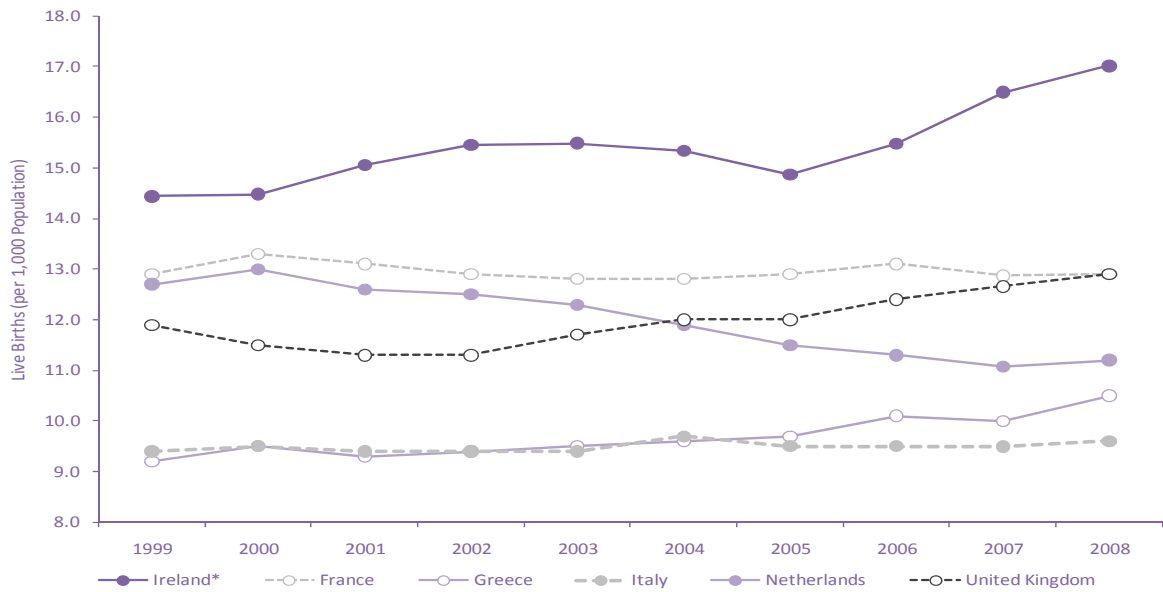
The birth rate is based on the total number of live births per 1,000 population.³ Figure 2.3 shows trends in birth rates for selected EU countries over the decade 1999-2008. Of the countries reviewed, Ireland has consistently had the highest birth rate over the period. With birth rates closer to those of other European countries at the beginning of the decade, Ireland's birth rate began to increase from 2001, reaching a rate of 15.5 per 1,000 population in 2002 and 2003. This rate declined slightly in 2004 and 2005 but increased in 2006 to 15.5 per 1,000 and again, quite substantially, in 2007 to 16.5 per 1,000 population. For 2008 the birth rate for Ireland was recorded at 17.0 per 1,000 population, which is the highest recorded rate among the 27 EU countries presented in Figure 2.4.⁴ After Ireland, the countries with the next highest birth rates are France and the United Kingdom (12.9) followed by Estonia (12.0). In 2008, Germany (8.3) had the lowest birth rate with Austria (9.3) next in line.

² It should be noted that the crude birth rate could rise or fall depending on the numbers of women in the age cohorts from 15 to 49 years old. Changes in the crude birth rate often mask underlying trends in fertility. The next section is, therefore, concerned with changes in fertility over time.

³ The population estimates used in the denominator of the birth rate were calculated by the CSO, date consulted December 2010. <http://www.cso.ie/px/pxeirestat/database/eirestat/Population%20Estimates/Population%20Estimates.asp>

⁴ See also *Vital Statistics, Fourth Quarter and Yearly Summary 2008*, August 2009.

FIGURE 2.3
TRENDS IN BIRTH RATES FOR SELECTED EU COUNTRIES, 1999–2008



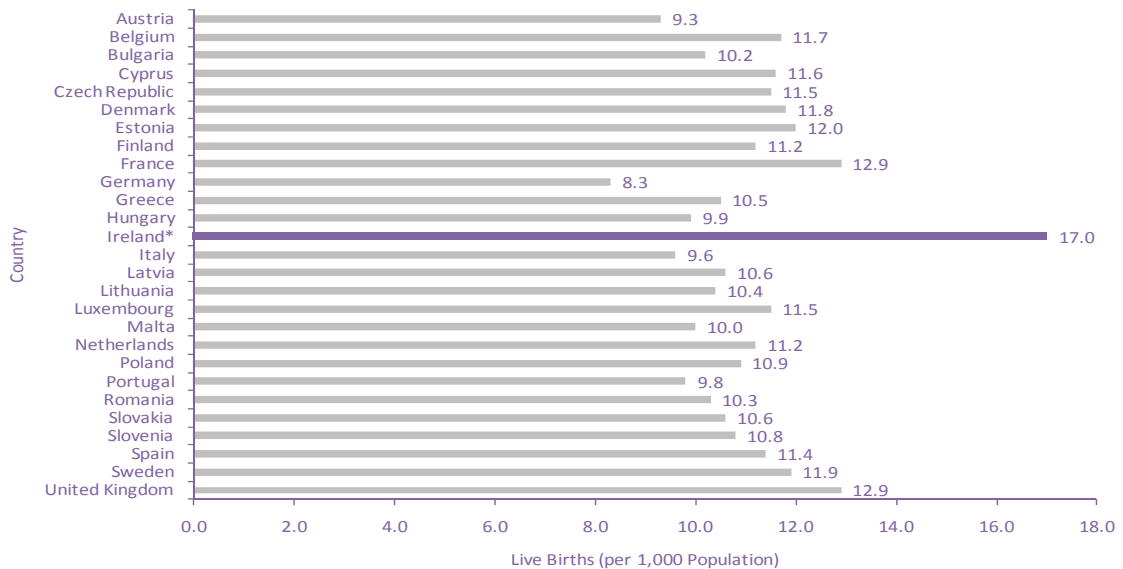
Sources: 'Population and Social Conditions', Eurostat, Data Navigation Tree, date consulted December 2010.

<http://epp.eurostat.ec.europa.eu>

*Data for Ireland are based on NPRS data on live births from 1999 onwards. The population estimates used in the denominator of the birth rate were calculated by the CSO, date consulted December 2010.

<http://www.cso.ie/px/pxeirestat/database/eirestat/Population%20Estimates/Population%20Estimates.asp>

FIGURE 2.4
BIRTH RATES PER 1,000 POPULATION FOR SELECTED EU COUNTRIES, 2008



Sources: 'Population and Social Conditions', Eurostat, Data Navigation Tree, date consulted December 2010.

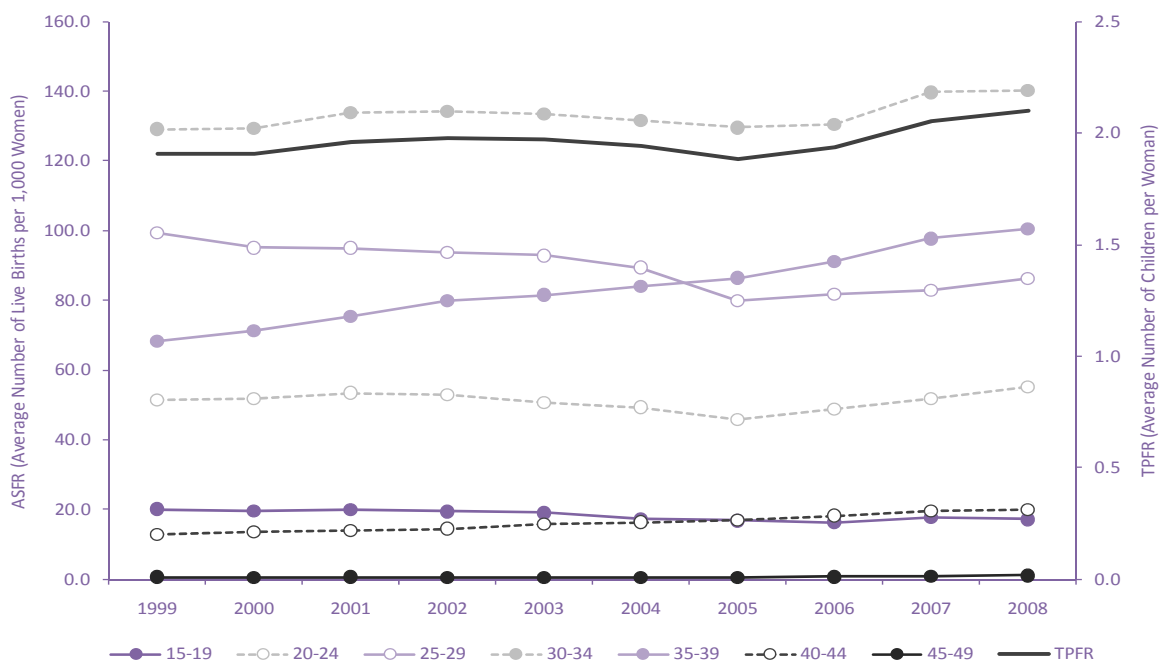
<http://epp.eurostat.ec.europa.eu>

* Data for Ireland are based on NPRS data on live births. Population estimates for 2008 were obtained from the CSO, date consulted December 2010. <http://www.cso.ie/px/pxeirestat/database/eirestat/Population%20Estimates/Population%20Estimates.asp>

FERTILITY

The Total Period Fertility Rate (TPFR) for a given year indicates the number of children a woman could expect to have if the age-specific fertility rates (ASFR) for that year applied throughout her fertile years.⁵ Figure 2.5 shows the trend in the TPFR in Ireland from 1999-2008. The Irish TPFR has increased overall from an average of 1.9 in 1999 to 2.1 in 2008, a level not recorded since 1990.⁶ The ASFRs used in the calculation of the TPFR, and also shown in Figure 2.5, indicate differences in fertility patterns between younger and older age groups. Compared to 1999, only the age groups 15 to 19 years and 25 to 29 years recorded lower ASFRs in 2008; all other age groups recorded higher ASFRs in 2008. Women in the older age groups (35 to 49 years) recorded increased rates over the period 1999 to 2008, with women aged 35 to 44 being the only groups to record a continuous increase each year. Whilst women in the younger age groups (20 to 34 years) recorded decreasing rates up to 2005, these rates have been increasing through to 2008. In all years the 30 to 34 year age group recorded the highest ASFR. The ASFR for the 40 to 44 year age group was greater than that reported for the 15 to 19 year age group in 2008, a trend observed since 2005. With the exception of the 15 to 19 years age group, all age group categories reported higher ASFRs in 2008.

FIGURE 2.5
AGE-SPECIFIC FERTILITY RATES (ASFRS) AND TOTAL PERIOD FERTILITY RATES (TPFRS), IRELAND, 1999–2008



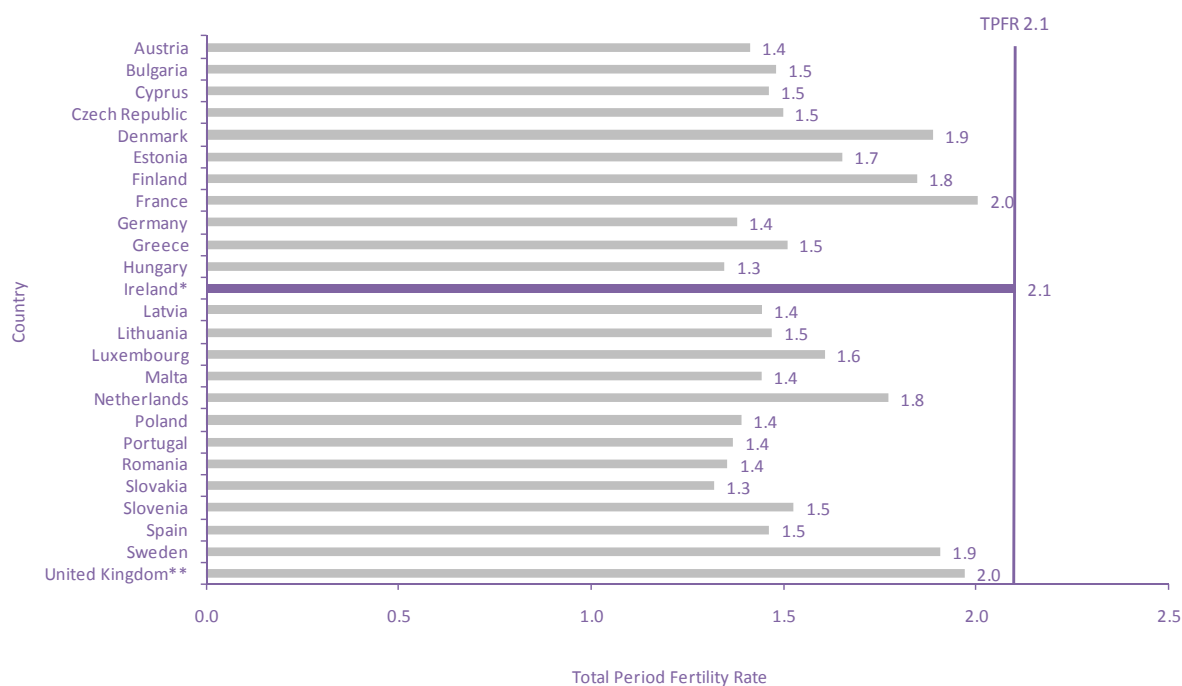
Sources: Total period fertility rates (TPFRs) and age-specific fertility rates (ASFRs) are calculated using NPRS data from 1999 onwards. Female population estimates were obtained from the CSO, date consulted December 2010. <http://www.cso.ie/px/pxeirestat/database/eirestat/Population%20Estimates/Population%20Estimates.asp>

⁵ ASFR is the number of live births to women in a particular age group divided by the female population in that age group, multiplied by 1,000. The TPFR is compiled by summing the ASFRs for the relevant five-year age groups, dividing by 1,000 and multiplying by 5.

⁶ Report on Vital Statistics 2007, Central Statistics Office, Ireland

The TPF_R for Ireland is based on estimated population data for 2008, and is now just at the level expected (2.1) for the long term replacement of the population in the absence of any net inward migration. Using data from Eurostat and the NPRS, Figure 2.6 shows that Ireland had the highest TPF_R in the 25 EU countries for which 2008 data were available. France and the UK were just behind with a TPF_R of 2.0, while Hungary and Slovakia recorded the lowest TPF_R's (1.3) in 2008.

FIGURE 2.6
TOTAL PERIOD FERTILITY RATES FOR SELECTED EU COUNTRIES, 2008



Sources: 'Population and Social Conditions', Eurostat, Data Navigation Tree, date consulted December 2010, <http://epp.eurostat.ec.europa.eu>

* Data for Ireland are based on NPRS data on live births. Population estimates for 2008 were obtained from the CSO, date consulted December 2010. <http://www.cso.ie/px/pxeirestat/database/eirestat/Population%20Estimates/Population%20Estimates.asp>

**The NHS Information Centre for Health and Social Care, Compendium of Clinical and Health Indicators/Clinical and Health Outcomes Knowledge Base, December 2009, (www.nchod.nhs.uk or nww.nchod.nhs.uk).

SINGLETON AND MULTIPLE BIRTHS

Table 2.3 shows the numbers of singleton and multiple births each year for the period 1999 to 2008. In 2008 there were 72,985 singleton births, 2,591 twin births, 92 triplets and 4 quadruplets reported to NPRS. Of these, 85 births weighed less than 500 grams: 69 singleton births and 16 multiple births. In accordance with the World Health Organization (WHO) guidelines, only births weighing 500 grams or more are included in any analysis of NPRS data. For the purposes of this report, therefore, there were 72,916 singleton births, 2,575 twin births, 92 triplet births and 4 quadruplet births in 2008. The twinning rate was 17.9 per 1,000 maternities in 2008. Over the period 1999-2008 the average twinning rate was 15.0 per 1,000 maternities.

TABLE 2.3: SINGLETON AND MULTIPLE BIRTHS, 1999–2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Singleton births	52,830	53,737	56,422	59,071	60,164	60,499	59,902	63,839	69,692	72,916
Twin births	1,392	1,397	1,756	1,728	1,747	1,849	1,833	1,916	2,185	2,575
Triplet births	85	48	71	54	78	54	47	51	83	92
Quadruplet births	0	4	7	12	0	4	4	4	3	4
Quintuplet births	0	0	5	0	0	0	0	0	0	0
Twinning rate (per 1,000 maternities)	14.8	12.8	15.3	14.4	14.3	15.0	15.1	14.8	15.4	17.9

Note: See Appendix A for details on calculation of twinning rate.

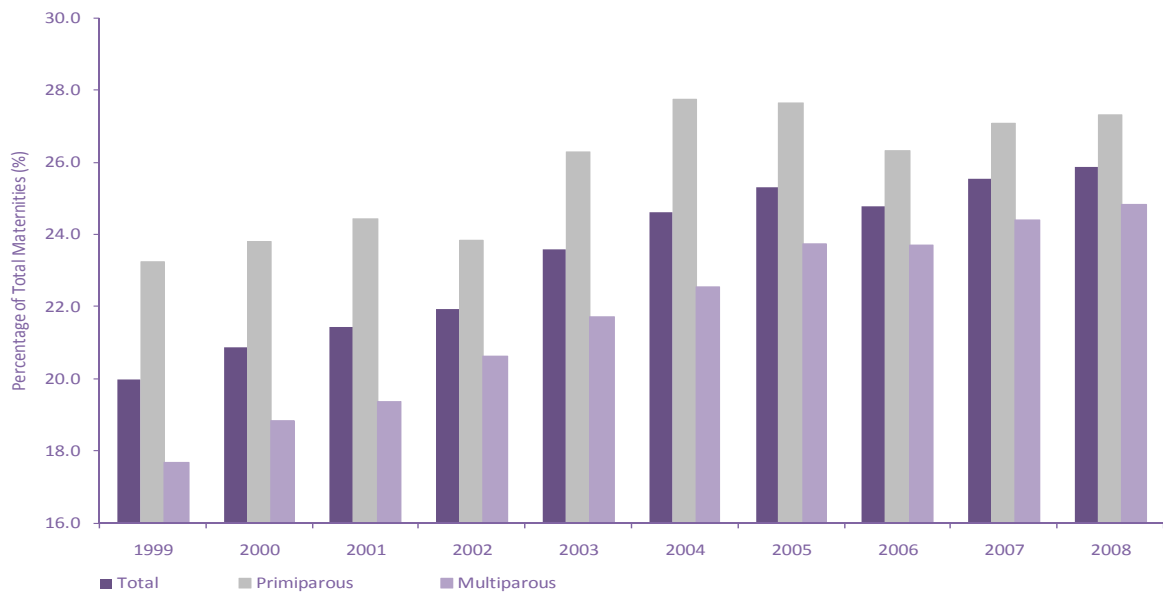
The number of stillbirths and early neonatal deaths for singleton and multiple births between 1999 and 2008 is presented in Table 2.4. In all years, higher mortality rates were estimated for multiple births when compared to singleton births. In 2008, the stillbirth mortality rate for singleton births decreased to 4.6 per 1,000 live births and stillbirths, compared to a rate of 5.2 in 1999. The early neonatal mortality rate for singleton births increased slightly in 2008 and was reported at 1.9 per 1,000 live births.

TABLE 2.4: LIVE BIRTHS, STILLBIRTHS AND EARLY NEONATAL DEATHS, NUMBERS AND RATES, SINGLETON AND MULTIPLE BIRTHS, 1999–2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number of Births and Perinatal Deaths										
Total Births	54,307	55,186	58,261	60,865	61,989	62,406	61,786	65,810	71,963	75,587
Singleton	52,830	53,737	56,422	59,071	60,164	60,499	59,902	63,839	69,692	72,916
Multiple	1,477	1,449	1,839	1,794	1,825	1,907	1,884	1,971	2,271	2,671
Live Births	54,019	54,871	57,922	60,522	61,632	62,067	61,480	65,502	71,570	75,229
Singleton	52,556	53,442	56,115	58,752	59,837	60,186	59,621	63,555	69,318	72,582
Multiple	1,463	1,429	1,807	1,770	1,795	1,881	1,859	1,947	2,252	2,647
Stillbirths	288	315	339	343	357	339	306	308	393	358
Singleton	274	295	307	319	327	313	281	284	374	334
Multiple	14	20	32	24	30	26	25	24	19	24
Early Neonatal Deaths	157	176	160	170	177	168	139	152	132	159
Singleton	130	153	136	149	156	140	109	129	118	138
Multiple	27	23	24	21	21	28	30	23	14	21
Rates*										
Stillbirths	5.3	5.7	5.8	5.6	5.8	5.4	5.0	4.7	5.5	4.7
Singleton	5.2	5.5	5.4	5.4	5.4	5.2	4.7	4.4	5.4	4.6
Multiple	9.5	13.8	17.4	13.4	16.4	13.6	13.3	12.2	8.4	9.0
Early Neonatal Deaths	2.9	3.2	2.8	2.8	2.9	2.7	2.3	2.3	1.8	2.1
Singleton	2.5	2.9	2.4	2.5	2.6	2.3	1.8	2.0	1.7	1.9
Multiple	18.5	16.1	13.3	11.9	11.7	14.9	16.1	11.8	6.2	7.9

Note: * For stillbirths, perinatal deaths and adjusted perinatal deaths, rates are calculated on total live births and stillbirths. For early neonatal deaths, rates are calculated on total live births. See Appendix A for further details on calculation of rates.

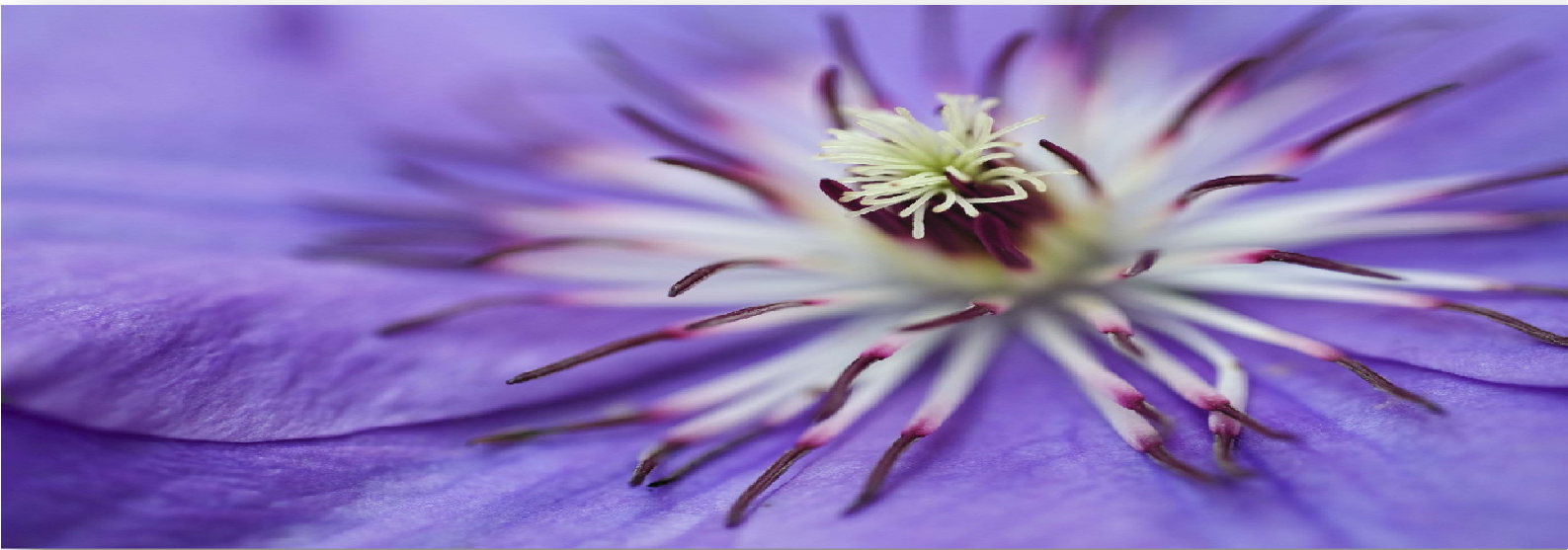
FIGURE 2.7
**PERCENTAGE DISTRIBUTION OF MATERNITIES DELIVERING BY CAESAREAN SECTION FOR TOTAL,
 PRIMIPAROUS AND MULTIPAROUS WOMEN, 1999–2008**



Note: See Table 2.5 for data.

SECTION THREE

GENERAL CHARACTERISTICS



INTRODUCTION

This section presents more detailed analyses of data reported to the NPRS for 2008 and provides some longitudinal comparisons.⁷ Tables and figures are presented in some detail for a number of variables relating to the mother (age, marital status, occupation, nationality, parity, number of previous stillbirths, and interval since last birth), father (occupation and nationality), and infant (birthweight, gestational age, and month of birth). For selected variables, the tables outline data for live births, stillbirths and early neonatal deaths, together with their corresponding rates, as well as presenting the number of maternities.

⁷ Data from 2004-2007 will be presented see the following reports available at www.esri.ie/health_information/latest_hipe_nprs_reports/
Report on Perinatal Statistics for 2004, The Economic and Social Research Institute, December 2007
Perinatal Statistics Report 2005, The Economic and Social Research Institute, July 2008
Perinatal Statistics Report 2006, The Economic and Social Research Institute, December 2008
Perinatal Statistics Report 2007, The Economic and Social Research Institute, October 2009

MATERNAL AGE

The average maternal age for all births increased from 30.8 in 2004 to 31.2 years in 2008. The percentage of births to mothers aged 19 years and under fell from 4.0 to 3.2 per cent over the five-year period.⁸ Mothers 35 years or over increased accounted for 24.4 per cent of births in 2004 compared with 26.8 per cent of births in 2008. Just over a third of all mother's having either a singleton or multiple births in 2008 were in the 30 to 34 year age group (see Table 3.1).

TABLE 3.1: AGE OF MOTHER

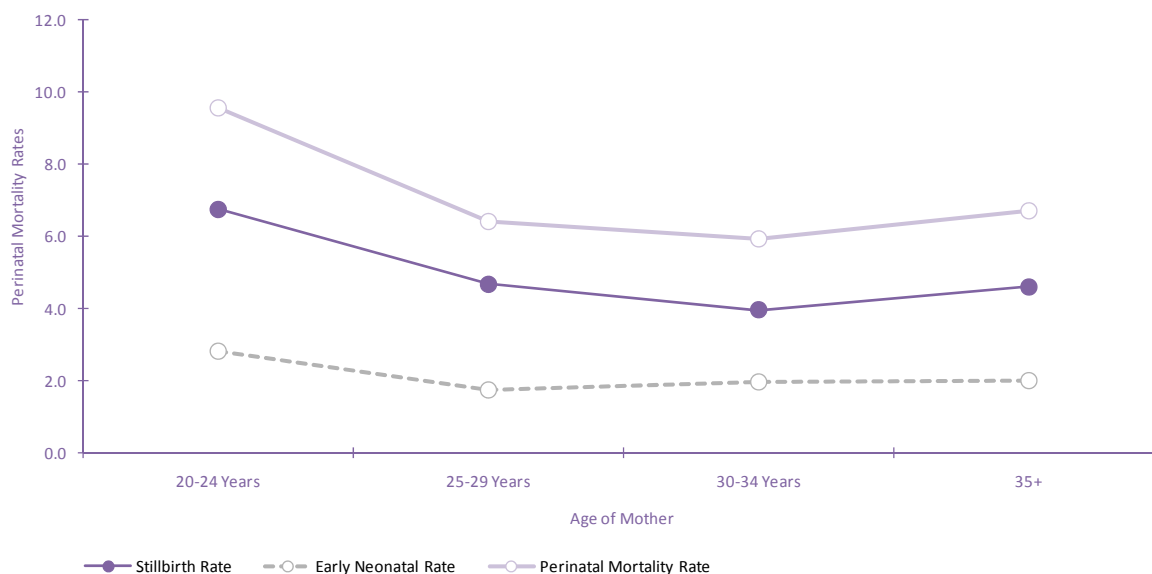
Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Age of Mother	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
Under 15 Years	9	9	0	0.0	0	0.0	0.0	0.0	8
15-19 Years	2,412	2,396	16	6.6	11	4.6	11.2	8.3	2,382
20-24 Years	9,333	9,270	63	6.8	26	2.8	9.5	7.7	9,239
25-29 Years	17,967	17,883	84	4.7	31	1.7	6.4	5.1	17,730
30-34 Years	25,571	25,470	101	4.0	50	2.0	5.9	4.2	25,117
35-39 Years	16,972	16,908	64	3.8	34	2.0	5.8	3.8	16,550
40-44 Years	3,108	3,080	28	9.0	7	2.3	11.3	8.4	3,015
45 Years and Over	165	163	2	12.1	0	0.0	12.1	12.1	151
Not Stated	50	50	0	0.0	0	0.0	0.0	0.0	50
Total	75,587	75,229	358	4.7	159	2.1	6.8	5.1	74,242
Singleton Births									
Under 15 Years	7	7	0	0.0	0	0.0	0.0	0.0	7
15-19 Years	2,353	2,338	15	6.4	11	4.7	11.1	8.1	2,353
20-24 Years	9,144	9,083	61	6.7	23	2.5	9.2	7.3	9,144
25-29 Years	17,490	17,418	72	4.1	26	1.5	5.6	4.4	17,490
30-34 Years	24,671	24,571	100	4.1	46	1.9	5.9	4.1	24,671
35-39 Years	16,134	16,073	61	3.8	26	1.6	5.4	3.4	16,134
40-44 Years	2,929	2,906	23	7.9	6	2.1	9.9	7.2	2,929
45 Years and Over	138	136	2	14.5	0	0.0	14.5	14.5	138
Not Stated	50	50	0	0.0	0	0.0	0.0	0.0	50
Total	72,916	72,582	334	4.6	138	1.9	6.5	4.7	72,916
Multiple Births									
Under 15 Years	2	2	0	0.0	0	0.0	0.0	0.0	1
15-19 Years	59	58	1	17.0	0	0.0	17.0	17.0	29
20-24 Years	189	187	2	10.6	3	16.0	26.5	26.5	95
25-29 Years	477	465	12	25.2	5	10.8	35.6	33.6	240
30-34 Years	900	899	1	1.1	4	4.5	5.6	5.6	446
35-39 Years	838	835	3	3.6	8	9.6	13.1	12.0	416
40-44 Years	179	174	5	27.9	1	5.8	33.5	28.1	86
45 Years and Over	27	27	0	0.0	0	0.0	0.0	0.0	13
Not Stated	0	0	0	0.0	0	0.0	0.0	0.0	0
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

⁸ Throughout this section, 'Not Stated' values are not included in the calculation of percentages for discussion.

Figure 3.1 shows that the perinatal mortality rate is highest for mothers aged 20 to 24 years, with a rate of 9.5 per 1,000 live births and a stillbirth rate of 6.8 per 1,000 live births. The lowest stillbirth and perinatal mortality rates were recorded for the 30 to 34 year age group (4.0 per 1,000 live and stillbirths and 5.9 per 1,000 live births). Rates for early neonatal mortality were broadly comparable for mothers aged over 25 years, with slightly higher rates recorded for mothers aged 20 to 24 years.

FIGURE 3.1
AGE-SPECIFIC STILLBIRTH, EARLY NEONATAL AND PERINATAL MORTALITY RATES, TOTAL BIRTHS



Note: See Table 3.1 for data. Rates based on 20 or less observations are not included in this Figure.

MOTHER'S MARITAL STATUS

The distribution of total births by mother's marital status has remained fairly consistent in recent years with close to two-thirds of births to married women, and under one-third to single women (see Figure 3.2).⁹ In the case of multiple births these proportions differ; almost 75 per cent of multiple births were to married women (see Table 3.2). Although a very small proportion of total births, the percentage of births to mothers whose marital status was 'divorced' increased from 0.4 per cent of total births in 2004 to 0.6 per cent in 2008 (see Figure 3.2). The distribution of single mothers by mother's area of residence¹⁰ is shown in Figure 3.3. Dublin City recorded the highest percentage of single mothers at just over 40 per cent, and was followed by counties Waterford, Wexford and Louth, each recording between 36 and 39 per cent. Roscommon recorded the lowest proportion of single mothers at 22.8 per cent.

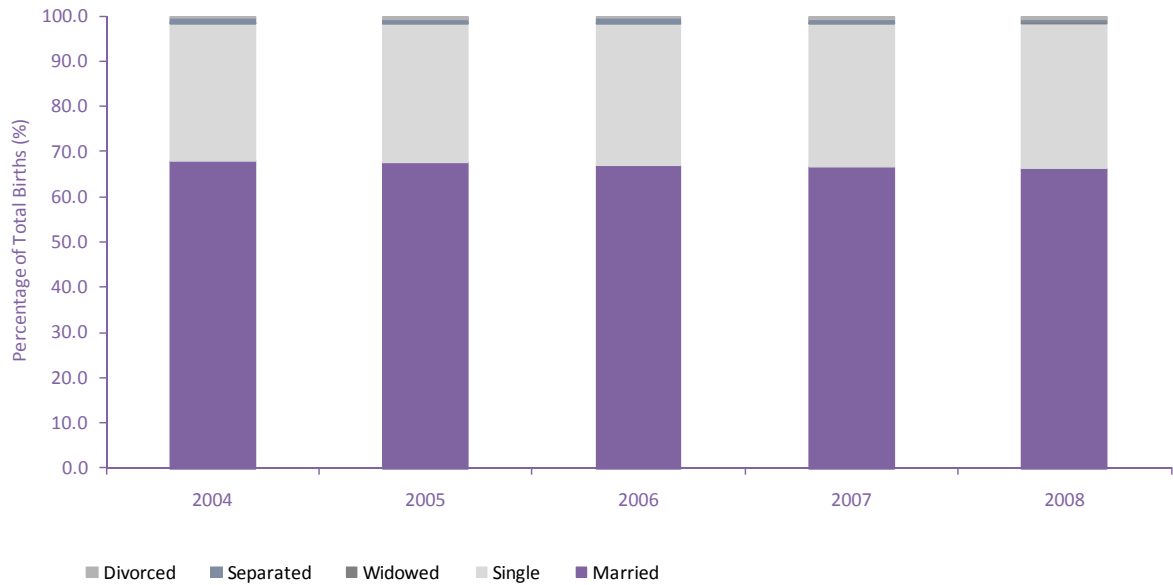
⁹ Data recording marital status as 'never married' are classified as 'single' marital status in discussion in this report.

¹⁰ See Appendix E for details of county of residence classification.

**TABLE 3.2: MOTHER'S MARITAL STATUS
TOTAL BIRTHS, LIVE BIRTHS, STILLBIRTHS, EARLY NEONATAL DEATHS, MORTALITY RATES, AND MATERNITIES**

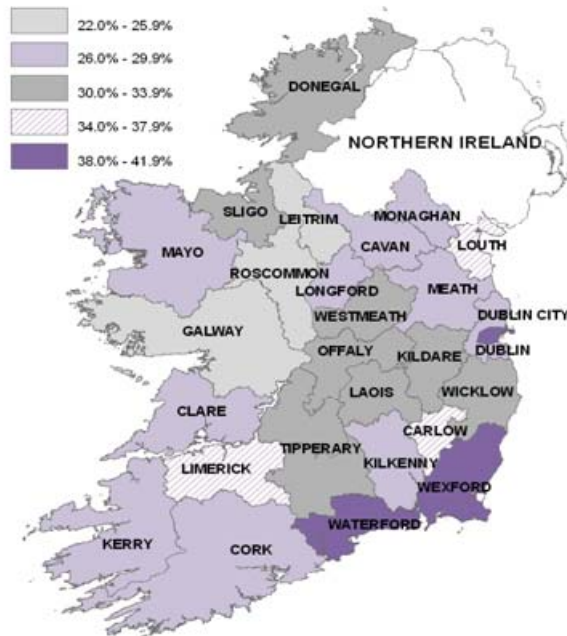
Mother's Marital Status	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
Married	49,920	49,711	209	4.2	89	1.8	6.0	4.3	48,913
Never Married	24,357	24,214	143	5.9	68	2.8	8.7	6.8	24,044
Widowed	77	77	0	0.0	0	0.0	0.0	0.0	77
Separated	688	685	3	4.4	1	1.5	5.8	2.9	673
Divorced	481	480	1	2.1	0	0.0	2.1	2.1	473
Not Stated	64	62	2	31.3	1	16.1	46.9	46.9	62
Total	75,587	75,229	358	4.7	159	2.1	6.8	5.1	74,242
Singleton Births									
Married	47,924	47,734	190	4.0	74	1.6	5.5	3.8	47,924
Never Married	23,732	23,594	138	5.8	62	2.6	8.4	6.6	23,732
Widowed	77	77	0	0.0	0	0.0	0.0	0.0	77
Separated	658	655	3	4.6	1	1.5	6.1	3.1	658
Divorced	465	464	1	2.2	0	0.0	2.2	2.2	465
Not Stated	60	58	2	33.3	1	17.2	50.0	50.0	60
Total	72,916	72,582	334	4.6	138	1.9	6.5	4.7	72,916
Multiple Births									
Married	1,996	1,977	19	9.5	15	7.6	17.0	16.1	989
Never Married	625	620	5	8.0	6	9.7	17.6	16.0	312
Widowed	0	0	0	0.0	0	0.0	0.0	0.0	0
Separated	30	30	0	0.0	0	0.0	0.0	0.0	15
Divorced	16	16	0	0.0	0	0.0	0.0	0.0	8
Not Stated	4	4	0	0.0	0	0.0	0.0	0.0	2
Total	2,671	2,647	24	9.0	21	7.9	16.9	15.7	1,326

FIGURE 3.2
PERCENTAGE OF BIRTHS BY MOTHER'S MARITAL STATUS, TOTAL BIRTHS, 2004–2008



Note: See Appendix G, Table G1 for data. 'Not Stated' values are not included in the calculation of percentages.

FIGURE 3.3
PERCENTAGE OF BIRTHS TO SINGLE MOTHERS BY MOTHER'S COUNTY OF RESIDENCE, TOTAL BIRTHS



Notes: See Appendix G, Table G2 for data. 'Not Stated' values are not included in the calculation of percentages. Example: Of all births to mothers resident in Carlow, 34.9 per cent were to single mothers.

OCCUPATION

MOTHER'S OCCUPATION

Over two-fifths of total births were to mothers whose occupation was recorded as either 'home duties' (22.3 per cent) or 'intermediate non-manual workers' (22.6 per cent). The occupations with the next highest percentage of births were 'lower professional', reported as 14.2 per cent of total births followed by 'other non-manual workers', reported as 12.8 per cent of total births (see Table 3.3). Where rates are calculated on more than 20 observations, the occupations recording the highest perinatal mortality rates were 'semi-skilled manual workers' (12.0) and 'unemployed' (7.9) (see Figure 3.4).

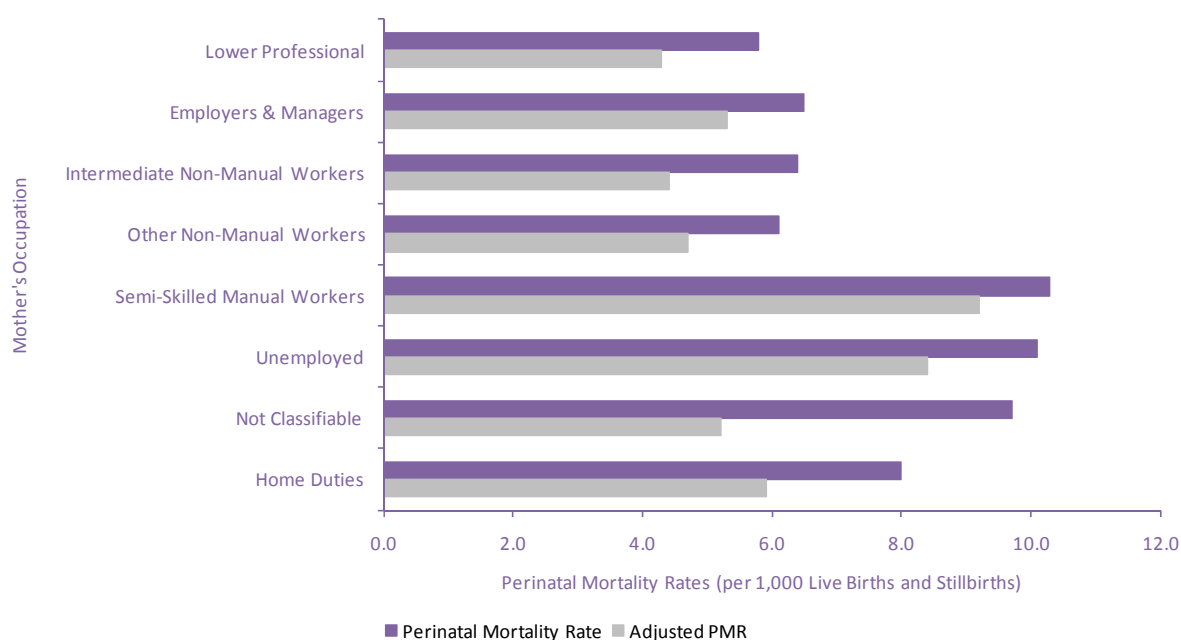
TABLE 3.3: MOTHER'S OCCUPATION

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Mother's Occupation	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR*	Maternities
Total Births									
Farmers & Farm Managers	91	90	1	11.0	0	0.0	11.0	11.0	86
Other Agricultural Occupations & Fishermen	99	98	1	10.1	0	0.0	10.1	10.1	98
Higher Professional	4,731	4,717	14	3.0	4	0.9	3.8	2.8	4,636
Lower Professional	10,681	10,642	39	3.7	23	2.2	5.8	4.3	10,458
Employers & Managers	5,807	5,779	28	4.8	10	1.7	6.5	5.3	5,685
Salaried Employees	1,221	1,218	3	2.5	2	1.6	4.1	3.3	1,202
Intermediate Non-Manual Workers	17,040	16,962	78	4.6	31	1.8	6.4	4.4	16,748
Other Non-Manual Workers	9,691	9,645	46	4.8	13	1.4	6.1	4.7	9,527
Skilled Manual Workers	1,348	1,345	3	2.2	0	0.0	2.2	2.2	1,326
Semi-Skilled Manual Workers	2,626	2,607	19	7.2	8	3.1	10.3	9.2	2,583
Unskilled Manual Workers	7	7	0	0.0	0	0.0	0.0	0.0	7
Unemployed	2,376	2,360	16	6.7	8	3.4	10.1	8.4	2,334
Not Classifiable	2,876	2,862	14	4.9	14	4.9	9.7	5.2	2,833
Home Duties	16,836	16,746	90	5.4	44	2.6	8.0	5.9	16,568
Not Stated	157	151	6	38.2	2	13.3	51.0	44.9	151
Total	75,587	75,229	358	4.7	159	2.1	6.8	5.1	74,242
Singleton Births									
Farmers & Farm Managers	81	80	1	12.4	0	0.0	12.4	12.4	81
Other Agricultural Occupations & Fishermen	97	96	1	10.3	0	0.0	10.3	10.3	97
Higher Professional	4,540	4,526	14	3.1	4	0.9	4.0	2.9	4,540
Lower Professional	10,244	10,209	35	3.4	18	1.8	5.2	3.6	10,244
Employers & Managers	5,561	5,538	23	4.1	8	1.4	5.6	4.5	5,561
Salaried Employees	1,184	1,182	2	1.7	2	1.7	3.4	2.5	1,184
Intermediate Non-Manual Workers	16,458	16,384	74	4.5	27	1.7	6.1	4.1	16,458
Other Non-Manual Workers	9,368	9,325	43	4.6	10	1.1	5.7	4.3	9,368
Skilled Manual Workers	1,305	1,302	3	2.3	0	0.0	2.3	2.3	1,305
Semi-Skilled Manual Workers	2,537	2,520	17	6.7	7	2.8	9.5	8.3	2,537
Unskilled Manual Workers	7	7	0	0.0	0	0.0	0.0	0.0	7
Unemployed	2,293	2,278	15	6.5	7	3.1	9.6	7.9	2,293
Not Classifiable	2,792	2,778	14	5.0	13	4.7	9.7	5.0	2,792
Home Duties	16,303	16,217	86	5.3	40	2.5	7.7	5.7	16,303
Not Stated	146	140	6	41.1	2	14.3	54.8	48.3	146
Total	72,916	72,582	334	4.6	138	1.9	6.5	4.7	72,916
Multiple Births									
Farmers & Farm Managers	10	10	0	0.0	0	0.0	0.0	0.0	5
Other Agricultural Occupations & Fishermen	2	2	0	0.0	0	0.0	0.0	0.0	1
Higher Professional	191	191	0	0.0	0	0.0	0.0	0.0	96
Lower Professional	437	433	4	9.2	5	11.6	20.6	20.6	214
Employers & Managers	246	241	5	20.3	2	8.3	28.5	24.5	124
Salaried Employees	37	36	1	27.0	0	0.0	27.0	27.0	18
Intermediate Non-Manual Workers	582	578	4	6.9	4	6.9	13.8	13.8	290
Other Non-Manual Workers	323	320	3	9.3	3	9.4	18.6	15.5	159
Skilled Manual Workers	43	43	0	0.0	0	0.0	0.0	0.0	21
Semi-Skilled Manual Workers	89	87	2	22.5	1	11.5	33.7	33.7	46
Unskilled Manual Workers	0	0	0	0.0	0	0.0	0.0	0.0	0
Unemployed	83	82	1	12.1	1	12.2	24.1	24.1	41
Not Classifiable	84	84	0	0.0	1	11.9	11.9	11.9	41
Home Duties	533	529	4	7.5	4	7.6	15.0	13.2	265
Not Stated	11	11	0	0.0	0	0.0	0.0	0.0	5
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

Note: See Appendix C for a description of the classification system for occupation.

FIGURE 3.4
PERINATAL MORTALITY RATES BY MOTHER'S OCCUPATION, TOTAL BIRTHS



Note: See Table 3.3 for data. Rates based on 20 or less observations are not included in this Figure.

FATHER'S OCCUPATION¹¹

For almost one-quarter of total births, the father's occupation was recorded as 'skilled manual workers'. Apart from 'not applicable', the next highest occupational grouping, 'other non-manual workers', was recorded as 9.6 per cent of total births (see Table 3.4). Where rates are calculated on more than 20 observations, the occupations recording the highest perinatal mortality rates were amongst the lower socio-economic groups, where father's occupations was recorded as either 'unemployed' or 'other non-manual workers' (see Figure 3.5).¹²

¹¹ The occupation category 'Not applicable' applies to father's occupation only. Where mother's marital status is recorded as 'never married', 'widowed', 'separated' or 'divorced' the GRO does not require father's details to register the birth. This information, therefore, is often not provided in these circumstances. Where father's details are provided, they are included in the statistics.

¹² For further discussion and analysis on this issue see Layte, R., and Clyne, B., *Did the Celtic Tiger Decrease Socio-Economic Differentials in Perinatal Mortality in Ireland?*, The Economic and Social Review, Vol 41, No.2, June 2010.

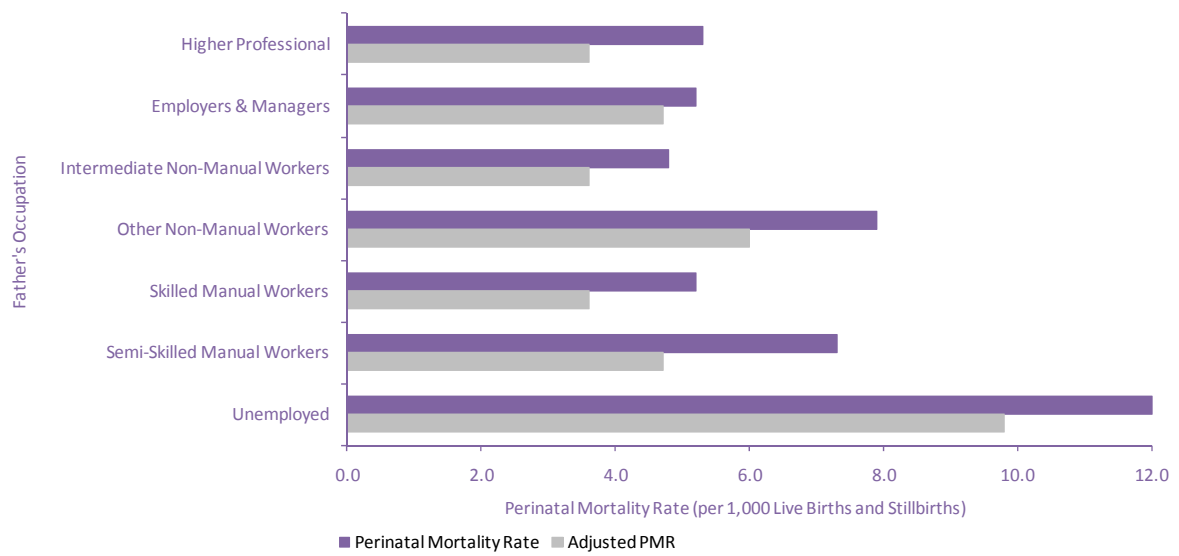
TABLE 3.4: FATHER'S OCCUPATION

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Father's Occupation	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
Farmers & Farm Managers	2,213	2,199	14	6.3	5	2.3	8.6	6.8	2,159
Other Agricultural Occupations & Fishermen	763	761	2	2.6	1	1.3	3.9	1.3	741
Higher Professional	5,834	5,814	20	3.4	11	1.9	5.3	3.6	5,715
Lower Professional	3,459	3,448	11	3.2	6	1.7	4.9	2.9	3,393
Employers & Managers	5,953	5,925	28	4.7	3	0.5	5.2	4.7	5,826
Salaried Employees	1,609	1,605	4	2.5	3	1.9	4.4	1.9	1,573
Intermediate Non-Manual Workers	6,196	6,177	19	3.1	11	1.8	4.8	3.6	6,083
Other Non-Manual Workers	7,213	7,173	40	5.6	17	2.4	7.9	6.0	7,084
Skilled Manual Workers	18,030	17,961	69	3.8	24	1.3	5.2	3.6	17,725
Semi-Skilled Manual Workers	3,446	3,433	13	3.8	12	3.5	7.3	4.7	3,391
Unskilled Manual Workers	769	768	1	1.3	3	3.9	5.2	1.3	754
Unemployed	2,249	2,229	20	8.9	7	3.1	12.0	9.8	2,208
Not Classifiable	1,622	1,617	5	3.1	1	0.6	3.7	3.1	1,593
Not Applicable	15,544	15,441	103	6.6	50	3.2	9.8	7.8	15,330
Home Duties	119	118	1	8.4	0	0.0	8.4	8.4	118
Not Stated	568	560	8	14.1	5	8.9	22.9	17.7	549
Total	75,587	75,229	358	4.7	159	2.1	6.8	5.1	74,242
Singleton Births									
Farmers & Farm Managers	2,107	2,095	12	5.7	3	1.4	7.1	5.2	2,107
Other Agricultural Occupations & Fishermen	721	719	2	2.8	1	1.4	4.2	1.4	721
Higher Professional	5,593	5,574	19	3.4	9	1.6	5.0	3.4	5,593
Lower Professional	3,330	3,320	10	3.0	5	1.5	4.5	2.4	3,330
Employers & Managers	5,697	5,670	27	4.7	2	0.4	5.1	4.6	5,697
Salaried Employees	1,539	1,535	4	2.6	3	2.0	4.6	2.0	1,539
Intermediate Non-Manual Workers	5,970	5,952	18	3.0	10	1.7	4.7	3.4	5,970
Other Non-Manual Workers	6,959	6,928	31	4.5	11	1.6	6.0	4.3	6,959
Skilled Manual Workers	17,427	17,362	65	3.7	22	1.3	5.0	3.4	17,427
Semi-Skilled Manual Workers	3,334	3,322	12	3.6	12	3.6	7.2	4.5	3,334
Unskilled Manual Workers	741	741	0	0.0	3	4.1	4.1	0.0	741
Unemployed	2,168	2,149	19	8.8	7	3.3	12.0	9.7	2,168
Not Classifiable	1,566	1,561	5	3.2	1	0.6	3.8	3.2	1,566
Not Applicable	15,117	15,016	101	6.7	46	3.1	9.7	7.6	15,117
Home Duties	117	116	1	8.6	0	0.0	8.6	8.6	117
Not Stated	530	522	8	15.1	3	5.8	20.8	15.2	530
Total	72,916	72,582	334	4.6	138	1.9	6.5	4.7	72,916
Multiple Births									
Farmers & Farm Managers	106	104	2	18.9	2	19.2	37.7	37.7	52
Other Agricultural Occupations & Fishermen	42	42	0	0.0	0	0.0	0.0	0.0	20
Higher Professional	241	240	1	4.2	2	8.3	12.5	8.3	122
Lower Professional	129	128	1	7.8	1	7.8	15.5	15.5	63
Employers & Managers	256	255	1	3.9	1	3.9	7.8	7.8	129
Salaried Employees	70	70	0	0.0	0	0.0	0.0	0.0	34
Intermediate Non-Manual Workers	226	225	1	4.4	1	4.4	8.9	8.9	113
Other Non-Manual Workers	254	245	9	35.4	6	24.5	59.1	51.6	125
Skilled Manual Workers	603	599	4	6.6	2	3.3	10.0	10.0	298
Semi Skilled Manual Workers	112	111	1	8.9	0	0.0	8.9	8.9	57
Unskilled Manual Workers	28	27	1	35.7	0	0.0	35.7	35.7	13
Unemployed	81	80	1	12.4	0	0.0	12.4	12.4	40
Not classifiable	56	56	0	0.0	0	0.0	0.0	0.0	27
Not applicable	427	425	2	4.7	4	9.4	14.1	14.1	213
Home Duties	2	2	0	0.0	0	0.0	0.0	0.0	1
Not Stated	38	38	0	0.0	2	52.6	52.6	52.6	19
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

Note: See Appendix C for a description of the classification system for occupation.

FIGURE 3.5
PERINATAL MORTALITY RATES BY FATHER'S OCCUPATION, TOTAL BIRTHS



Note: See Table 3.4 for data. Rates based on 20 or less observation are not included in this Figure.

NATIONALITY

MOTHER'S NATIONALITY

Information on mother's nationality was reported for the first time in 2004. For the purposes of this report mother's nationality is recorded as 'place of birth' of mother. In 2008, where rates were calculated on more than 20 observations, the highest mortality rate was recorded for babies born to mothers from Africa (10.6 per 1,000 live births and stillbirths). The lowest mortality rates were reported, for babies born to Irish mothers at 6.5 per 1,000 live births and stillbirths (see Table 3.5).

In 2004, 84.4 per cent of total births were to women born in Ireland; this figure fell to 77.5 per cent in 2008 when 22.5 per cent were to non-Irish born women (see Figure 3.6). Figure 3.6 shows the percentage of total births by nationality of mothers accounting for the majority of total births to non-Irish mothers in 2008. Between 2004 and 2008, births to mothers from the United Kingdom remained relatively stable, and births to mothers from Asia increased from 2.5 per cent to 3.7 per cent of total births.

The average maternal age for total births in 2008 was 31.2 years and, as demonstrated in Figure 3.7, there was some variation when mother's age is examined across nationality groups. Mothers from the EU15 to EU27 accession countries were on average younger at 27.5 years, as were mothers from the rest of Europe (29.6 years). Mother's from the EU15 (excluding Ireland and United Kingdom) and Australia recorded the highest average maternal age at 32.6 years and 33.5 years respectively. For most other nationalities, the average age was closer to the average age for total births.

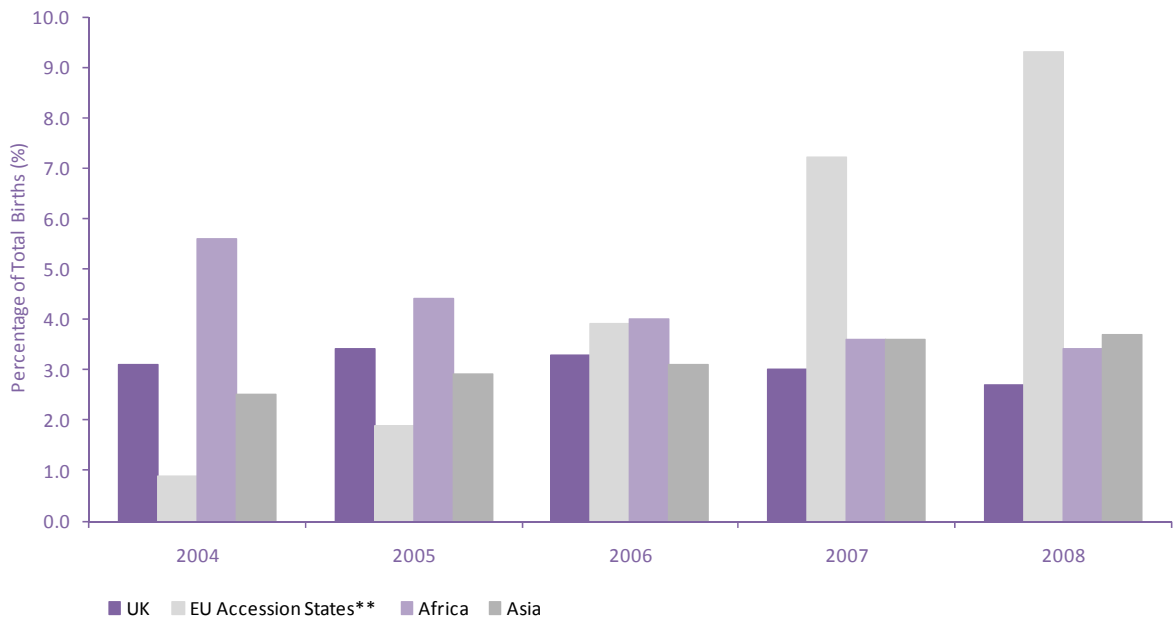
TABLE 3.5: MOTHER'S NATIONALITY

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Mother's Nationality	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
Ireland	58,465	58,208	257	4.4	123	2.1	6.5	4.6	57,383
United Kingdom	2,064	2,047	17	8.2	2	1.0	9.2	9.2	2,020
EU15 (excluding Ireland & United Kingdom)	1,015	1,013	2	2.0	2	2.0	3.9	2.0	997
EU15 to EU27 Accession States	6,985	6,951	34	4.9	18	2.6	7.4	6.5	6,895
Rest of Europe	669	668	1	1.5	0	0.0	1.5	1.5	666
Africa	2,554	2,531	23	9.0	4	1.6	10.6	9.4	2,499
Asia	2,772	2,757	15	5.4	7	2.5	7.9	5.4	2,742
America	674	673	1	1.5	0	0.0	1.5	0.0	655
Australia	149	149	0	0.0	0	0.0	0.0	0.0	148
New Zealand and Other Oceania	42	42	0	0.0	0	0.0	0.0	0.0	42
Other Nationality	10	10	0	0.0	0	0.0	0.0	0.0	10
Not Stated	188	180	8	42.6	3	16.7	58.5	48.4	185
Total	75,587	75,229	358	4.7	159	2.1	6.8	5.1	74,242
Singleton Births									
Ireland	56,324	56,086	238	4.2	108	1.9	6.1	4.2	56,324
United Kingdom	1,973	1,957	16	8.1	1	0.5	8.6	8.6	1,973
EU15 (excluding Ireland & United Kingdom)	979	977	2	2.0	2	2.1	4.1	2.1	979
EU15 to EU27 Accession States	6,802	6,770	32	4.7	14	2.1	6.8	5.7	6,802
Rest of Europe	663	662	1	1.5	0	0.0	1.5	1.5	663
Africa	2,447	2,425	22	9.0	4	1.7	10.6	9.4	2,447
Asia	2,711	2,697	14	5.2	6	2.2	7.4	4.8	2,711
America	636	635	1	1.6	0	0.0	1.6	0.0	636
Australia	147	147	0	0.0	0	0.0	0.0	0.0	147
New Zealand and Other Oceania	42	42	0	0.0	0	0.0	0.0	0.0	42
Other Nationality	10	10	0	0.0	0	0.0	0.0	0.0	10
Not Stated	182	174	8	44.0	3	17.2	60.4	50.0	182
Total	72,916	72,582	334	4.6	138	1.9	6.5	4.7	72,916
Multiple Births									
Ireland	2,141	2,122	19	8.9	15	7.1	15.9	14.5	1,059
United Kingdom	91	90	1	11.0	1	11.1	22.0	22.0	47
EU15 (excluding Ireland & United Kingdom)	36	36	0	0.0	0	0.0	0.0	0.0	18
EU15 to EU27 Accession States	183	181	2	10.9	4	22.1	32.8	32.8	93
Rest of Europe	6	6	0	0.0	0	0.0	0.0	0.0	3
Africa	107	106	1	9.4	0	0.0	9.4	9.4	52
Asia	61	60	1	16.4	1	16.7	32.8	32.8	31
America	38	38	0	0.0	0	0.0	0.0	0.0	19
Australia	2	2	0	0.0	0	0.0	0.0	0.0	1
New Zealand and Other Oceania	0	0	0	0.0	0	0.0	0.0	0.0	0
Other Nationality	0	0	0	0.0	0	0.0	0.0	0.0	0
Not Stated	6	6	0	0.0	0	0.0	0.0	0.0	3
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

Note: See Appendix F for a description of the classification system for nationality.

FIGURE 3.6
PERCENTAGE DISTRIBUTION OF BIRTHS BY NATIONALITY FOR NON-IRISH BORN MOTHERS, TOTAL BIRTHS, 2004–2008*



Notes: See Appendix G, Table G3 for data. 'Not Stated' values are not included in the calculation of percentages.
 *Mothers from the United Kingdom, EU Accession States, Africa, and Asia accounted for 19.1 per cent of total births in 2008.
 **Please note that the following EU Accession States joined the EU in 2004, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia. Bulgaria and Romania joined the EU 2007.

FIGURE 3.7
AVERAGE AGE OF MOTHER BY MOTHER'S NATIONALITY, TOTAL BIRTHS



Note: See Appendix G, Table G4 for data.

FATHER'S NATIONALITY

Information on father's nationality (place of birth) was also reported for the first time in 2004, and 2008 data are shown in Tables 3.6. Father's nationality was recorded as 'not applicable' for over 24 per cent of total births, decreasing from 28.4 per cent in 2004.¹³ Excluding these births, the largest proportion, 78.0 per cent of total births, occurred to Irish fathers, compared to 84.4 per cent in 2004.

¹³ The nationality category 'Not applicable' applies under father's nationality only. Where mother's marital status is recorded as 'never married', 'widowed', 'separated' or 'divorced', the GRO does not require father's details to register the birth. This information, therefore, is often not provided in these circumstances. Where father's details are provided, they are included in the statistics.

TABLE 3.6: FATHER'S NATIONALITY

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Father's Nationality	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR*	Maternities
Total Births									
Ireland	44,178	43,992	186	4.2	82	1.9	6.1	4.2	43,295
United Kingdom	1,869	1,858	11	5.9	3	1.6	7.5	7.0	1,821
EU15 (excluding Ireland & United Kingdom)	578	577	1	1.7	0	0.0	1.7	1.7	569
EU15 to EU27									
Accession States	4,575	4,555	20	4.4	8	1.8	6.1	5.3	4,514
Rest of Europe	519	519	0	0.0	1	1.9	1.9	0.0	514
Africa	2,069	2,053	16	7.7	3	1.5	9.2	8.2	2,025
Asia	2,205	2,190	15	6.8	3	1.4	8.2	5.9	2,180
America	464	461	3	6.5	0	0.0	6.5	4.3	454
Australia	147	147	0	0.0	1	6.8	6.8	0.0	146
New Zealand and Other Oceania	63	63	0	0.0	1	15.9	15.9	15.9	59
Other Nationality	2	2	0	0.0	0	0.0	0.0	0.0	2
Not Stated	683	674	9	13.2	3	4.5	17.6	13.2	668
Not Applicable	18,235	18,138	97	5.3	54	3.0	8.3	6.4	17,995
Total	75,587	75,229	358	4.7	159	2.1	6.8	5.1	74,242
Singleton Births									
Ireland	42,430	42,262	168	4.0	68	1.6	5.6	3.7	42,430
United Kingdom	1,771	1,760	11	6.2	3	1.7	7.9	7.3	1,771
EU15 (excluding Ireland & United Kingdom)	560	559	1	1.8	0	0.0	1.8	1.8	560
EU15 to EU27									
Accession States	4,454	4,436	18	4.0	6	1.4	5.4	4.5	4,454
Rest of Europe	508	508	0	0.0	1	2.0	2.0	0.0	508
Africa	1,983	1,968	15	7.6	3	1.5	9.1	8.1	1,983
Asia	2,155	2,141	14	6.5	3	1.4	7.9	5.6	2,155
America	444	441	3	6.8	0	0.0	6.8	4.5	444
Australia	145	145	0	0.0	1	6.9	6.9	0.0	145
New Zealand and Other Oceania	55	55	0	0.0	0	0.0	0.0	0.0	55
Other Nationality	2	2	0	0.0	0	0.0	0.0	0.0	2
Not Stated	653	644	9	13.8	3	4.7	18.4	13.9	653
Not Applicable	17,756	17,661	95	5.4	50	2.8	8.2	6.3	17,756
Total	72,916	72,582	334	4.6	138	1.9	6.5	4.7	72,916
Multiple Births									
Ireland	1,748	1,730	18	10.3	14	8.1	18.3	16.6	865
United Kingdom	98	98	0	0.0	0	0.0	0.0	0.0	50
EU15 (excluding Ireland & United Kingdom)	18	18	0	0.0	0	0.0	0.0	0.0	9
EU15 to EU27									
Accession States	121	119	2	16.5	2	16.8	33.1	33.1	60
Rest of Europe	11	11	0	0.0	0	0.0	0.0	0.0	6
Africa	86	85	1	11.6	0	0.0	11.6	11.6	42
Asia	50	49	1	20.0	0	0.0	20.0	20.0	25
America	20	20	0	0.0	0	0.0	0.0	0.0	10
Australia	2	2	0	0.0	0	0.0	0.0	0.0	1
New Zealand and Other Oceania	8	8	0	0.0	1	125.0	125.0	125.0	4
Other Nationality	0	0	0	0.0	0	0.0	0.0	0.0	0
Not Stated	30	30	0	0.0	0	0.0	0.0	0.0	15
Not Applicable	479	477	2	4.2	4	8.4	12.5	12.5	239
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

Note: See Appendix F for a description of the classification system for nationality.

MATERNAL PARITY

Maternal parity is a mother's total number of previous live births and stillbirths. Just over 42 per cent of all maternities in 2008 were to primiparous women¹⁴ and 57.6 per cent of maternities had at least one previous live birth or stillbirth (see Table 3.7).

Over the period 2004 to 2008, the average maternal age rose from 28.5 years to 29.0 years for primiparous women and from 32.4 to 32.8 years for multiparous women.¹⁵ During this five year period the proportion of mothers giving birth for the first time and aged 35 years or more increased from 12.6 per cent to 14.5 per cent, while the proportion of multiparous women aged 35 years or more increased from 32.4 per cent to 35.8 per cent (see Figures 3.8 and 3.9).

Maternal parity by mother's age for 2008 is shown in Figure 3.10. Of mothers aged less than 20 years, 91.0 per cent gave birth for the first time, with only 8.4 per cent delivering for the second time and 0.6 per cent delivering more than a third time. A more equal distribution was observed for mothers aged between 30 and 34 years giving birth for the first and second time. As expected, mothers aged 40 years or more were relatively evenly distributed for first, second and third time deliveries.

¹⁴ Women giving birth for the first time

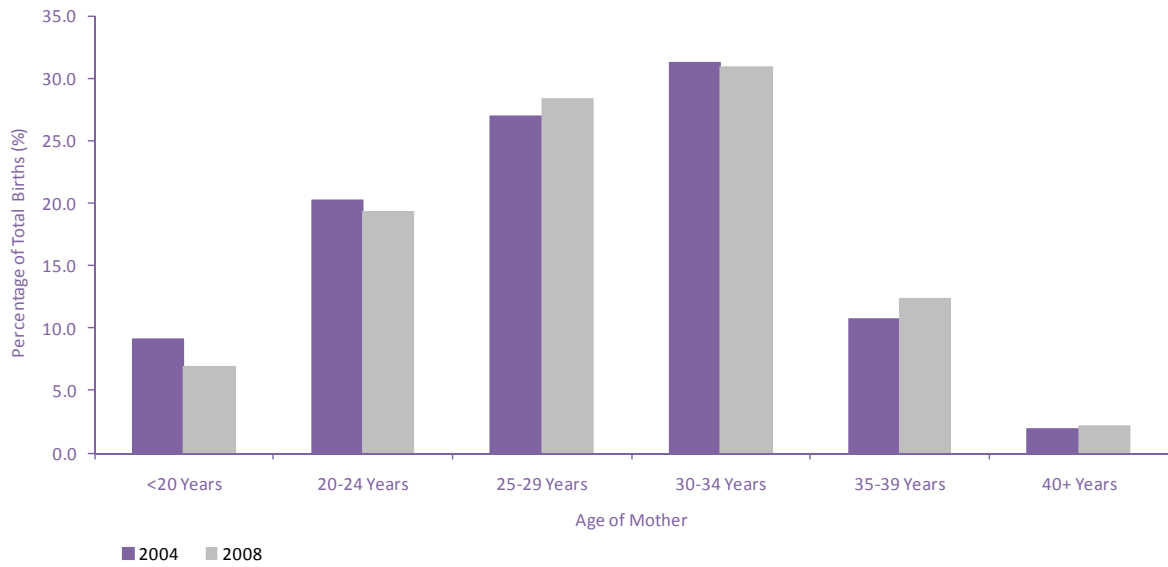
¹⁵ Women who have had at least one previous pregnancy resulting in a live birth or stillbirth

TABLE 3.7: MATERNAL PARITY

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

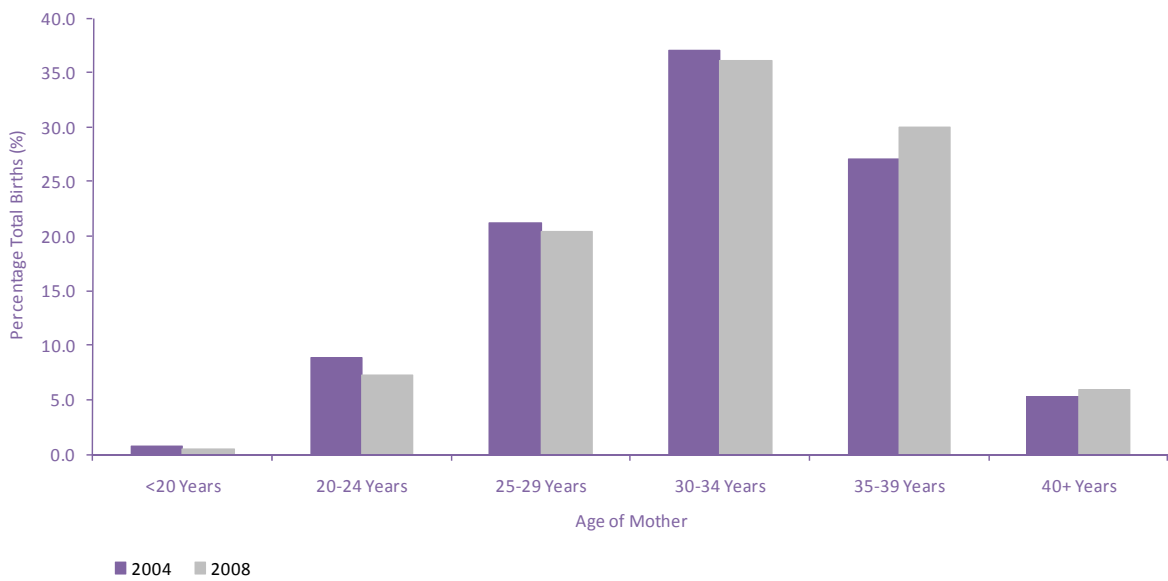
Maternal Parity	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR*	Maternities
Total Births									
0	32,092	31,918	174	5.4	76	2.4	7.8	6.2	31,480
1	23,866	23,769	97	4.1	38	1.6	5.7	4.1	23,472
2	12,445	12,393	52	4.2	26	2.1	6.3	4.4	12,218
3	4,654	4,637	17	3.7	12	2.6	6.2	3.5	4,584
4	1,554	1,545	9	5.8	4	2.6	8.4	5.8	1,527
5	527	523	4	7.6	1	1.9	9.5	9.5	522
6	236	234	2	8.5	0	0.0	8.5	0.0	230
More than 6	201	198	3	14.9	1	5.1	19.9	15.0	197
Not Stated	12	12	0	0.0	1	83.3	83.3	83.3	12
Total	75,587	75,229	358	4.7	159	2.1	6.8	5.1	74,242
Singleton Births									
0	30,878	30,717	161	5.2	62	2.0	7.2	5.6	30,878
1	23,084	22,993	91	3.9	35	1.5	5.5	4.0	23,084
2	11,992	11,943	49	4.1	25	2.1	6.2	4.3	11,992
3	4,516	4,499	17	3.8	12	2.7	6.4	3.6	4,516
4	1,500	1,492	8	5.3	1	0.7	6.0	3.3	1,500
5	517	514	3	5.8	1	2.0	7.7	7.7	517
6	224	222	2	8.9	0	0.0	8.9	0.0	224
More than 6	193	190	3	15.5	1	5.3	20.7	15.6	193
Not Stated	12	12	0	0.0	1	83.3	83.3	83.3	12
Total	72,916	72,582	334	4.6	138	1.9	6.5	4.7	72,916
Multiple Births									
0	1,214	1,201	13	10.7	14	11.7	22.2	22.2	602
1	782	776	6	7.7	3	3.9	11.5	7.7	388
2	453	450	3	6.6	1	2.2	8.8	8.8	226
3	138	138	0	0.0	0	0.0	0.0	0.0	68
4	54	53	1	18.5	3	56.6	74.1	74.1	27
5	10	9	1	100.0	0	0.0	100.0	100.0	5
6	12	12	0	0.0	0	0.0	0.0	0.0	6
More than 6	8	8	0	0.0	0	0.0	0.0	0.0	4
Not Stated	0	0	0	0.0	0	0.0	0.0	0.0	0
Total	2,671	2,647	24	9.0	21	7.9	16.9	15.7	1,326

FIGURE 3.8
TOTAL BIRTHS TO PRIMIPAROUS WOMEN BY MOTHER’S AGE GROUP, 2004 AND 2008



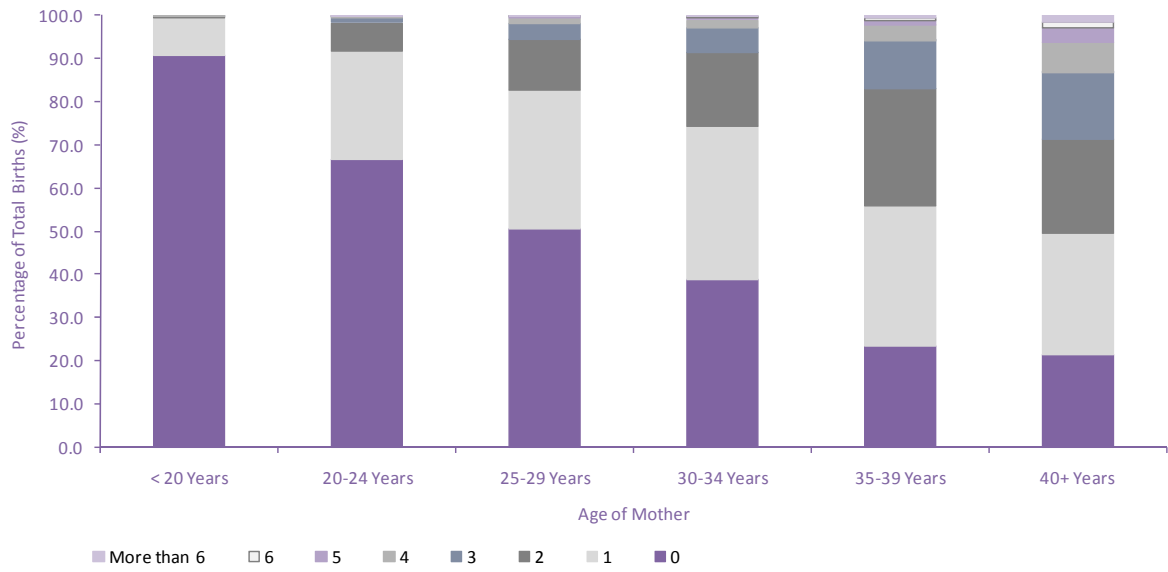
Note: See Appendix G, Table G5 for data. ‘Not Stated’ values are not included in the calculation of percentages.

FIGURE 3.9
TOTAL BIRTHS TO MULTIPAROUS WOMEN BY MOTHER’S AGE GROUP, 2004 AND 2008



Note: See Appendix G, Table G6 for data. ‘Not Stated’ values are not included in the calculation of percentages.

FIGURE 3.10
PARITY BY AGE OF MOTHER, TOTAL MATERNITIES



Note: See Appendix G, Table G7 for data. 'Not Stated' values are not included in the calculation of percentages.

NUMBER OF PREVIOUS STILLBIRTHS

In 2008, 98.3 per cent of total births to multiparous women recorded no previous stillbirths while 1.7 per cent recorded at least 1 previous stillbirth (see Table 3.8). This is consistent with information from previous years.

TABLE 3.8: PREVIOUS STILLBIRTHS

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Previous Stillbirths	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
0	42,747	42,570	177	4.1	79	1.9	6.0	4.1	42,031
1	669	662	7	10.5	2	3.0	13.5	10.5	652
2	50	50	0	0.0	1	20.0	20.0	20.0	50
3 and over	17	17	0	0.0	0	0.0	0.0	0.0	17
Total	43,483	43,299	184	4.2	82	1.9	6.1	4.3	42,750
Singleton Births									
0	41,323	41,156	167	4.0	72	1.7	5.8	3.9	41,323
1	636	630	6	9.4	2	3.2	12.6	11.0	636
2	50	50	0	0.0	1	20.0	20.0	20.0	50
3 and over	17	17	0	0.0	0	0.0	0.0	0.0	17
Total	42,026	41,853	173	4.1	75	1.8	5.9	4.1	42,026
Multiple Births									
0	1,424	1,414	10	7.0	7	5.0	11.9	10.5	708
1	33	32	1	30.3	0	0.0	30.3	0.0	16
2	0	0	0	0.0	0	0.0	0.0	0.0	0
3 and over	0	0	0	0.0	0	0.0	0.0	0.0	0
Total	1,457	1,446	11	7.5	7	4.8	12.4	10.3	724

Notes: This table only includes women having second and subsequent births. Primiparous women (i.e. women with no previous live births or stillbirths) are not included in this table.

There were 12 maternities with unknown parity; these were excluded from the table.

INTERVAL SINCE LAST BIRTH

Table 3.9 outlines the interval in years since mother's last birth for total, singleton and multiple births. The percentage of multiparous women whose previous birth was within the last 3 years decreased slightly from 52.3 per cent in 2004 to 51.5 per cent in 2008.

TABLE 3.9: INTERVAL IN YEARS SINCE LAST BIRTH

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Interval Since Last Birth	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR*	Maternities
All Births									
1 year or less	608	604	4	6.6	1	1.7	8.2	5.0	589
>1 year to 2 years	10,721	10,689	32	3.0	23	2.2	5.1	3.0	10,557
>2 years to 3 years	10,762	10,712	50	4.6	18	1.7	6.3	4.6	10,587
>3 years to 4 years	6,576	6,549	27	4.1	9	1.4	5.5	3.5	6,457
>4 years to 5 years	4,310	4,295	15	3.5	10	2.3	5.8	4.4	4,238
>5 years to 6 years	2,858	2,846	12	4.2	3	1.1	5.2	3.2	2,810
More than 6 years	7,055	7,017	38	5.4	14	2.0	7.4	6.0	6,931
Not Stated	593	587	6	10.1	4	6.8	16.9	13.5	581
Total	43,483	43,299	184	4.2	82	1.9	6.1	4.3	42,750
Singleton Births									
1 year or less	569	565	4	7.0	1	1.8	8.8	5.3	569
>1 year to 2 years	10,391	10,360	31	3.0	22	2.1	5.1	3.0	10,391
>2 years to 3 years	10,419	10,372	47	4.5	17	1.6	6.1	4.3	10,419
>3 years to 4 years	6,338	6,313	25	3.9	8	1.3	5.2	3.2	6,338
>4 years to 5 years	4,167	4,152	15	3.6	10	2.4	6.0	4.6	4,167
>5 years to 6 years	2,764	2,755	9	3.3	3	1.1	4.3	2.2	2,764
More than 6 years	6,808	6,771	37	5.4	12	1.8	7.2	5.9	6,808
Not Stated	570	565	5	8.8	2	3.5	12.3	10.5	570
Total	42,026	41,853	173	4.1	75	1.8	5.9	4.1	42,026
Multiple Births									
1 year or less	39	39	0	0.0	0	0.0	0.0	0.0	20
>1 year to 2 years	330	329	1	3.0	1	3.0	6.1	3.0	166
>2 years to 3 years	343	340	3	8.7	1	2.9	11.7	11.7	168
>3 years to 4 years	238	236	2	8.4	1	4.2	12.6	12.6	119
>4 years to 5 years	143	143	0	0.0	0	0.0	0.0	0.0	71
>5 years to 6 years	94	91	3	31.9	0	0.0	31.9	31.9	46
More than 6 years	247	246	1	4.0	2	8.1	12.1	8.1	123
Not Stated	23	22	1	43.5	2	90.9	130.4	90.9	11
Total	1,457	1,446	11	7.5	7	4.8	12.4	10.3	724

Notes: This table only includes women having second and subsequent births. Primiparous women (i.e. women with no previous live births or stillbirths) are not included in this table.
There were 12 maternities with unknown parity; these were excluded from the table.

BIRTHWEIGHT

The birthweight of a baby is widely used as a key indicator of health status. According to the World Health Organization (WHO), low birthweight babies are defined as weighing less than 2,500 grams. This is further divided into very low birthweight (weighing less than 1,500 grams) and extremely low birthweight (weighing less than 1,000 grams). Low birthweight babies are more likely to have poor perinatal outcomes with consequences for later life experience.¹⁶ In 2008, the average birthweight of live births was 3,502 grams for singletons and 2,425 grams for multiples. The average birthweight of total live births in 2008 was 3,464 grams. The percentage of total live births classified as low birthweight was 5.3 per cent (3.8 per cent of singletons and 48.4 per cent of multiples). There is considerable variation in low birthweight rates between singleton and multiple births (see Table 3.10). The percentage of singleton live births weighing less than 1,500 grams was 0.6 per cent compared to 7.8 per cent for multiple births (see Figure 3.11). The combined percentage of total live births with very low and extremely low birthweights (<1,500g) was just under 1 per cent. In 2008, 91.9 per cent of total live births were in the healthy birthweight category, 2,500–4,499 grams (see Figure 3.12).

¹⁶ EURO-PERISTAT Project, with SCPE, EUROCAT, EURONEOSTAT. European Perinatal Health Report, 2008. www.europeristat.com

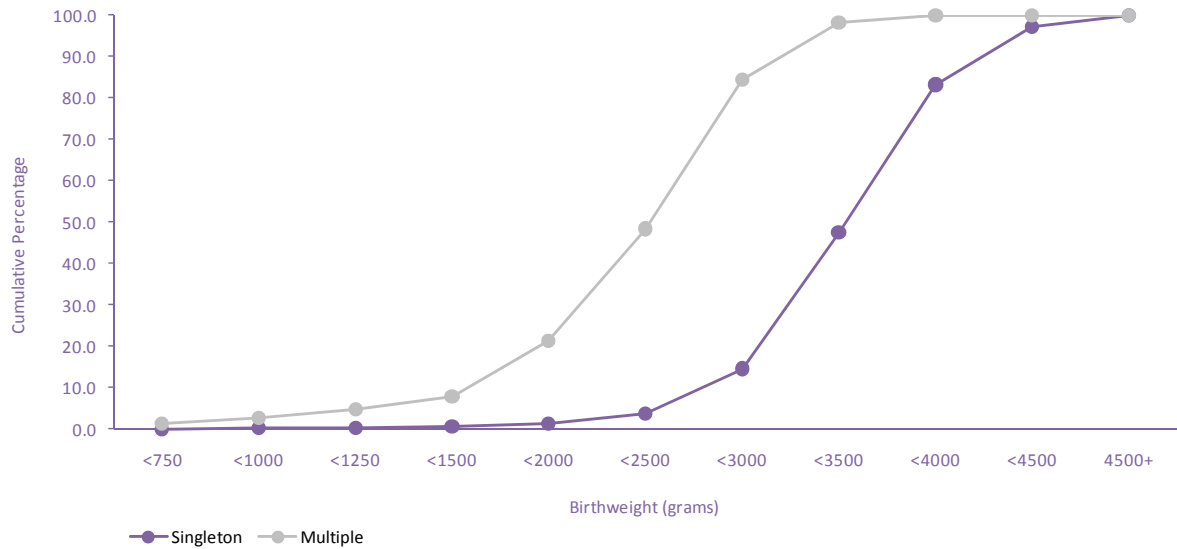
TABLE 3.10: BIRTHWEIGHT

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Birthweight (grams)	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
500-749	179	107	72	402.2	49	457.9	676.0	650.6	156
750-999	161	137	24	149.1	16	116.8	248.5	198.7	144
1000-1249	187	161	26	139.0	8	49.7	181.8	145.3	151
1250-1499	263	242	21	79.9	11	45.5	121.7	76.0	223
1500-1999	953	896	57	59.8	17	19.0	77.7	50.8	751
2000-2499	2,508	2,468	40	16.0	23	9.3	25.1	14.9	2,138
2500-2999	8,877	8,828	49	5.5	11	1.3	6.8	5.3	8,424
3000-3499	24,335	24,301	34	1.4	9	0.4	1.8	1.4	24,155
3500-3999	25,896	25,870	26	1.0	9	0.4	1.4	0.9	25,872
4000-4499	10,158	10,150	8	0.8	6	0.6	1.4	1.1	10,158
4500 and Over	2,068	2,067	1	0.5	0	0.0	0.5	0.5	2,068
Not Stated	2	2	0	0.0	0	0.0	0.0	0.0	2
Total	75,587	75,229	358	4.7	159	2.1	6.8	5.1	74,242
Singleton Births									
500-749	134	72	62	462.7	31	430.6	694.0	663.9	134
750-999	120	97	23	191.7	15	154.6	316.7	254.6	120
1000-1249	133	109	24	180.5	7	64.2	233.1	190.5	133
1250-1499	183	163	20	109.3	11	67.5	169.4	105.9	183
1500-1999	589	536	53	90.0	17	31.7	118.9	76.5	589
2000-2499	1,790	1,754	36	20.1	22	12.5	32.4	18.7	1,790
2500-2999	7,924	7,877	47	5.9	11	1.4	7.3	5.7	7,924
3000-3499	23,970	23,936	34	1.4	9	0.4	1.8	1.4	23,970
3500-3999	25,846	25,820	26	1.0	9	0.4	1.4	0.9	25,846
4000-4499	10,157	10,149	8	0.8	6	0.6	1.4	1.1	10,157
4500 and Over	2,068	2,067	1	0.5	0	0.0	0.5	0.5	2,068
Not Stated	2	2	0	0.0	0	0.0	0.0	0.0	2
Total	72,916	72,582	334	4.6	138	1.9	6.5	4.7	72,916
Multiple Births									
500-749	45	35	10	222.2	18	514.3	622.2	613.6	22
750-999	41	40	1	24.4	1	25.0	48.8	48.8	24
1000-1249	54	52	2	37.0	1	19.2	55.6	37.7	18
1250-1499	80	79	1	12.5	0	0.0	12.5	12.5	40
1500-1999	364	360	4	11.0	0	0.0	11.0	11.0	162
2000-2499	718	714	4	5.6	1	1.4	7.0	5.6	348
2500-2999	953	951	2	2.1	0	0.0	2.1	2.1	500
3000-3499	365	365	0	0.0	0	0.0	0.0	0.0	185
3500-3999	50	50	0	0.0	0	0.0	0.0	0.0	26
4000-4499	1	1	0	0.0	0	0.0	0.0	0.0	1
4500 and Over	0	0	0	0.0	0	0.0	0.0	0.0	0
Not Stated	0	0	0	0.0	0	0.0	0.0	0.0	0
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

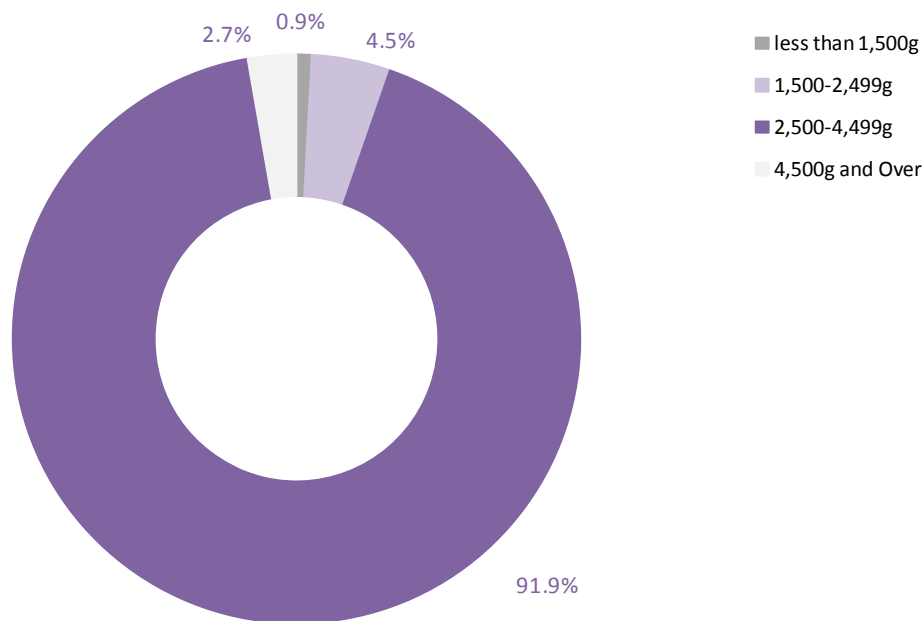
Note: Birthweight tables by primiparous and multiparous women are provided in Appendix G, Tables G8 and G9.

FIGURE 3.11
BIRTHWEIGHT: CUMULATIVE PERCENTAGES OF TOTAL LIVE BIRTHS



Note: See Table 3.10 for data. 'Not Stated' values are not included in the calculation of percentages.

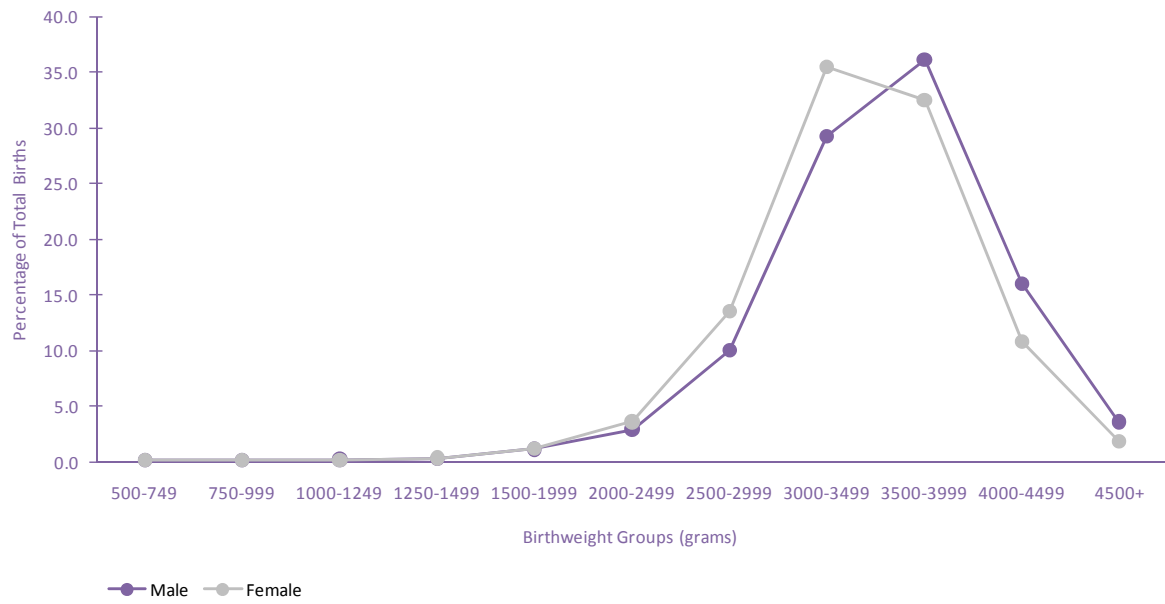
FIGURE 3.12
PERCENTAGE OF BIRTHS BY BIRTHWEIGHT GROUPS, TOTAL LIVE BIRTHS



Note: See Appendix G, Table G10 for data. 'Not Stated' values are not included in the calculation of percentages.

The average birthweight of stillborn babies was 1,925 grams in 2008 compared to the 3,464 grams reported for live births. Low birthweight occurred in 67.0 per cent of stillborn babies. Just less than 40 per cent of stillborn babies weighed less than 1,500 grams. Figure 3.13 shows the percentage distribution across birthweight groups by sex. A marginally smaller proportion of male live births were low birthweight (5.0 per cent) compared with female babies (5.7 per cent). The average birthweight of live births was 3,524 grams for males compared to 3,400 grams for females.

FIGURE 3.13
PERCENTAGE DISTRIBUTION FOR MALES AND FEMALES ACROSS BIRTHWEIGHT GROUPS, TOTAL LIVE BIRTHS



Note: See Appendix G, Table G11 for data. 'Not Stated' values are not included in the calculation of percentages.

GESTATIONAL AGE

The average gestational age for total births in 2008 was 39.3 weeks. The percentage of all babies born at term (37–41 weeks) was 90.2 per cent (see Table 3.11). Preterm births (born before 37 completed weeks gestation) were associated with higher risk of perinatal death and comprised 6.2 per cent of total births. Figure 3.14 presents perinatal mortality rates by gestational age for total births. Most preterm births occurred at a gestational age of 32–36 completed weeks (5.0 per cent of total births). For stillborn births the average gestational age was 32.9 weeks compared to 39.3 weeks for live borns. Preterm birth occurred in 63.7 per cent of stillborns and 5.9 per cent of live births. For singleton births the average gestational age was 39.4 completed weeks compared with 35.7 for twins and 32.0 for higher-order multiple births.

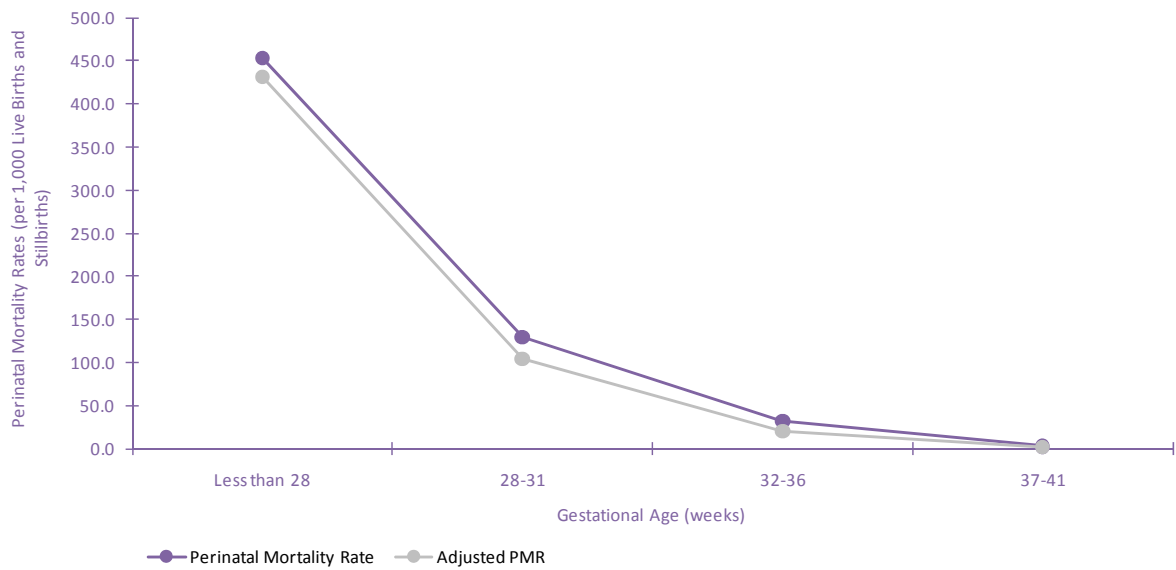
TABLE 3.11: GESTATIONAL AGE AT DELIVERY

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Gestation (Weeks)	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
Less than 28	316	239	77	243.7	66	276.2	452.5	430.9	277
28-31	567	506	61	107.6	12	23.7	128.8	103.5	474
32-36	3,779	3,689	90	23.8	32	8.7	32.3	20.6	3,233
37-41	68,172	68,042	130	1.9	46	0.7	2.6	1.8	67,506
42 and Over	2,750	2,750	0	0.0	3	1.1	1.1	0.0	2,749
Not Stated	3	3	0	0.0	0	0.0	0.0	0.0	3
Total	75,587	75,229	358	4.7	159	2.1	6.8	5.1	74,242
Singleton Births									
Less than 28	233	166	67	287.6	47	283.1	489.3	464.0	233
28-31	390	332	58	148.7	11	33.1	176.9	141.7	390
32-36	2,703	2,619	84	31.1	32	12.2	42.9	26.7	2,703
37-41	66,839	66,714	125	1.9	45	0.7	2.5	1.7	66,839
42 and Over	2,748	2,748	0	0.0	3	1.1	1.1	0.0	2,748
Not Stated	3	3	0	0.0	0	0.0	0.0	0.0	3
Total	72,916	72,582	334	4.6	138	1.9	6.5	4.7	72,916
Multiple Births									
Less than 28	83	73	10	120.5	19	260.3	349.4	341.5	44
28-31	177	174	3	17.0	1	5.8	22.6	22.6	84
32-36	1,076	1,070	6	5.6	0	0.0	5.6	5.6	530
37-41	1,333	1,328	5	3.8	1	0.8	4.5	3.0	667
42 and Over	2	2	0	0.0	0	0.0	0.0	0.0	1
Not Stated	0	0	0	0.0	0	0.0	0.0	0.0	0
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

Note: Gestational age tables by primiparous and multiparous women are provided in Appendix G, Tables G12 and G13.

FIGURE 3.14
PERINATAL MORTALITY RATES BY GESTATIONAL AGE AT DELIVERY, TOTAL BIRTHS



Notes: See Table 3.11 for data. 'Not Stated' values are not included in the calculation of percentages.

MONTH OF BIRTH

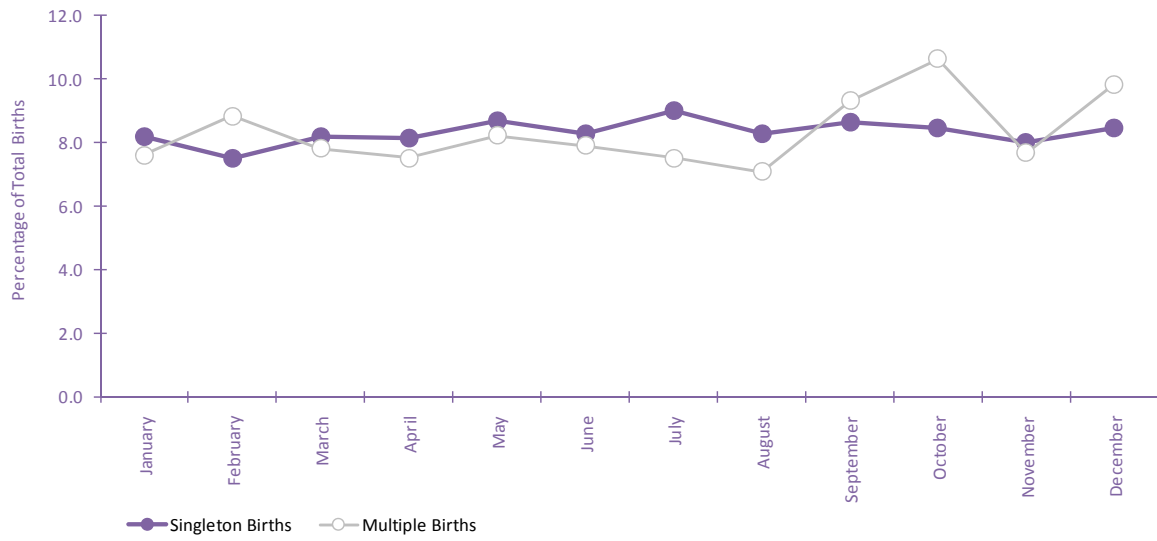
As shown in Table 3.12, total births were fairly evenly spread throughout the year, with the lowest number of births occurring in February (7.6 per cent) and the highest occurring in July (8.9 per cent). The highest number of singleton births occurred in July (10.4 per cent) and in October for multiple births (10.6 per cent) (see Table 3.12 and Figure 3.15).

TABLE 3.12: MONTH OF BIRTH

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Month of Birth	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
January	6,184	6,153	31	5.0	10	1.6	6.6	5.3	6,082
February	5,725	5,691	34	5.9	8	1.4	7.3	5.1	5,606
March	6,198	6,171	27	4.4	11	1.8	6.1	5.2	6,092
April	6,152	6,128	24	3.9	15	2.5	6.3	3.1	6,052
May	6,564	6,529	35	5.3	15	2.3	7.6	5.8	6,453
June	6,266	6,233	33	5.3	13	2.1	7.3	5.3	6,158
July	6,764	6,729	35	5.2	15	2.2	7.4	5.6	6,664
August	6,237	6,211	26	4.2	17	2.7	6.9	5.9	6,142
September	6,567	6,534	33	5.0	18	2.8	7.8	6.0	6,441
October	6,460	6,427	33	5.1	9	1.4	6.5	5.3	6,318
November	6,033	6,011	22	3.7	15	2.5	6.1	4.2	5,930
December	6,437	6,412	25	3.9	13	2.0	5.9	4.2	6,304
Total	75,587	75,229	358	4.7	159	2.1	6.8	5.1	74,242
Singleton Births									
January	5,981	5,952	29	4.9	9	1.5	6.4	5.0	5,981
February	5,489	5,455	34	6.2	6	1.1	7.3	5.1	5,489
March	5,989	5,963	26	4.3	9	1.5	5.8	4.9	5,989
April	5,951	5,929	22	3.7	14	2.4	6.1	2.7	5,951
May	6,344	6,313	31	4.9	15	2.4	7.3	5.4	6,344
June	6,055	6,023	32	5.3	12	2.0	7.3	5.1	6,055
July	6,563	6,531	32	4.9	14	2.1	7.0	5.2	6,563
August	6,048	6,023	25	4.1	12	2.0	6.1	5.1	6,048
September	6,318	6,287	31	4.9	14	2.2	7.1	5.4	6,318
October	6,176	6,145	31	5.0	8	1.3	6.3	5.0	6,176
November	5,828	5,809	19	3.3	14	2.4	5.7	3.6	5,828
December	6,174	6,152	22	3.6	11	1.8	5.3	3.7	6,174
Total	72,916	72,582	334	4.6	138	1.9	6.5	4.7	72,916
Multiple Births									
January	203	201	2	9.9	1	5.0	14.8	14.8	101
February	236	236	0	0.0	2	8.5	8.5	4.3	117
March	209	208	1	4.8	2	9.6	14.4	14.4	103
April	201	199	2	10.0	1	5.0	14.9	14.9	101
May	220	216	4	18.2	0	0.0	18.2	18.2	109
June	211	210	1	4.7	1	4.8	9.5	9.5	103
July	201	198	3	14.9	1	5.1	19.9	19.9	101
August	189	188	1	5.3	5	26.6	31.8	31.8	94
September	249	247	2	8.0	4	16.2	24.1	20.2	123
October	284	282	2	7.0	1	3.6	10.6	10.6	142
November	205	202	3	14.6	1	5.0	19.5	19.5	102
December	263	260	3	11.4	2	7.7	19.0	15.3	130
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

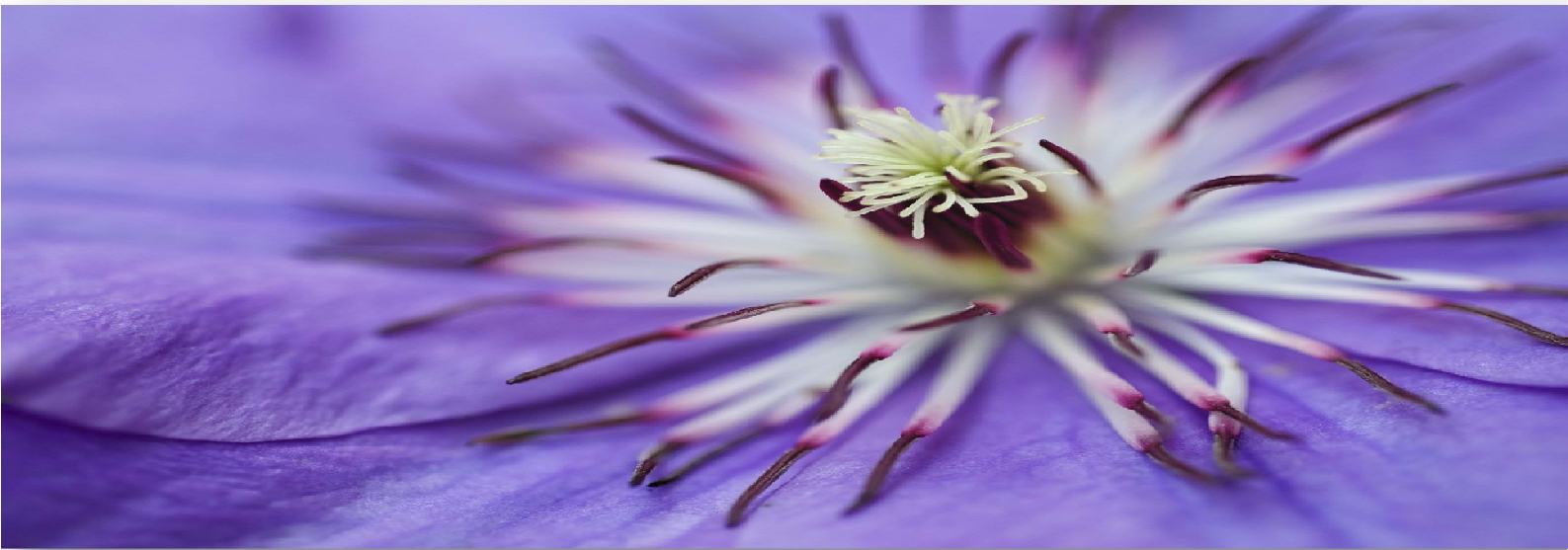
FIGURE 3.15
PERCENTAGE OF BIRTHS BY MONTH OF BIRTH, TOTAL BIRTHS



Note: See Table 3.12 for data.

SECTION FOUR

PERINATAL CARE



INTRODUCTION

This section presents a detailed review of aspects of perinatal care for the mother and baby. Total, singleton and multiple births are reported, as well as details of maternal parity. The following tables outline data for total births, live births, stillbirths and early neonatal deaths, together with the relevant rates, as well as presenting the number of maternities. The perinatal mortality rate and adjusted perinatal mortality rate are also outlined in each table. Tables and figures are presented in some detail for a number of variables, including type of antenatal care, timing of first antenatal visit, mother's antenatal and postnatal length of stay, method of delivery, mother's immunity to rubella, infant's length of stay and type of feeding.

TYPE OF ANTENATAL CARE

The preferred choice of antenatal care was the combined hospital and G.P. option accounting for just over 79.2 per cent of total births.¹⁷ With Hospital/Obstetrician care accounting for a further 19.9 per cent of total births, a very small proportion of births were delivered under other antenatal care schemes. Table 4.1 shows that Hospital/Obstetrician care was higher for maternities delivering multiple births (31.2 per cent) compared with those delivering singleton births (19.4 per cent). Deliveries under Domino Schemes and midwifery-led maternity units within some hospitals were included under combined care.

TABLE 4.1: TYPE OF ANTENATAL CARE

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Type of Antenatal Care	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Mortality Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
Hospital/Obstetrician	14,998	14,912	86	5.7	45	3.0	8.7	6.0	14,578
General Practitioner only	123	122	1	8.1	0	0.0	8.1	0.0	123
Hospital & G.P. combined	59,785	59,521	264	4.4	105	1.8	6.2	4.7	58,872
None	220	214	6	27.3	7	32.7	59.1	59.1	213
Midwife only	397	396	1	2.5	1	2.5	5.0	2.5	397
Not Stated	64	64	0	0.0	1	15.6	15.6	15.6	59
Total	75,587	75,229	358	4.7	159	2.1	6.8	5.1	74,242
Singleton Births									
Hospital/Obstetrician	14,166	14,093	73	5.2	38	2.7	7.8	5.0	14,166
General Practitioner only	123	122	1	8.1	0	0.0	8.1	0.0	123
Hospital & G.P. combined	57,972	57,718	254	4.4	93	1.6	6.0	4.5	57,972
None	205	200	5	24.4	5	25.0	48.8	48.8	205
Midwife only	397	396	1	2.5	1	2.5	5.0	2.5	397
Not Stated	53	53	0	0.0	1	18.9	18.9	18.9	53
Total	72,916	72,582	334	4.6	138	1.9	6.5	4.7	72,916
Multiple Births									
Hospital/Obstetrician	832	819	13	15.6	7	8.5	24.0	22.9	412
General Practitioner only	0	0	0	0.0	0	0.0	0.0	0.0	0
Hospital & G.P. combined	1,813	1,803	10	5.5	12	6.7	12.1	11.0	900
None	15	14	1	66.7	2	142.9	200.0	200.0	8
Midwife only	0	0	0	0.0	0	0.0	0.0	0.0	0
Not Stated	11	11	0	0.0	0	0.0	0.0	0.0	6
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

¹⁷ Throughout this section, 'Not Stated' values are not included in the calculation of percentages for discussion.

DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT

While 79.2 per cent of total births were recorded as receiving combined antenatal care, the date of the first visit to the doctor was recorded as 'not known' for 43.4 per cent of these births. As a result of the absence of these data, the timing of first contact with health professionals within this category will reflect the date of the first hospital visit, even though this is likely to have been later than the first doctor visit. Consequently, caution should be exercised in interpreting the data presented here on the timing of the first visit to health services (see Table 4.2). A higher percentage of multiple birth maternities (63.3 per cent) had their first antenatal visit within the first 12 weeks of pregnancy compared with singleton birth maternities at 56.3 per cent.

TABLE 4.2: TIME OF FIRST VISIT TO DOCTOR OR HOSPITAL DURING PREGNANCY

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Time of first visit (weeks)	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Mortality Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
0-12	41,257	41,067	190	4.6	78	1.9	6.5	4.8	40,433
13-19	22,748	22,650	98	4.3	40	1.8	6.1	4.7	22,405
20 and over	8,912	8,858	54	6.1	36	4.1	10.1	6.9	8,776
Not Stated	2,670	2,654	16	6.0	5	1.9	7.9	6.7	2,628
Total	75,587	75,229	358	4.7	159	2.1	6.8	5.1	74,242
Singleton Births									
0-12	39,621	39,448	173	4.4	64	1.6	6.0	4.3	39,621
13-19	22,068	21,975	93	4.2	38	1.7	5.9	4.5	22,068
20 and over	8,642	8,589	53	6.1	31	3.6	9.7	6.4	8,642
Not Stated	2,585	2,570	15	5.8	5	1.9	7.7	6.6	2,585
Total	72,916	72,582	334	4.6	138	1.9	6.5	4.7	72,916
Multiple Births									
0-12	1,636	1,619	17	10.4	14	8.6	18.9	17.1	812
13-19	680	675	5	7.4	2	3.0	10.3	10.3	337
20 and over	270	269	1	3.7	5	18.6	22.2	22.2	134
Not Stated	85	84	1	11.8	0	0.0	11.8	11.8	43
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

ADVANCE HOSPITAL BOOKINGS

Almost 99 per cent of maternities were booked at time of admission to hospital, see Table 4.3.

TABLE 4.3: ADVANCE HOSPITAL BOOKINGS

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Advance Hospital Bookings	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Mortality Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
Booked	74,557	74,213	344	4.6	143	1.9	6.5	4.8	73,248
Not Booked	842	829	13	15.4	16	19.3	34.4	28.7	809
Not Stated	30	29	1	33.3	0	0.0	33.3	33.3	27
Total	75,429	75,071	358	4.7	159	2.1	6.9	5.1	74,084
Singleton Births									
Booked	71,959	71,638	321	4.5	124	1.7	6.2	4.5	71,959
Not Booked	776	764	12	15.5	14	18.3	33.5	27.2	776
Not Stated	23	22	1	43.5	0	0.0	43.5	43.5	23
Total	72,758	72,424	334	4.6	138	1.9	6.5	4.7	72,758
Multiple Births									
Booked	2,598	2,575	23	8.9	19	7.4	16.2	15.0	1,289
Not Booked	66	65	1	15.2	2	30.8	45.5	45.5	33
Not Stated	7	7	0	0.0	0	0.0	0.0	0.0	4
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

Notes: 'Not Stated' includes 7 births where place of birth was recorded as domiciliary but birth was registered by a hospital. For these cases, the mother was not admitted under a planned community midwife scheme. Therefore, hospital bookings were not applicable. There were 23 births where advance hospital booking was not stated. Domiciliary births, of which there were 158 singleton births, are excluded from this table. See Section Six for detailed analysis.

MOTHER'S ANTENATAL LENGTH OF STAY

The average antenatal length of stay was less than 1 day for singleton births and 2.3 days for multiple births. Table 4.4 outlines the distribution of antenatal length of stay for total, singleton and multiple births. Over 90 per cent of singleton births and 76.7 per cent of multiple births were delivered within 2 days of mother's admission to hospital. Just over 4 per cent of maternities delivering singleton births had an antenatal length of stay greater than 3 days, compared to 16.0 per cent of maternities delivering multiple births.

TABLE 4.4: MOTHER'S ANTENATAL LENGTH OF STAY

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Antenatal Length of Stay	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Mortality Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
0-1 Days	67,613	67,324	289	4.3	122	1.8	6.1	4.4	66,586
2 Days	4,267	4,238	29	6.8	6	1.4	8.2	7.3	4,173
3-5 Days	2,192	2,174	18	8.2	12	5.5	13.7	11.4	2,111
6-8 Days	561	552	9	16.0	6	10.9	26.7	23.3	516
9-11 Days	240	236	4	16.7	2	8.5	25.0	20.9	204
12-14 Days	153	149	4	26.1	3	20.1	45.8	39.5	142
More than 2 Weeks	348	343	5	14.4	8	23.3	37.4	17.6	297
Not Stated	55	55	0	0.0	0	0.0	0.0	0.0	55
Total	75,429	75,071	358	4.7	159	2.1	6.9	5.1	74,084
Singleton Births									
0-1 Days	65,565	65,293	272	4.1	105	1.6	5.8	4.1	65,565
2 Days	4,080	4,052	28	6.9	6	1.5	8.3	7.4	4,080
3-5 Days	2,032	2,015	17	8.4	12	6.0	14.3	11.8	2,032
6-8 Days	474	468	6	12.7	4	8.5	21.1	16.9	474
9-11 Days	172	169	3	17.4	1	5.9	23.3	23.3	172
12-14 Days	132	129	3	22.7	2	15.5	37.9	30.5	132
More than 2 Weeks	248	243	5	20.2	8	32.9	52.4	24.9	248
Not Stated	55	55	0	0.0	0	0.0	0.0	0.0	55
Total	72,758	72,424	334	4.6	138	1.9	6.5	4.7	72,758
Multiple Births									
0-1 Days	2,048	2,031	17	8.3	17	8.4	16.6	15.6	1,021
2 Days	187	186	1	5.3	0	0.0	5.3	5.3	93
3-5 Days	160	159	1	6.3	0	0.0	6.3	6.3	79
6-8 Days	87	84	3	34.5	2	23.8	57.5	57.5	42
9-11 Days	68	67	1	14.7	1	14.9	29.4	14.9	32
12-14 Days	21	20	1	47.6	1	50.0	95.2	95.2	10
More than 2 Weeks	100	100	0	0.0	0	0.0	0.0	0.0	49
Not Stated	0	0	0	0.0	0	0.0	0.0	0.0	0
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

Notes: 'Not Stated' includes 51 births where place of birth was recorded as domiciliary but birth was registered by a hospital. For these cases, the mother was not admitted, or was admitted post delivery, under a planned community midwife scheme. Therefore, dates of mother's antenatal length of stay were not applicable.

There were 3 births where place of birth was recorded as 'Born Before Arrival'. In these cases, mother's admission date was after the infant's date of birth. Therefore, antenatal length of stay was not applicable.

There was 1 birth where mother's admission date was not stated.

Domiciliary births, of which there were 158 singleton births, are excluded from this table. See Section Six for detailed analysis.

MOTHER'S POSTNATAL LENGTH OF STAY

Maternal postnatal length of stay can be influenced by factors such as method of delivery, post delivery complications, neonatal mortality, and hospital discharge policies. In 2008, the mother's median postnatal length of stay was 2 days for live born singleton births and 4 days for live born multiple births. Average postnatal lengths of stay for singleton and multiple births were 2.7 and 4.5 days respectively.

Over 50 per cent of maternities delivering singleton births remained in hospital for less than 3 days; for maternities delivering multiple births 11.7 per cent remained in hospital for the same period (see Table 4.5).

The average postnatal length of stay for mothers differed by method of delivery and plurality. Average maternal postnatal length of stay for spontaneous delivery for singleton births was 2.1 days compared to 3.2 days for multiple births. Singleton births delivered by caesarean section resulted in an average maternal postnatal length of stay of 4.3 days compared to 5.1 days for multiple births. Mother's postnatal length of stay by method of delivery and plurality is shown in Figures 4.1 and 4.2. For spontaneous deliveries, 71.8 per cent of singleton births recorded a postnatal length of stay of less than 3 days compared to 34.0 per cent of multiple births. Delivery by caesarean section with a postnatal length of stay of 6 days or more accounted for 6.9 per cent of singleton caesarean deliveries compared to 25.4 per cent for multiple caesarean deliveries.

TABLE 4.5: MOTHER'S POSTNATAL LENGTH OF STAY

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

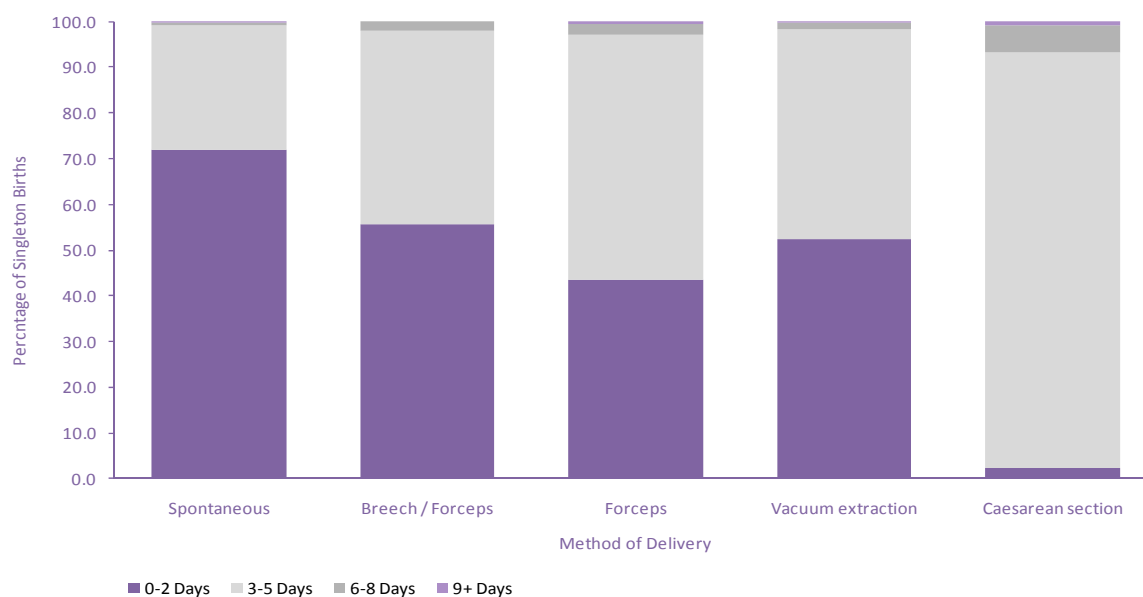
Postnatal Length of Stay	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Mortality Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
0-1 Days	14,226	14,015	211	14.8	60	4.3	19.0	14.2	14,185
2 Days	22,927	22,851	76	3.3	41	1.8	5.1	4.0	22,816
3-5 Days	35,903	35,845	58	1.6	51	1.4	3.0	2.0	34,956
6-8 Days	2,042	2,033	9	4.4	5	2.5	6.9	5.9	1,826
9-11 Days	214	213	1	4.7	1	4.7	9.3	9.3	195
12-14 Days	65	62	3	46.2	1	16.1	61.5	61.5	57
More than 2 Weeks	35	35	0	0.0	0	0.0	0.0	0.0	32
Not Stated	17	17	0	0.0	0	0.0	0.0	0.0	17
Total	75,429	75,071	358	4.7	159	2.1	6.9	5.1	74,084
Singleton Births									
0-1 Days	14,143	13,939	204	14.4	52	3.7	18.1	13.3	14,143
2 Days	22,703	22,628	75	3.3	34	1.5	4.8	3.7	22,703
3-5 Days	34,020	33,974	46	1.4	46	1.4	2.7	1.7	34,020
6-8 Days	1,620	1,615	5	3.1	4	2.5	5.6	4.3	1,620
9-11 Days	177	176	1	5.6	1	5.7	11.3	11.3	177
12-14 Days	49	46	3	61.2	1	21.7	81.6	81.6	49
More than 2 Weeks	29	29	0	0.0	0	0.0	0.0	0.0	29
Not Stated	17	17	0	0.0	0	0.0	0.0	0.0	17
Total	72,758	72,424	334	4.6	138	1.9	6.5	4.7	72,758
Multiple Births									
0-1 Days	83	76	7	84.3	8	105.3	180.7	170.7	42
2 Days	224	223	1	4.5	7	31.4	35.7	35.7	113
3-5 Days	1,883	1,871	12	6.4	5	2.7	9.0	8.0	936
6-8 Days	422	418	4	9.5	1	2.4	11.8	11.8	206
9-11 Days	37	37	0	0.0	0	0.0	0.0	0.0	18
12-14 Days	16	16	0	0.0	0	0.0	0.0	0.0	8
More than 2 Weeks	6	6	0	0.0	0	0.0	0.0	0.0	3
Not Stated	0	0	0	0.0	0	0.0	0.0	0.0	0
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

Notes: 'Not Stated' includes 15 births where place of birth was recorded as domiciliary but birth was registered by a hospital. For these cases, the mother was not admitted under a planned community midwife scheme. Therefore, dates of mother's postnatal length of stay were not applicable.

There were 2 births where mother's discharge date was not stated.

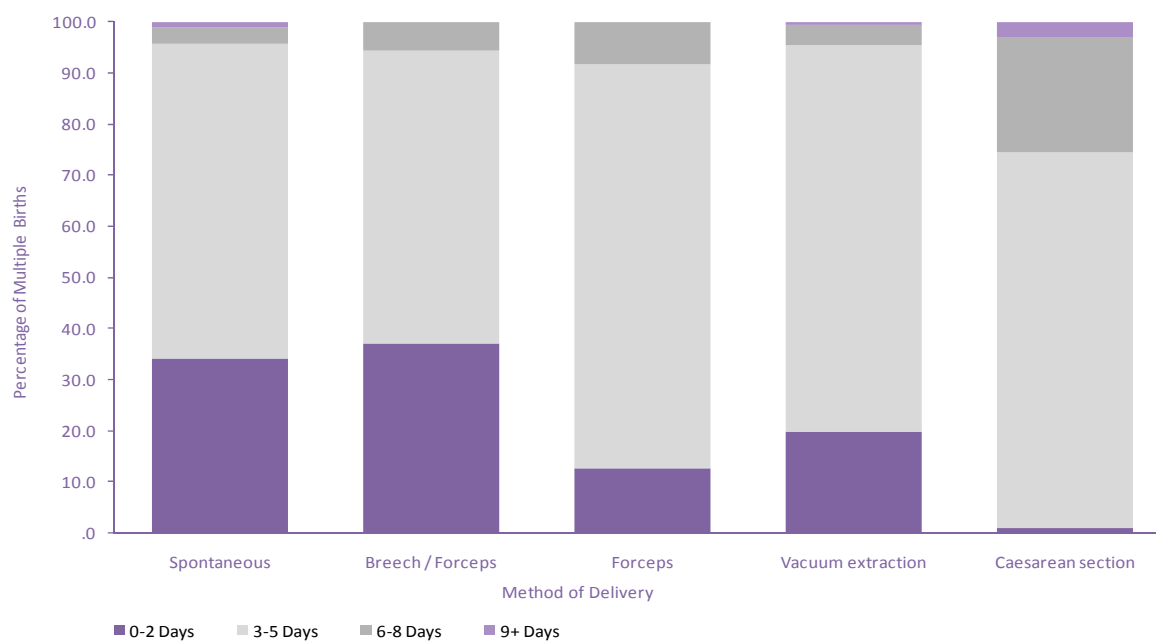
Domiciliary births, of which there were 158 singleton births, are excluded from this table. See Section Six for detailed analysis.

FIGURE 4.1
MOTHER'S POSTNATAL LENGTH OF STAY BY METHOD OF DELIVERY, SINGLETON BIRTHS



Note: See Appendix G, Table G14 for data. 'Not Stated' values are not included in the calculation of percentages.

FIGURE 4.2
MOTHER'S POSTNATAL LENGTH OF STAY BY METHOD OF DELIVERY, MULTIPLE BIRTHS



Note: See Appendix G, Table G14 for data. 'Not Stated' values are not included in the calculation of percentages.

RUBELLA IMMUNITY STATUS OF MOTHER

Table 4.6 presents the rubella immunity status of the mother. Of total maternities, 90.0 per cent were rubella immune. A further 5.5 per cent of maternities were not rubella immune and mother's rubella immunity was not known for 4.5 per cent of maternities.

TABLE 4.6: RUBELLA IMMUNITY STATUS OF MOTHER, NUMBERS AND PERCENTAGES

Rubella Immunity	Number of Maternities	Per Cent
Total Births		
Immune	66,800	90.0
Not Immune	4,079	5.5
Unknown	3,363	4.5
Total	74,242	100
Singleton Births		
Immune	65,624	90.0
Not Immune	3,999	5.5
Unknown	3,293	4.5
Total	72,916	100
Multiple Births		
Immune	1,176	88.7
Not Immune	80	6.0
Unknown	70	5.3
Total	1,326	100

METHOD OF DELIVERY

METHOD OF DELIVERY FOR TOTAL MATERNITIES BY PARITY

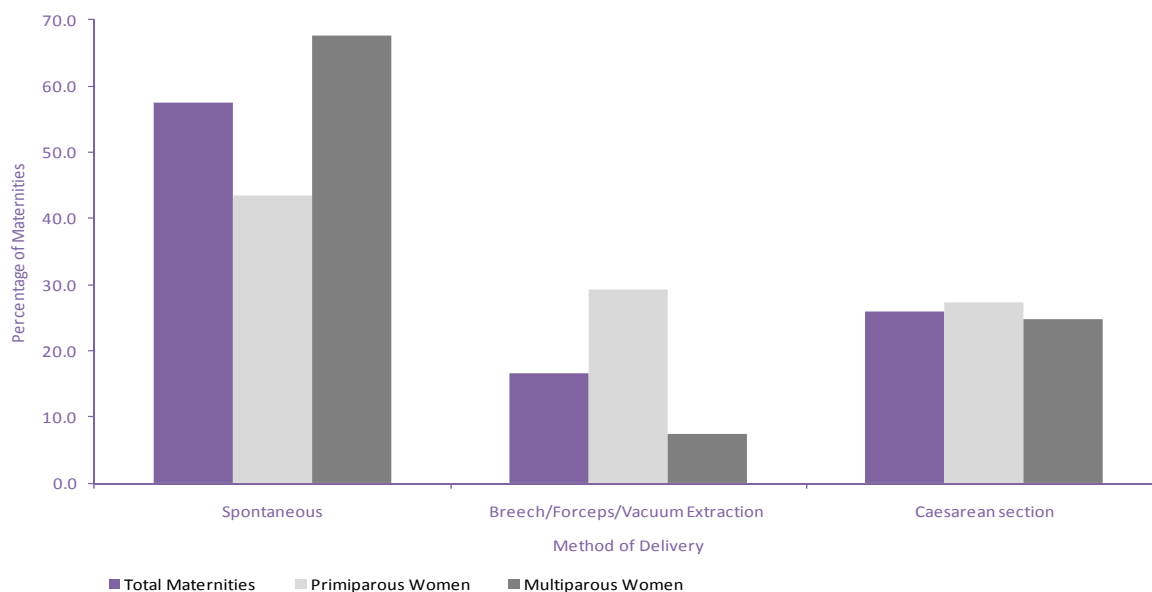
Of mothers giving birth in 2008, 57.4 per cent delivered spontaneously (43.5 per cent of primiparous women and 67.6 per cent of multiparous women, see Table 4.7a). As well as recording the highest proportion of caesarean section deliveries (27.3 per cent) primiparous women had the highest proportion of instrumental delivery (either forceps or vacuum extraction) at 28.6 per cent (compared to 7.1 per cent for multiparous women), see Figure 4.3. When method of delivery is analysed by plurality, 62.4 per cent of mothers delivering more than one infant had a caesarean section, compared with 25.2 per cent of women who had one child. When broken down by parity over 70 per cent of primiparous women and 55.5 per cent of multiparous women delivered by this method for multiple births.

TABLE 4.7a: METHOD OF DELIVERY FOR TOTAL MATERNITIES BY PARITY

Method of Delivery	Total Maternities		Maternities - Primiparous Women		Maternities - Multiparous Women	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Total Births						
Spontaneous	42,583	57.4	13,692	43.5	28,891	67.6
Breech/Forceps	311	0.4	171	0.5	140	0.3
Forceps	2,748	3.7	2,264	7.2	484	1.1
Vacuum extraction	9,320	12.6	6,749	21.4	2,571	6.0
Caesarean section	19,212	25.9	8,596	27.3	10,616	24.8
Other specified & combined	48	0.1	7	0.0	41	0.1
Not stated	8	0.0	1	0.0	7	0.0
Total	74,230	100	31,480	100	42,750	100
Singleton Births						
Spontaneous	42,225	57.9	13,600	44.0	28,625	68.1
Breech/Forceps	293	0.4	164	0.5	129	0.3
Forceps	2,725	3.7	2,246	7.3	479	1.1
Vacuum extraction	9,221	12.6	6,689	21.7	2,532	6.0
Caesarean section	18,385	25.2	8,171	26.5	10,214	24.3
Other specified & combined	47	0.1	7	0.0	40	0.1
Not stated	8	0.0	1	0.0	7	0.0
Total	72,904	100	30,878	100	42,026	100
Multiple Births						
Spontaneous	358	27.0	92	15.3	266	36.7
Breech/Forceps	18	1.4	7	1.2	11	1.5
Forceps	23	1.7	18	3.0	5	0.7
Vacuum extraction	99	7.5	60	10.0	39	5.4
Caesarean section	827	62.4	425	70.6	402	55.5
Other specified & combined	1	0.1	0	0.0	1	0.1
Not stated	0	0.0	0	0.0	0	0.0
Total	1,326	100	602	100	724	100

Note: There were 12 maternities with parity unknown; these were excluded from this table.

FIGURE 4.3
PERCENTAGE DISTRIBUTION OF MATERNITIES BY METHOD OF DELIVERY



Note: See Table 4.7a for data. There were 12 maternities with parity unknown; these were excluded from this figure.

METHOD OF DELIVERY FOR TOTAL BIRTHS BY PARITY

Births by method of delivery are presented in Table 4.7b. Births to multiparous women represented 57.5 per cent of total births with births to primiparous women accounting for the remaining 42.5 per cent. The perinatal mortality rate for births to primiparous women was 7.8 per 1,000 births compared to 6.1 per 1,000 births for births to multiparous women. The stillbirth rate was also lower for multiparous women at 4.2 per 1,000 births compared to 5.4 per 1,000 births to primiparous women.

TABLE 4.7b: METHOD OF DELIVERY FOR TOTAL BIRTHS BY PARITY
Total Births, Live Births, Stillbirths, Early Neonatal Deaths and Mortality Rates

Method of Delivery	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Mortality Rate	Perinatal Mortality Rate	Adjusted PMR
Total Births								
Spontaneous	42,836	42,573	263	6.1	78	1.8	8.0	6.2
Breech/Forceps	401	364	37	92.3	17	46.7	134.7	103.4
Forceps	2,773	2,769	4	1.4	1	0.4	1.8	1.1
Vacuum extraction	9,413	9,403	10	1.1	6	0.6	1.7	1.3
Caesarean section	20,095	20,053	42	2.1	56	2.8	4.9	3.1
Other specified & combined	49	47	2	40.8	0	0.0	40.8	20.8
Not stated	8	8	0	0.0	0	0.0	0.0	0.0
Total	75,575	75,217	358	4.7	158	2.1	6.8	5.1
Births to Primiparous Women								
Spontaneous	13,770	13,642	128	9.3	36	2.6	11.9	10.0
Breech/Forceps	204	184	20	98.0	11	59.8	152.0	112.8
Forceps	2,283	2,282	1	0.4	1	0.4	0.9	0.4
Vacuum extraction	6,785	6,780	5	0.7	2	0.3	1.0	0.9
Caesarean section	9,042	9,023	19	2.1	26	2.9	5.0	3.5
Other specified & combined	7	6	1	142.9	0	0.0	142.9	0.0
Not stated	1	1	0	0.0	0	0.0	0.0	0.0
Total	32,092	31,918	174	5.4	76	2.4	7.8	6.2
Births to Multiparous Women								
Spontaneous	29,066	28,931	135	4.6	42	1.5	6.1	4.4
Breech/Forceps	197	180	17	86.3	6	33.3	116.8	93.8
Forceps	490	487	3	6.1	0	0.0	6.1	4.1
Vacuum extraction	2,628	2,623	5	1.9	4	1.5	3.4	2.3
Caesarean section	11,053	11,030	23	2.1	30	2.7	4.8	2.7
Other specified & combined	42	41	1	23.8	0	0.0	23.8	0.0
Not stated	7	7	0	0.0	0	0.0	0.0	0.0
Total	43,483	43,299	184	4.2	82	1.9	6.1	4.3

Notes: There were 12 maternities with parity unknown; these were excluded from this table.
See Appendix G Table G15 for a breakdown of Method of Delivery by Parity for Singleton and Multiple Births.

METHOD OF DELIVERY BY PLURALITY

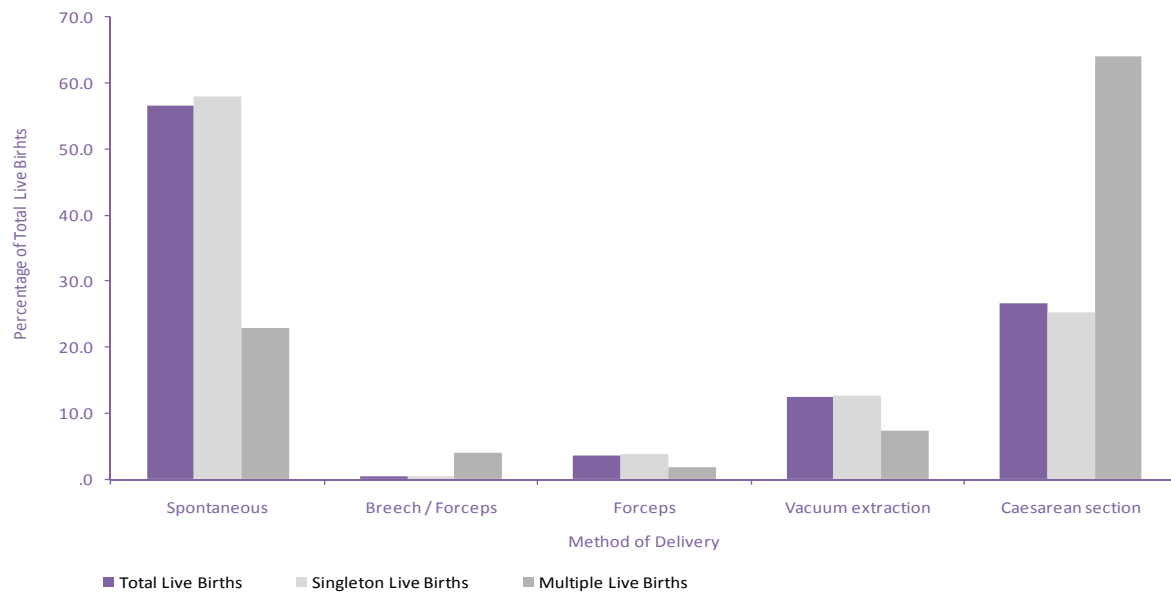
Table 4.8a outlines method of delivery for total, singleton and multiple births. There were 20,056 live births delivered by caesarean section, representing 26.7 per cent for total live births in 2008, 25.3 per cent for singletons and 64.0 per cent for multiples (see Figure 4.4). Over 16 per cent of total live births were born by instrumental delivery (either forceps or vacuum extraction). These percentages differed for live singleton births (16.4 per cent) and live multiple births (9.1 per cent).

TABLE 4.8a: METHOD OF DELIVERY, TOTAL BIRTHS

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Method of Delivery	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Mortality Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
Total Births									
Spontaneous	42,843	42,580	263	6.1	79	1.9	8.0	6.2	42,590
Breech/Forceps	401	364	37	92.3	17	46.7	134.7	103.4	311
Forceps	2,773	2,769	4	1.4	1	0.4	1.8	1.1	2,748
Vacuum extraction	9,415	9,405	10	1.1	6	0.6	1.7	1.3	9,322
Caesarean section	20,098	20,056	42	2.1	56	2.8	4.9	3.1	19,215
Other specified & combined	49	47	2	40.8	0	0.0	40.8	20.8	48
Not stated	8	8	0	0.0	0	0.0	0.0	0.0	8
Total	75,587	75,229	358	4.7	159	2.1	6.8	5.1	74,242
Singleton Births									
Spontaneous	42,232	41,976	256	6.1	67	1.6	7.6	5.9	42,232
Breech/Forceps	293	258	35	119.5	9	34.9	150.2	107.5	293
Forceps	2,725	2,721	4	1.5	1	0.4	1.8	1.1	2,725
Vacuum extraction	9,223	9,213	10	1.1	6	0.7	1.7	1.3	9,223
Caesarean section	18,388	18,361	27	1.5	55	3.0	4.5	2.6	18,388
Other specified & combined	47	45	2	42.6	0	0.0	42.6	21.7	47
Not stated	8	8	0	0.0	0	0.0	0.0	0.0	8
Total	72,916	72,582	334	4.6	138	1.9	6.5	4.7	72,916
Multiple Births									
Spontaneous	611	604	7	11.5	12	19.9	31.1	29.5	358
Breech/Forceps	108	106	2	18.5	8	75.5	92.6	92.6	18
Forceps	48	48	0	0.0	0	0.0	0.0	0.0	23
Vacuum extraction	192	192	0	0.0	0	0.0	0.0	0.0	99
Caesarean section	1,710	1,695	15	8.8	1	0.6	9.4	8.2	827
Other specified & combined	2	2	0	0.0	0	0.0	0.0	0.0	1
Not stated	0	0	0	0.0	0	0.0	0.0	0.0	0
Total	2,671	2,647	24	9.0	21	7.9	16.8	15.7	1,326

FIGURE 4.4
PERCENTAGE DISTRIBUTION OF TOTAL LIVE BIRTHS BY METHOD OF DELIVERY



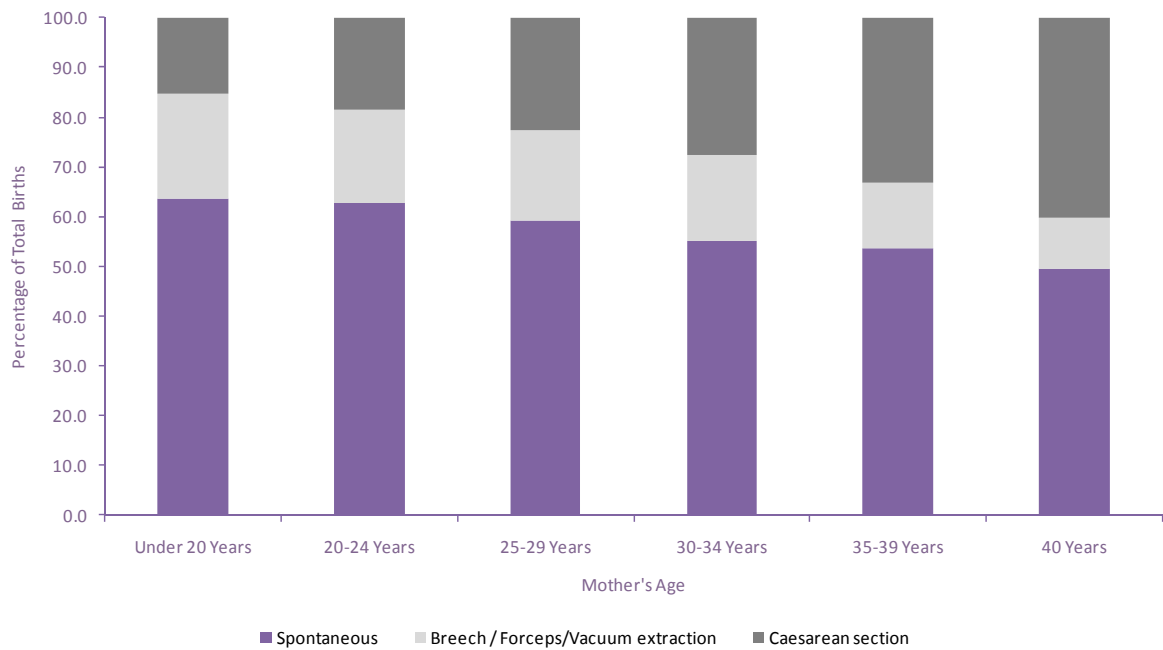
Note: See Table 4.8a for data. 'Not Stated' values are not included in the calculation of percentages.

The percentage of births born by caesarean section increased with maternal age (see Table 4.8b). In 2008, the percentage of caesarean sections ranged from 15.3 for mothers aged less than 20 years to 40.1 for mothers aged 40 years and older (see Figure 4.5). The percentage of babies delivered by spontaneous delivery fell from 63.7 per cent for mothers aged less than 20 years to 49.4 per cent for mothers aged 40 years and older. The percentage delivered by vacuum extraction also fell from 16.8 per cent for mothers aged less than 20 years to 7.3 per cent for mothers aged 40 years and older.

TABLE 4.8b: METHOD OF DELIVERY BY MOTHER'S AGE

Method of Delivery Frequency Col. Per Cent	Mother's Age							Total
	Under 20 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40 Years and Over	Not Stated	
Spontaneous	1,541 63.7	5,845 62.6	10,642 59.2	14,088 55.1	9,080 53.5	1,617 49.4	30 60.0	42,843 56.7
Breech/Forceps	11 0.5	56 0.6	95 0.5	127 0.5	97 0.6	15 0.5	0 0.0	401 0.5
Forceps	92 3.8	376 4.0	729 4.1	962 3.8	529 3.1	85 2.6	0 0.0	2,773 3.7
Vacuum extraction	406 16.8	1,332 14.3	2,442 13.6	3,343 13.1	1,647 9.7	240 7.3	5 10.0	9,415 12.5
Caesarean section	371 15.3	1,715 18.4	4,042 22.5	7,037 27.5	5,604 33.0	1,314 40.1	15 30.0	20,098 26.6
Other specified & combined	0 0.0	7 0.1	15 0.1	11 0.0	14 0.1	2 0.1	0 0.0	49 0.1
Not stated	0 0.0	2 0.0	2 0.0	3 0.0	1 0.0	0 0.0	0 0.0	8 0.0
Total	2,421 100	9,333 100	17,967 100	25,571 100	16,972 100	3,273 100	50 100	75,587 100

FIGURE 4.5
PERCENTAGE DISTRIBUTION OF TOTAL BIRTHS BY METHOD OF DELIVERY AND MOTHER'S AGE



Note: See Table 4.8b for data. 'Not Stated' values are not included in the calculation of percentages.

DISTRIBUTION OF BIRTHS BY SIZE OF MATERNITY UNIT

Over 40 per cent of total births take place in maternity units accommodating under 4,000 births annually. A further 13.0 per cent of total births occur in maternity units reporting between 4,000 and 5,999 births annually (see Table 4.9). In 2008, four maternity units accommodating 8,000 and more births reported over 46 per cent of total births (see Figure 4.6).

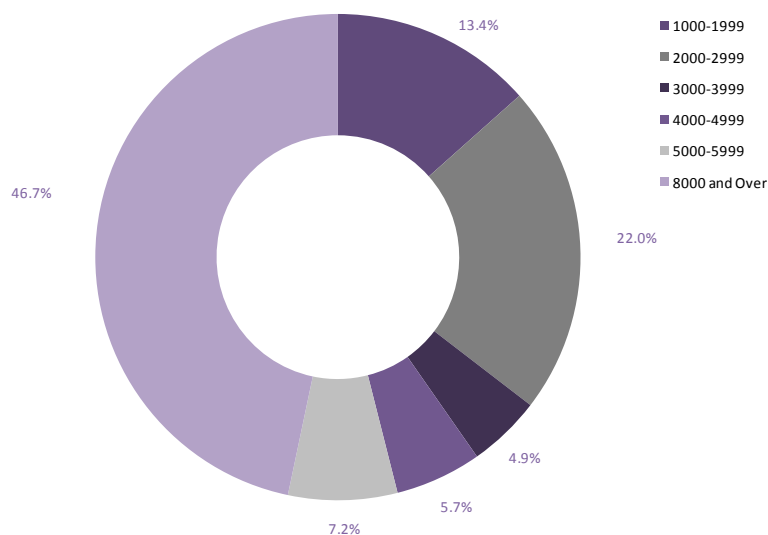
TABLE 4.9: SIZE OF MATERNITY UNIT (NUMBER OF LIVE BIRTHS AND STILLBIRTHS ANNUALLY)

Number of Units, Total Births, Live Births, Stillbirths, Early Neonatal Deaths and Mortality Rates

Size of Maternity Unit	Number of Units	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Mortality Rate	Perinatal Mortality Rate	Adjusted PMR
1000-1999	6	10,136	10,098	38	3.7	15	1.5	5.2	4.1
2000-2999	7	16,590	16,502	88	5.3	36	2.2	7.5	5.6
3000-3999	1	3,677	3,661	16	4.4	8	2.2	6.5	4.6
4000-4999	1	4,331	4,303	28	6.5	4	0.9	7.4	6.7
5000-5999	1	5,468	5,441	27	4.9	9	1.7	6.6	5.7
8000 and Over	4	35,227	35,066	161	4.6	87	2.5	7.0	4.9
Total	20	75,429	75,071	358	4.7	159	2.1	6.9	5.1

Notes: This table includes singleton and multiple births but excludes domiciliary births, of which there were 158 singleton births. There were 20 maternity units in Ireland in 2008, all of which delivered over 1,000 births per annum. No unit delivered between 6,000 - 7,999 births.

FIGURE 4.6
PERCENTAGE DISTRIBUTION OF BIRTHS BY SIZE OF MATERNITY UNIT, TOTAL BIRTHS



Note: See Table 4.9 for data. The size of the unit refers to the number of live births and stillbirths occurring in 2008.

INTER-HOSPITAL TRANSFER OF INFANTS

For singleton births, over 99 per cent of live births remained in the hospital in which they were born with just less than 1 per cent of live births being transferred to another hospital for medical reasons (see Table 4.10). For multiple births, 96.8 per cent remained in the hospital of birth with 3.2 per cent being transferred for medical reasons.

TABLE 4.10: INTER-HOSPITAL TRANSFER OF INFANTS

Infant Transfer	Live Births	Per Cent Live Births	Early Neonatal Deaths	Early Neonatal Mortality Rate
Total Births				
Transferred	402	0.5	5	12.4
Not Transferred	74,651	99.4	154	2.1
Not Stated	18	0.0	0	0.0
Total	75,071	100	159	2.1
Singleton Births				
Transferred	316	0.4	3	9.5
Not Transferred	72,090	99.5	135	1.9
Not Stated	18	0.0	0	0.0
Total	72,424	100	138	1.9
Multiple Births				
Transferred	86	3.2	2	23.3
Not Transferred	2,561	96.8	19	7.4
Not Stated	0	0.0	0	0.0
Total	2,647	100	21	7.9

Notes: 'Not Stated' includes 12 births where place of birth was recorded as domiciliary but birth was registered by a hospital. For these cases, the baby was not admitted under a planned community midwife scheme. Therefore, transfer details were not applicable. Domiciliary births, of which there were 158 singleton live births, are excluded from this table, see Section Six for detailed analysis.

INFANT'S LENGTH OF STAY

Approximately 95 per cent of total and singleton live births, and 62.1 per cent of multiple live births were discharged from hospital within 5 days of birth (see Table 4.11 and Figure 4.7). Almost 38 per cent of infants from multiple births remained in hospital for over 5 days, compared to singleton births where less than 5 per cent recorded a similar length of stay.

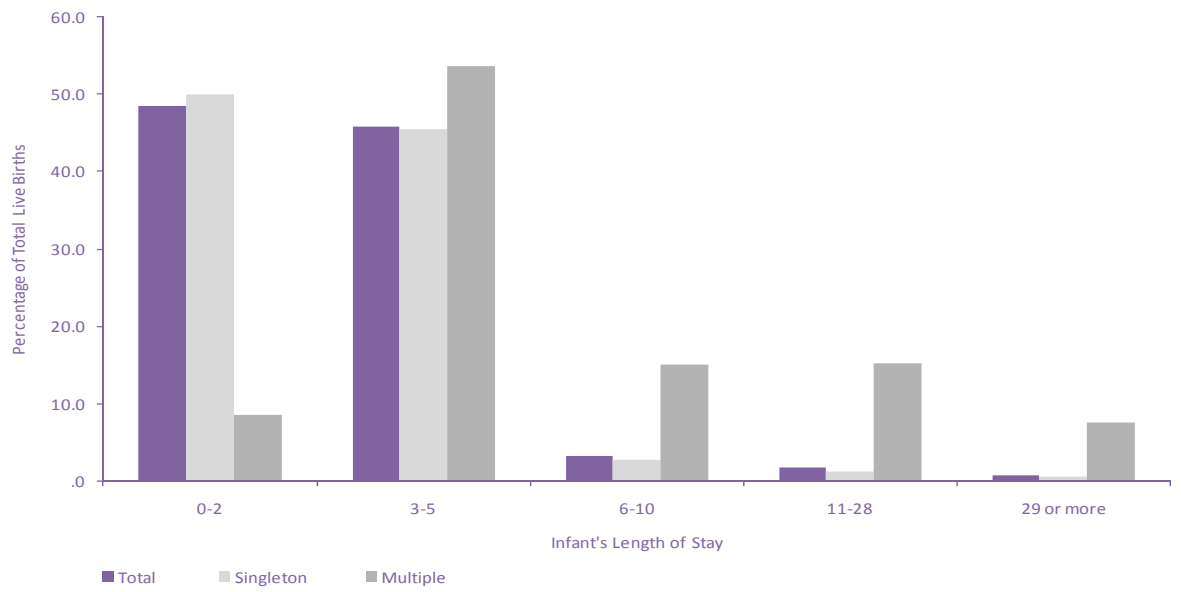
TABLE 4.11: PERCENTAGE DISTRIBUTION OF LIVE BIRTHS BY INFANT'S LENGTH OF STAY IN HOSPITAL

Infant's Length of Stay (Days)	Live Births	Per Cent Live Births
Total Births		
0-2	36,319	48.5
3-5	34,316	45.8
6-10	2,396	3.2
11-28	1,277	1.7
29 or more	584	0.8
Not Stated	20	0.0
Total	74,912	100
Singleton Births		
0-2	36,096	49.9
3-5	32,909	45.5
6-10	2,001	2.8
11-28	878	1.2
29 or more	385	0.5
Not Stated	17	0.0
Total	72,286	100
Multiple Births		
0-2	223	8.5
3-5	1,407	53.6
6-10	395	15.0
11-28	399	15.2
29 or more	199	7.6
Not Stated	3	0.1
Total	2,626	100

Notes: These tables do not include domiciliary births and early neonatal deaths.

'Not Stated' includes 16 births where place of birth was recorded as domiciliary but birth was registered by a hospital. In these cases, the infant was not admitted under a planned community midwife scheme. Therefore, infant's length of stay was not applicable.

FIGURE 4.7
PERCENTAGE DISTRIBUTION OF TOTAL LIVE BIRTHS BY INFANT'S LENGTH OF STAY



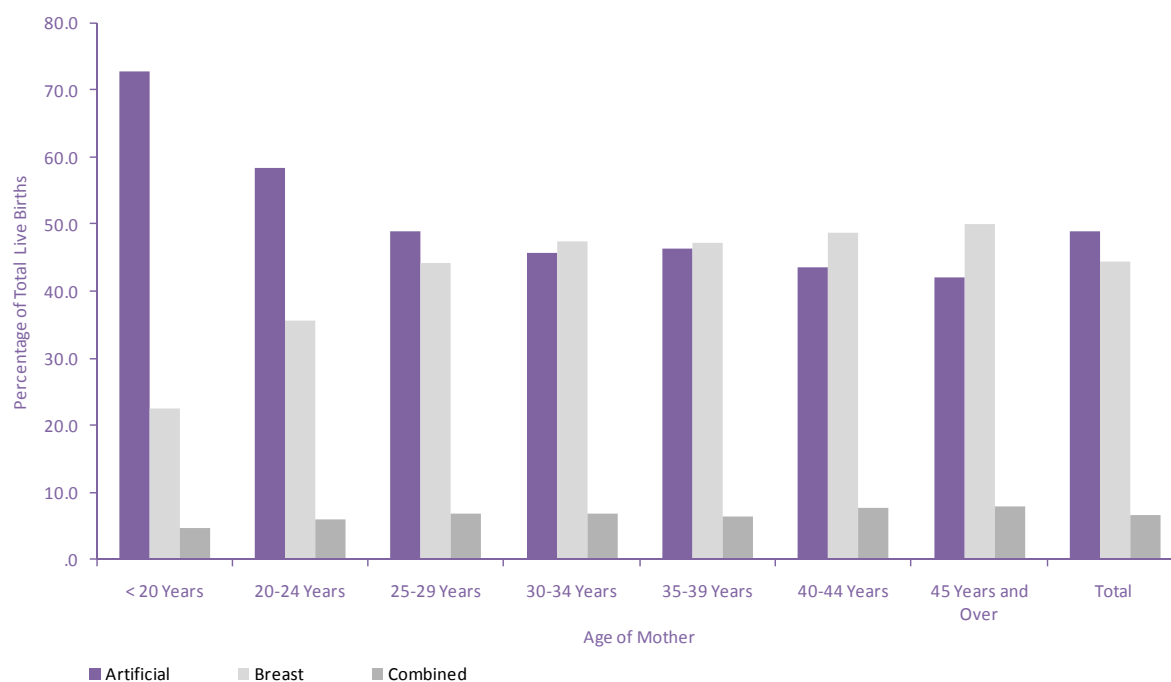
Note: See Table 4.11 for data. 'Not Stated' values are not included in the calculation of percentages.

INFANT'S TYPE OF FEEDING

Type of feeding is recorded at the time of discharge from hospital.¹⁸ The presentation of type of feeding in this report is based on live births only and excludes early neonatal deaths. Table 4.12 provides details of type of feeding by age of mother for total births. Accounting for almost 49 per cent of total births, artificial feeding is the more common type of feeding reported (48.6 per cent for singleton births and 56.7 per cent multiple births). Over 44 per cent of babies were breastfed with breastfeeding more common where mothers are aged 30 years and older (see Figure 4.8). Infants born to older mothers are more likely to be breastfed as almost half the babies born to mothers aged 40 years and older were exclusively breastfed compared with around 22 per cent of infants born to mothers under 20.

¹⁸ Following an audit of the data, one hospital has been found to be underreporting data for breastfeeding on discharge. Data quality initiatives are underway to assist the hospital in addressing the problems identified to ensure that all NPRS data reported meet the required standards for validity and accuracy.

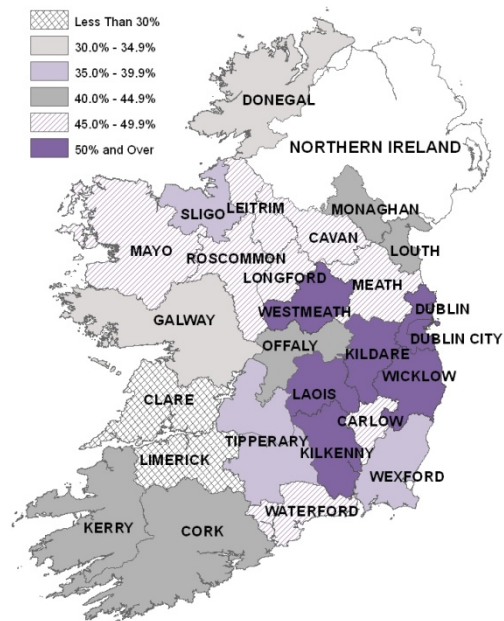
FIGURE 4.8
INFANT'S TYPE OF FEEDING BY AGE OF MOTHER, TOTAL LIVE BIRTHS



Note: See Table 4.12 for data. Not Stated' values are not included in the calculation of percentages.

Figure 4.9 shows that the prevalence of breastfeeding at time of discharge also varies by geographic location. Infants born to mothers resident in Dublin County recorded the highest rate of breastfeeding at 55.9 per cent, closely followed by Kilkenny with 53.7 per cent.

FIGURE 4.9
PERCENTAGE DISTRIBUTION OF BREASTFED INFANTS BY MOTHER'S COUNTY OF RESIDENCE, TOTAL LIVE BIRTHS



Notes: See Appendix G, Table G16 for data. 'Not Stated' values are not included in the calculation of percentages.
 Example: Of all live births to mothers resident in Galway, 33.3 per cent were breastfed.

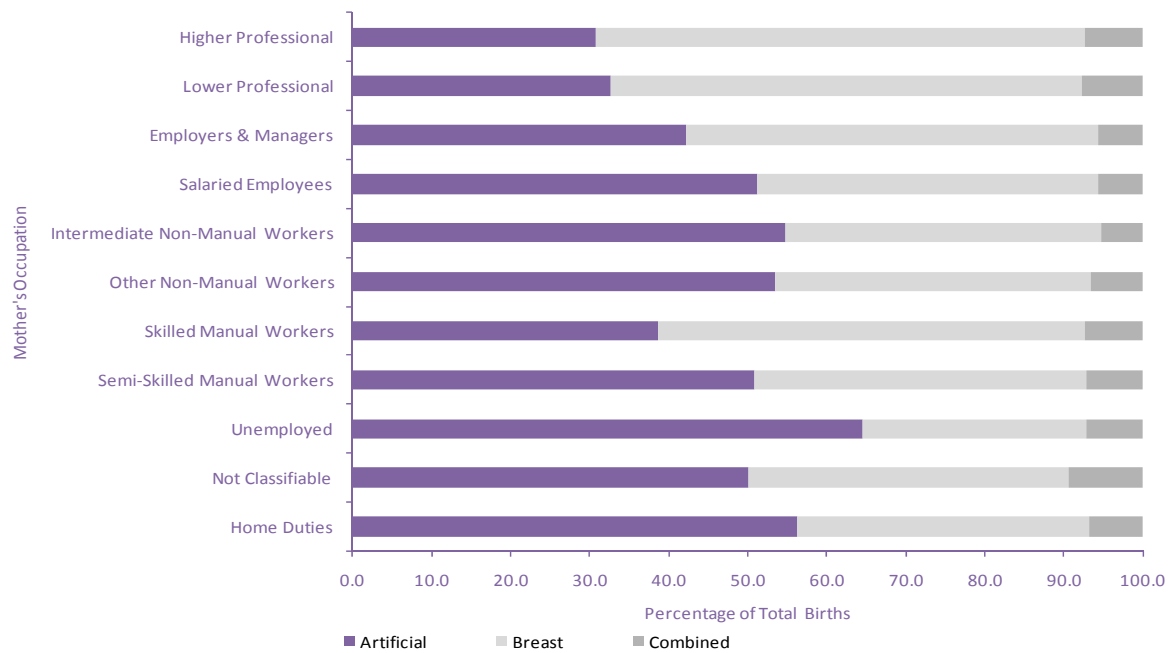
Type of feeding was also found to vary according to mother's occupation (see Table 4.13 and Figure 4.10). In general, infants born to mothers in the higher occupational groupings were more likely to be breastfed, while infants born to mothers in the lower occupational groupings were more likely to be fed artificially. Over 64 per cent of infants born to mothers who were unemployed were fed artificially, while 61.8 per cent of infants born to mothers with a higher professional occupation were breastfed.

TABLE 4.13: MOTHER'S OCCUPATION BY INFANT'S TYPE OF FEEDING, TOTAL LIVE BIRTHS

Mother's Occupation Frequency Row Per Cent Col. Per Cent	Type of Feeding				
	Artificial	Breast	Combined	Not Stated	Total
Farmers & Farm Managers	38 42.2 0.1	44 48.9 0.1	7 7.8 0.1	1 1.1 0.8	90 100.0 0.1
Other Agricultural Occupations & Fishermen	42 42.9 0.1	51 52.0 0.2	5 5.1 0.1	0 0.0 0.0	98 100.0 0.1
Higher Professional	1,451 30.8 4.0	2,909 61.7 8.7	349 7.4 7.0	4 0.1 3.3	4,713 100.0 6.3
Lower Professional	3,464 32.6 9.4	6,334 59.6 19.0	808 7.6 16.3	13 0.1 10.7	10,619 100.0 14.1
Employers & Managers	2,435 42.2 6.6	3,004 52.1 9.0	325 5.6 6.5	5 0.1 4.1	5,769 100.0 7.7
Salaried Employees	621 51.1 1.7	524 43.1 1.6	68 5.6 1.4	3 0.2 2.5	1,216 100.0 1.6
Intermediate Non-Manual Workers	9,251 54.6 25.2	6,734 39.8 20.2	905 5.3 18.2	41 0.2 33.6	16,931 100.0 22.6
Other Non-Manual Workers	5,150 53.5 14.0	3,839 39.9 11.5	626 6.5 12.6	17 0.2 13.9	9,632 100.0 12.8
Skilled Manual Workers	520 38.7 1.4	724 53.8 2.2	98 7.3 2.0	3 0.2 2.5	1,345 100.0 1.8
Semi-Skilled Manual Workers	1,320 50.8 3.6	1,086 41.8 3.3	187 7.2 3.8	6 0.2 4.9	2,599 100.0 3.5
Unskilled Manual Workers	2 28.6 0.0	2 28.6 0.0	2 28.6 0.0	1 14.3 0.8	7 100.0 0.0
Unemployed	1,516 64.5 4.1	665 28.3 2.0	167 7.1 3.4	4 0.2 3.3	2,352 100.0 3.1
Not Classifiable	1,425 50.0 3.9	1,155 40.6 3.5	267 9.4 5.4	1 0.0 0.8	2,848 100.0 3.8
Home Duties	9,382 56.2 25.6	6,158 36.9 18.5	1,139 6.8 22.9	23 0.1 18.9	16,702 100.0 22.2
Not Stated	55 36.9 0.1	76 51.0 0.2	18 12.1 0.4	0 0.0 0.0	149 100.0 0.2
Total	36,672 48.9 100	33,305 44.4 100	4,971 6.6 100	122 0.2 100	75,070 100 100

Note: See Appendix C for a description of the classification system for occupation.

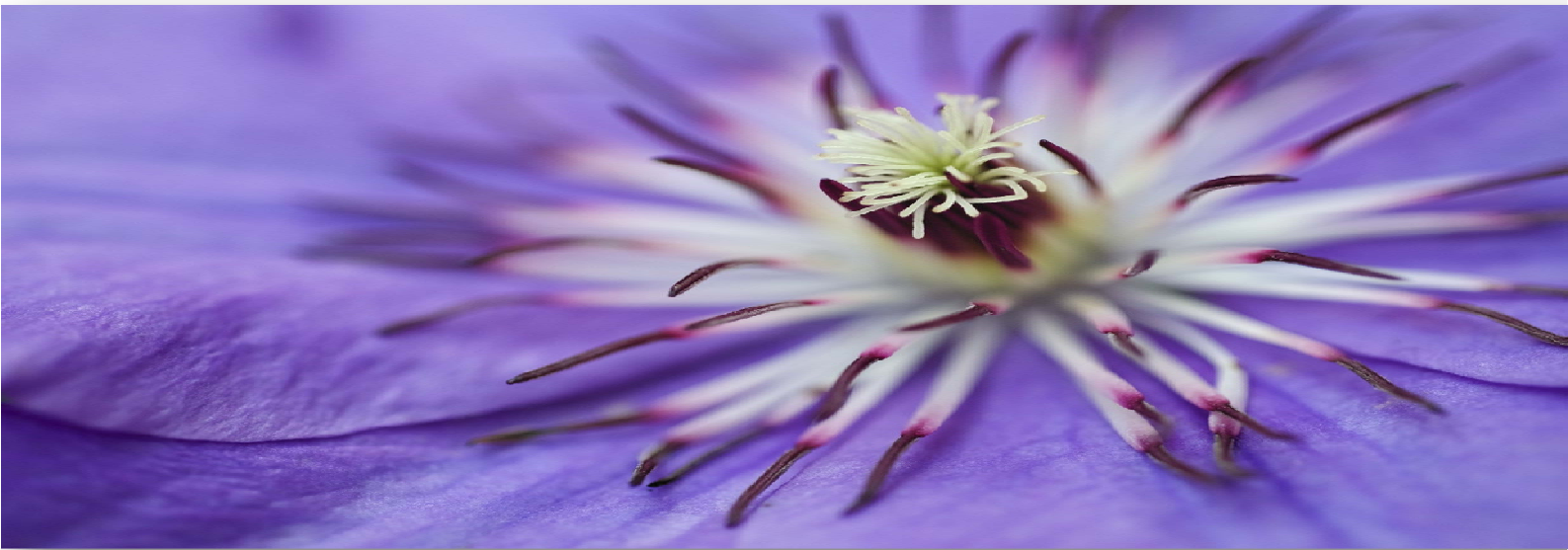
FIGURE 4.10
PERCENTAGE DISTRIBUTION OF INFANTS FEEDING BY MOTHER'S OCCUPATION, TOTAL LIVE BIRTHS



Notes: See Table 4.13 for data. 'Not Stated' values are not included in the calculation of percentages. Categories where percentages would be based on <100 births are not included in this graph.

SECTION FIVE

PERINATAL OUTCOMES



INTRODUCTION

This section presents a detailed review on aspects of perinatal outcomes for the infant. Cause of death is examined in greater detail according to the guidelines set out by the WHO in International Classification of Diseases (ICD-10).^{19,20} A detailed description on cause of death classification and coding rules applied is available in Appendix D. The following tables outline data for total births, antepartum and intrapartum stillbirths, and early neonatal deaths, together with the relevant rates.

Numbers of deaths, mortality rates, and cause of death are presented by birthweight, highlighting distribution of deaths as well as details of rates by cause of death within each birthweight category. Numbers of deaths and mortality rates by gestational age at delivery are also presented. Cause of death is then examined in greater detail, age at death for early neonatal deaths and post-mortem examination details are also presented in this section.

Of the 75,587 births recorded by the NPRS in 2008, 358 were stillbirths and 159 were early neonatal deaths, giving a total of 517 perinatal deaths and a perinatal mortality rate of 6.8 per 1,000 live births and stillbirths.

MORTALITY BY BIRTHWEIGHT CATEGORY AND PARITY

Table 5.1 summarises total births, antepartum and intrapartum stillbirths, early neonatal deaths, and their relevant mortality rates by birthweight groups and parity. Just over 70 per cent of total perinatal deaths weighed less than 2,500 grams; when analysed by parity 74.8 per cent of perinatal deaths were low birthweight babies to primiparous women and 66.5 per cent were to multiparous women (see Figure 5.1).²¹ The perinatal mortality rate for low birthweight babies was 85.6 per 1,000 births; when broken down by parity it was 82.9 per 1,000 for births to primiparous women and 88.8 per 1,000 for multiparous women. For births weighing 2,500 grams or more the perinatal mortality rate was 2.1 per 1,000 total births; the same rate was reported for births to primiparous and multiparous women. Figure 5.2 presents the perinatal mortality and adjusted perinatal mortality rates for total births by birthweight. The overall perinatal mortality rate for all births was 6.8 per 1,000 total births, 6.5 per 1,000 singleton births and 16.8 per 1,000 multiple births. For details of birthweight by plurality for total births, antepartum and intrapartum stillbirths, early neonatal deaths, and associated rates see Appendix G, Table G17.

¹⁹ World Health Organization, 2005, *International Statistical Classification of Diseases and Related Health Problems*, 10th Revision, Vols. 1-3. Geneva: World Health Organization.

²⁰ The ninth revision of the International Classification of Diseases (ICD 9) was used prior to 2005.

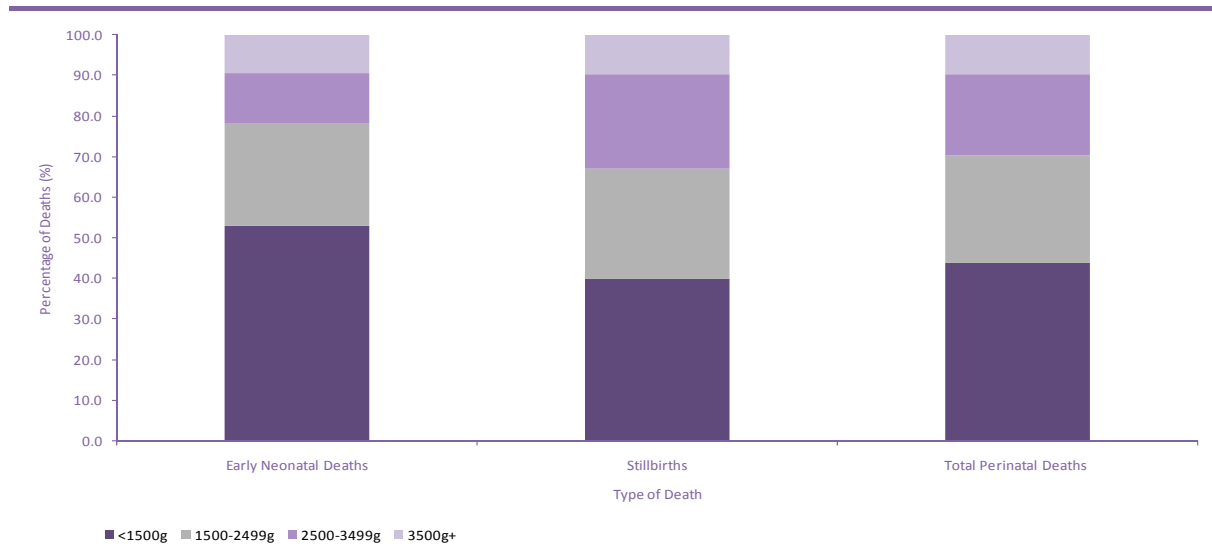
²¹ Throughout this section, 'Not Stated' values are not included in the calculation of percentages for discussion.

TABLE 5.1: TOTAL BIRTHS, ANTEPARTUM AND INTRAPARTUM STILLBIRTHS, EARLY NEONATAL DEATHS, AND MORTALITY RATES BY BIRTHWEIGHT AND PARITY

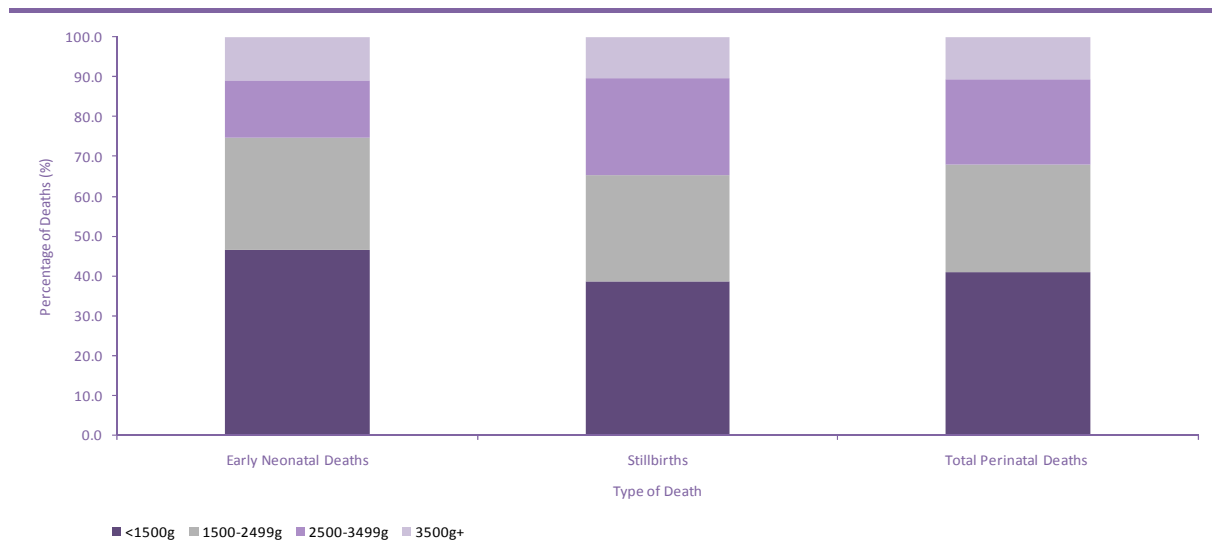
Birthweight (grams)	Total Births	Ante-partum Stillbirths	Intra-partum Stillbirths	Not Stated	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Mortality Rate	Perinatal Mortality Rate	Adjusted PMR
Total Births									
500-749	179	59	7	6	402.2	49	457.9	676.0	650.6
750-999	161	21	1	2	149.1	16	116.8	248.4	198.7
1000-1249	187	22	2	2	139.0	8	49.7	181.8	145.3
1250-1499	263	19	1	1	79.8	11	45.5	121.7	76.0
1500-1999	953	53	3	1	59.8	17	19.0	77.6	50.8
2000-2499	2,508	33	4	3	15.9	23	9.3	25.1	14.9
2500-2999	8,877	42	2	5	5.5	11	1.2	6.8	5.3
3000-3499	24,331	27	4	3	1.4	9	0.4	1.8	1.4
3500-3999	25,890	25	1	0	1.0	8	0.3	1.3	0.9
4000-4499	10,157	7	1	0	0.8	6	0.6	1.4	1.1
4500 and Over	2,067	1	0	0	0.5	0	0.0	0.5	0.0
Not Stated	2	0	0	0	0.0	0	0.0	0.0	0.0
Total	75,575	309	26	23	4.7	158	2.1	6.8	5.1
Births to Primiparous Women									
500-749	101	29	2	3	336.6	30	447.8	633.7	610.5
750-999	92	10	0	2	130.4	7	87.5	206.5	170.5
1000-1249	110	14	1	2	154.5	6	64.5	209.1	171.4
1250-1499	155	9	1	1	71.0	4	27.8	96.8	66.7
1500-1999	501	26	3	0	57.9	5	10.6	67.9	43.0
2000-2499	1,298	19	3	1	17.7	9	7.1	24.7	18.6
2500-2999	4,387	15	1	3	4.3	5	1.1	5.5	4.3
3000-3499	11,200	14	3	2	1.7	5	0.4	2.1	1.7
3500-3999	10,242	8	0	0	0.8	2	0.2	1.0	1.0
4000-4499	3,432	2	0	0	0.6	3	0.9	1.5	1.2
4500 and Over	573	0	0	0	0.0	0	0.0	0.0	0.0
Not Stated	1	0	0	0	0.0	0	0.0	0.0	0.0
Total	32,092	146	14	14	5.4	76	2.4	7.8	6.2
Births to Multiparous Women									
500-749	78	30	5	3	487.2	19	475.0	730.8	704.2
750-999	69	11	1	0	173.9	9	157.9	304.3	238.1
1000-1249	77	8	1	0	116.9	2	29.4	142.9	108.1
1250-1499	108	10	0	0	92.6	7	71.4	157.4	90.0
1500-1999	452	27	0	1	61.9	12	28.3	88.5	59.4
2000-2499	1,210	14	1	2	14.0	14	11.7	25.6	10.9
2500-2999	4,490	27	1	2	6.7	6	1.3	8.0	6.2
3000-3499	13,131	13	1	1	1.1	4	0.3	1.4	1.1
3500-3999	15,648	17	1	0	1.2	6	0.4	1.5	0.8
4000-4499	6,725	5	1	0	0.9	3	0.4	1.3	1.0
4500 and Over	1,494	1	0	0	0.7	0	0.0	0.7	0.0
Not Stated	1	0	0	0	0.0	0	0.0	0.0	0.0
Total	43,483	163	12	9	4.2	82	1.9	6.1	4.3

Note: There were 12 maternities for which parity was unknown; these were excluded from the table.

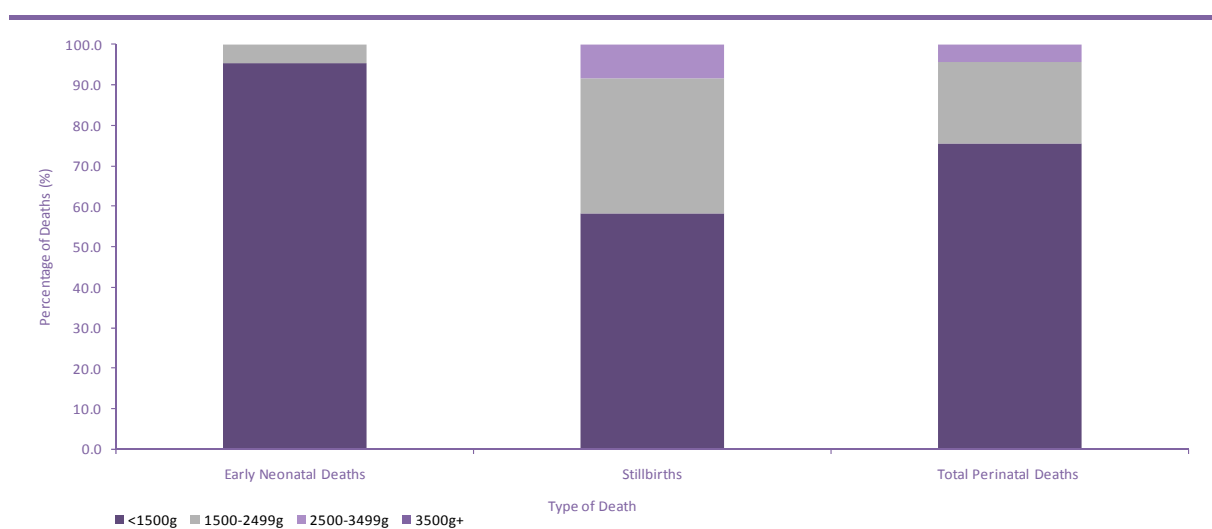
FIGURE 5.1
DEATHS BY BIRTHWEIGHT GROUPS AND PARITY
Total Births



Births to Primiparous Women

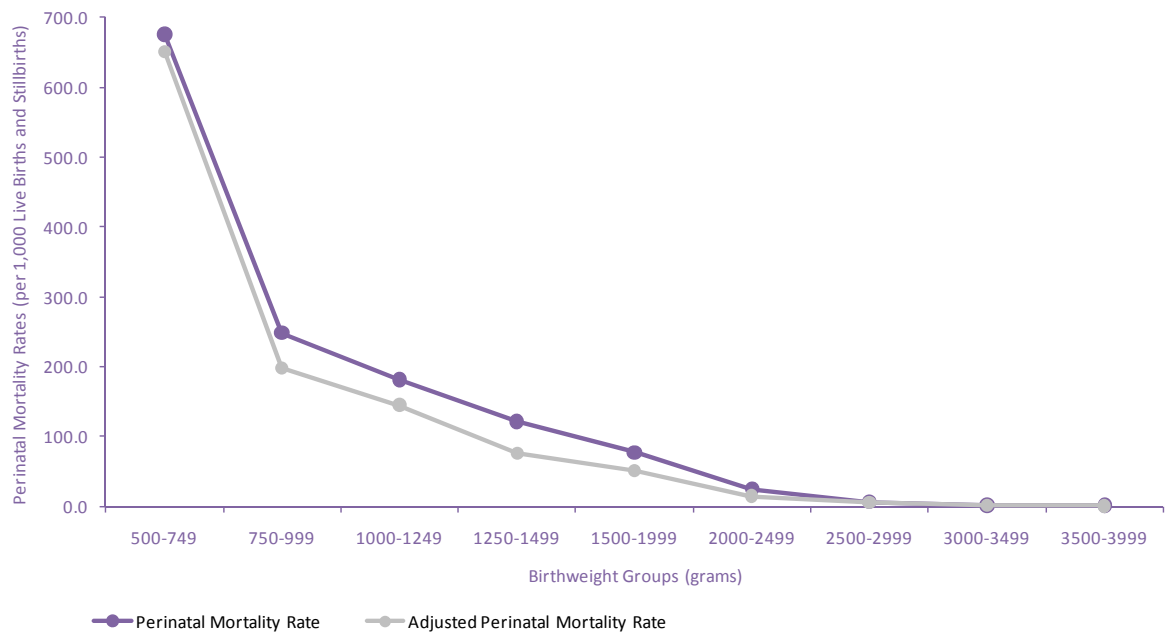


Births to Multiparous Women



Note: See Table 5.1 for data. 'Not Stated' values are not included in the calculation of percentages.

FIGURE 5.2
PERINATAL MORTALITY RATES BY BIRTHWEIGHT GROUPS, TOTAL BIRTHS



Note: See Table 5.1 for data. Rates based on 20 or less observations are not included in this Figure.

CAUSE OF DEATH BY BIRTHWEIGHT

Table 5.2 shows cause of death by each birthweight group for total, singleton and multiple births respectively. The relevant rate within each birthweight group is also provided in these tables. Over 70 per cent of total perinatal deaths weighed <2,500 grams, and over a quarter of these deaths were due to congenital malformations. This was followed by immaturity (26.1 per cent) and maternal factors (17.6 per cent); 16.8 per cent recorded cause of death as unexplained (see Figure 5.3). Perinatal deaths weighing at least 2,500 grams accounted for 29.6 per cent of total perinatal deaths. Of these, 27.5 per cent were due to maternal factors, 23.5 per cent were due to congenital malformation, and 28.1 per cent recorded cause of death as unexplained (see Figure 5.4).

**TABLE 5.2: TOTAL BIRTHS
PERINATAL MORTALITY: NUMBERS AND RATES BY BIRTHWEIGHT AND CAUSE OF DEATH**

Cause of Death	ICD-10 Code	500 - 749	750 - 999	1000 - 1249	1250 - 1499	1500 - 1999	2000 - 2499	2500 - 2999	3000 - 3499	3500 - 3999	4000 - 4499	4500 and Over	Total
Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery	P00-P04	18 100.6	4 24.8	3 16.0	8 30.4	15 15.7	16 6.4	21 2.4	11 0.5	7 0.3	3 0.3	0 0.0	106 1.4
Disorders related to length of gestation and foetal growth	P05-P08	65 363.1	14 87.0	6 32.1	3 11.4	6 6.3	1 0.4	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	95 1.3
Respiratory and cardiovascular disorders specific to the perinatal period	P20-P29	7 39.1	3 18.6	3 16.0	1 3.8	6 6.3	5 2.0	8 0.9	6 0.2	5 0.2	3 0.3	0 0.0	47 0.6
Infections specific to the perinatal period	P35-P39	3 16.8	1 6.2	4 21.4	0 0.0	1 1.0	0 0.0	0 0.0	2 0.1	1 0.0	0 0.0	0 0.0	12 0.2
Haemorrhagic and haematological disorders of foetus and newborn	P50-P61	0 0.0	1 6.2	2 10.7	0 0.0	0 0.0	2 0.8	1 0.1	1 0.0	1 0.0	0 0.0	0 0.0	8 0.1
Transitory endocrine and metabolic disorders specific to foetus and newborn	P70-P74	1 5.6	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	1 0.0	0 0.0	0 0.0	0 0.0	3 0.5
Digestive system disorders of foetus and newborn	P75-P78	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	1 0.4	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	1 0.0
Conditions involving the integument and temperature regulation of foetus and newborn	P80-P83	0 0.0	1 6.2	1 5.3	0 0.0	2 2.1	1 0.4	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	5 0.1
Other disorders originating in the perinatal period	P90.0-P94.9, P96.0-P96.8	0 0.0	0 0.0	0 0.0	0 0.0	1 1.0	0 0.0	0 0.0	1 0.0	1 0.0	0 0.0	0 0.0	3 0.0
Foetal death of unspecified cause, Condition originating in the perinatal period, unspecified	P95, P969	14 78.2	6 37.3	7 37.4	7 26.6	16 16.8	11 4.4	17 1.9	12 0.5	9 0.3	5 0.5	0 0.0	104 1.4
Congenital malformations of the nervous system	Q00-Q07	2 11.2	1 6.2	1 5.3	1 3.8	2 2.1	8 3.2	2 0.2	4 0.2	3 0.1	2 0.2	0 0.0	26 0.3
Congenital malformations of the circulatory system	Q20-Q28	0 0.0	0 0.0	1 5.3	0 0.0	2 2.1	4 1.6	0 0.0	3 0.1	1 0.0	0 0.0	0 0.0	11 0.1
Congenital malformations of the respiratory system	Q30-Q34	0 0.0	1 6.2	1 5.3	2 7.6	2 2.1	1 0.4	1 0.1	1 0.0	1 0.0	1 0.1	0 0.0	11 0.1
Other congenital malformations of the digestive system	Q38-Q45	0 0.0	0 0.0	0 0.0	0 0.0	1 1.0	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	1 0.0
Congenital malformations of the urinary system	Q60-Q64	0 0.0	1 6.2	0 0.0	1 3.8	7 7.3	5 2.0	1 0.1	0 0.0	0 0.0	0 0.0	0 0.0	15 0.2
Congenital malformations and deformations of the musculoskeletal system	Q65-Q79	2 11.2	0 0.0	0 0.0	2 7.6	2 2.1	0 0.0	2 0.2	1 0.0	1 0.0	0 0.0	0 0.0	10 0.1
Other congenital malformations	Q80-Q89	2 11.2	3 18.6	1 5.3	2 7.6	1 1.0	3 1.2	2 0.2	0 0.0	1 0.0	0 0.0	0 0.0	15 0.2
Chromosomal abnormalities, not elsewhere classified	Q90-Q99	7 39.1	4 24.8	4 21.4	5 19.0	10 10.5	5 2.0	5 0.6	0 0.0	4 0.2	0 0.0	0 0.0	44 0.6
Total		121 676.0	40 248.4	34 181.8	32 121.7	74 77.6	63 25.1	60 6.8	43 1.8	35 1.4	14 1.4	1 0.5	517 6.8

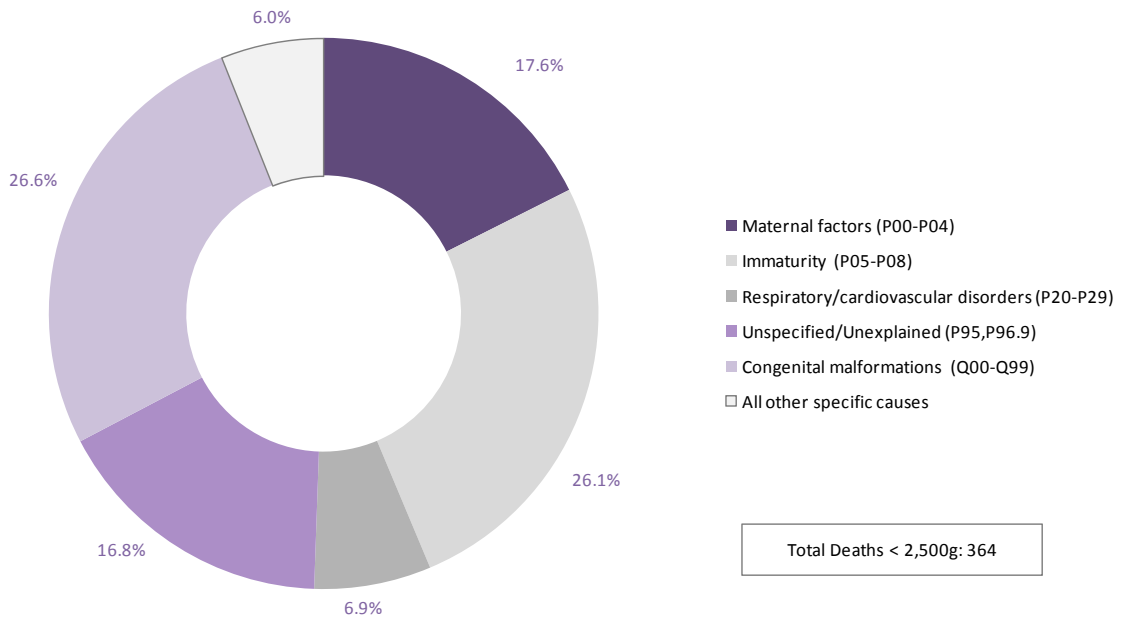
**TABLE 5.2: SINGLETON BIRTHS
PERINATAL MORTALITY: NUMBERS AND RATES, BY BIRTHWEIGHT AND CAUSE OF DEATH**

Cause of Death	ICD-10 Code	500 - 749	750 - 999	1000 - 1249	1250 - 1499	1500 - 1999	2000 - 2499	2500 - 2999	3000 - 3499	3500 - 3999	4000 - 4499	4500 and Over	Total
Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery	P00-P04	13 97.0	3 25.0	3 22.6	7 38.3	13 22.1	13 7.3	21 2.7	11 0.5	7 0.3	3 0.3	0 0.0	94 1.3
Disorders related to length of gestation and foetal growth	P05-P08	50 373.1	13 108.3	6 45.1	3 16.4	6 10.2	1 0.6	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	79 1.1
Respiratory and cardiovascular disorders specific to the perinatal period	P20-P29	4 29.9	3 25.0	2 15.0	1 5.5	5 8.5	5 2.8	8 1.0	6 0.3	5 0.2	3 0.3	0 0.0	42 0.6
Infections specific to the perinatal period	P35-P39	1 7.5	1 8.3	4 30.1	0 0.0	1 1.7	0 0.0	0 0.0	2 0.1	1 0.0	0 0.0	0 0.0	10 0.1
Haemorrhagic and haematological disorders of foetus and newborn	P50-P61	0 0.0	1 8.3	2 15.0	0 0.0	0 0.0	2 1.1	1 0.1	1 0.0	1 0.0	0 0.0	0 0.0	8 0.1
Transitory endocrine and metabolic disorders specific to foetus and newborn	P70-P74	1 7.5	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	1 0.0	0 0.0	0 0.0	1 0.5	3 0.0
Digestive system disorders of foetus and newborn	P75-P78	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	1 0.6	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	1 0.0
Conditions involving the integument and temperature regulation of foetus and newborn	P80-P83	0 0.0	1 8.3	1 7.5	0 0.0	2 3.4	1 0.6	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	5 0.1
Other disorders originating in the perinatal period	P90-P96	0 0.0	0 0.0	0 0.0	0 0.0	1 1.7	0 0.0	0 0.0	1 0.0	1 0.0	0 0.0	0 0.0	3 0.0
Foetal death of unspecified cause, Condition originating in the perinatal period, unspecified	P95, P969	12 89.6	6 50.0	6 45.1	7 38.3	15 25.5	10 5.6	15 1.9	12 0.5	9 0.3	5 0.5	0 0.0	97 1.3
Congenital malformations of the nervous system	Q00-Q07	2 14.9	1 8.3	1 7.5	1 5.5	2 3.4	7 3.9	2 0.3	4 0.2	3 0.1	2 0.2	0 0.0	25 0.3
Congenital malformations of the circulatory system	Q20-Q28	0 0.0	0 0.0	1 7.5	0 0.0	2 3.4	4 2.2	0 0.0	3 0.1	1 0.0	0 0.0	0 0.0	11 0.2
Congenital malformations of the respiratory system	Q30-Q34	0 0.0	1 8.3	1 7.5	2 10.9	2 3.4	1 0.6	1 0.1	1 0.0	1 0.0	1 0.1	0 0.0	11 0.2
Other congenital malformations of the digestive system	Q38-Q45	0 0.0	0 0.0	0 0.0	0 0.0	1 1.7	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	1 0.0
Congenital malformations of the urinary system	Q60-Q64	0 0.0	1 8.3	0 0.0	1 5.5	7 11.9	5 2.8	1 0.1	0 0.0	0 0.0	0 0.0	0 0.0	15 0.2
Congenital malformations and deformations of the musculoskeletal system	Q65-Q79	1 7.5	0 0.0	0 0.0	2 10.9	2 3.4	0 0.0	2 0.3	1 0.0	1 0.0	0 0.0	0 0.0	9 0.1
Other congenital malformations	Q80-Q89	2 14.9	3 25.0	1 7.5	2 10.9	1 1.7	3 1.7	2 0.3	0 0.0	1 0.0	0 0.0	0 0.0	15 0.2
Chromosomal abnormalities, not elsewhere classified	Q90-Q99	7 52.2	4 33.3	3 22.6	5 27.3	10 17.0	5 2.8	5 0.6	0 0.0	4 0.2	0 0.0	0 0.0	43 0.6
Total		93 694.0	38 316.7	31 233.1	31 169.4	70 118.8	58 32.4	58 7.3	43 1.8	35 1.4	14 1.4	1 0.5	472 6.5

**TABLE 5.2: MULTIPLE BIRTHS
PERINATAL MORTALITY: NUMBERS AND RATES, BY BIRTHWEIGHT AND CAUSE OF DEATH**

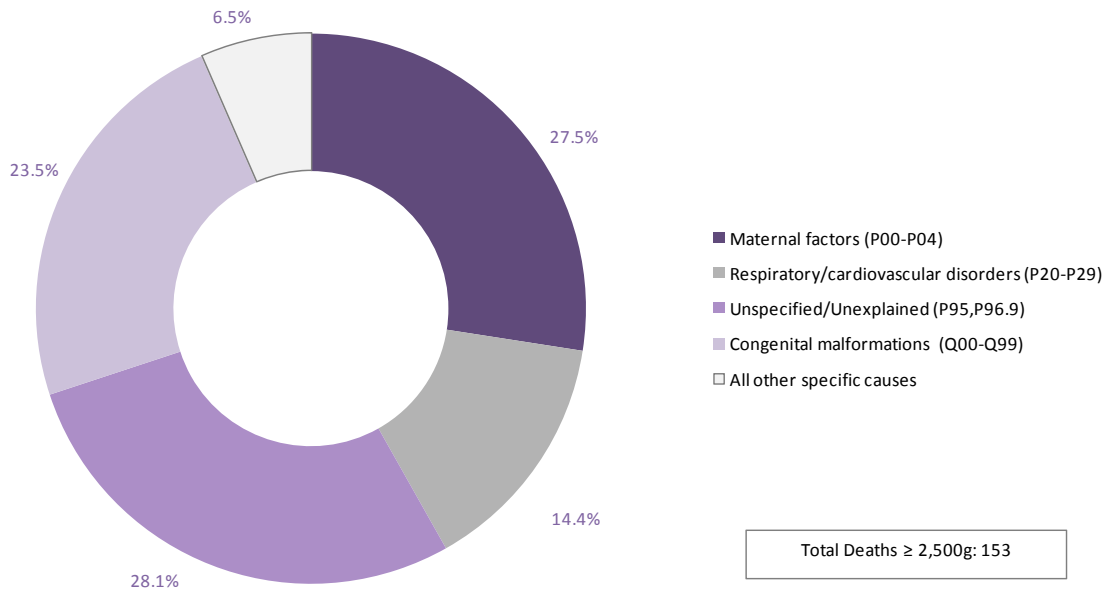
Cause of Death	ICD-10 Code	500 - 749	750 - 999	1000 - 1249	1250 - 1499	1500 - 1999	2000 - 2499	2500 - 2999	3000 - 3499	3500 - 3999	4000 - 4499	4500 and Over	Total
Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery	P00-P04	5 <i>111.1</i>	1 <i>24.4</i>	0 <i>0.0</i>	1 <i>12.5</i>	2 <i>5.5</i>	3 <i>4.2</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	12 <i>4.5</i>
Disorders related to length of gestation and foetal growth	P05-P08	15 <i>333.3</i>	1 <i>24.4</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	16 <i>6.0</i>
Respiratory and cardiovascular disorders specific to the perinatal period	P20-P29	3 <i>66.7</i>	0 <i>0.0</i>	1 <i>18.5</i>	0 <i>0.0</i>	1 <i>2.7</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	5 <i>1.9</i>
Infections specific to the perinatal period	P35-P39	2 <i>44.4</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	2 <i>0.7</i>
Foetal death of unspecified cause, Condition originating in the perinatal period, unspecified	P95, P969	2 <i>44.4</i>	0 <i>0.0</i>	1 <i>18.5</i>	0 <i>0.0</i>	1 <i>2.7</i>	1 <i>1.4</i>	2 <i>2.1</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	7 <i>2.6</i>
Congenital malformations of the nervous system	Q00-Q07	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	1 <i>1.4</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	1 <i>0.4</i>
Congenital malformations and deformations of the musculoskeletal system	Q65-Q79	1 <i>22.2</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	1 <i>0.4</i>
Chromosomal abnormalities, not elsewhere classified	Q90-Q99	0 <i>0.0</i>	0 <i>0.0</i>	1 <i>18.5</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	0 <i>0.0</i>	1 <i>0.4</i>
Total		28 622.2	2 48.8	3 55.6	1 12.5	4 11.0	5 7.0	2 2.1	0 0.0	0 0.0	0 0.0	0 0.0	45 16.8

FIGURE 5.3
TOTAL DEATHS WITH BIRTHWEIGHT < 2,500 GRAMS BY CAUSE OF DEATH



Note: See Table 5.2 for data. 'Not Stated' values are not included in the calculation of percentages.

FIGURE 5.4
TOTAL DEATHS WITH BIRTHWEIGHT ≥ 2,500 GRAMS BY CAUSE OF DEATH



Note: See note to Figure 5.4.

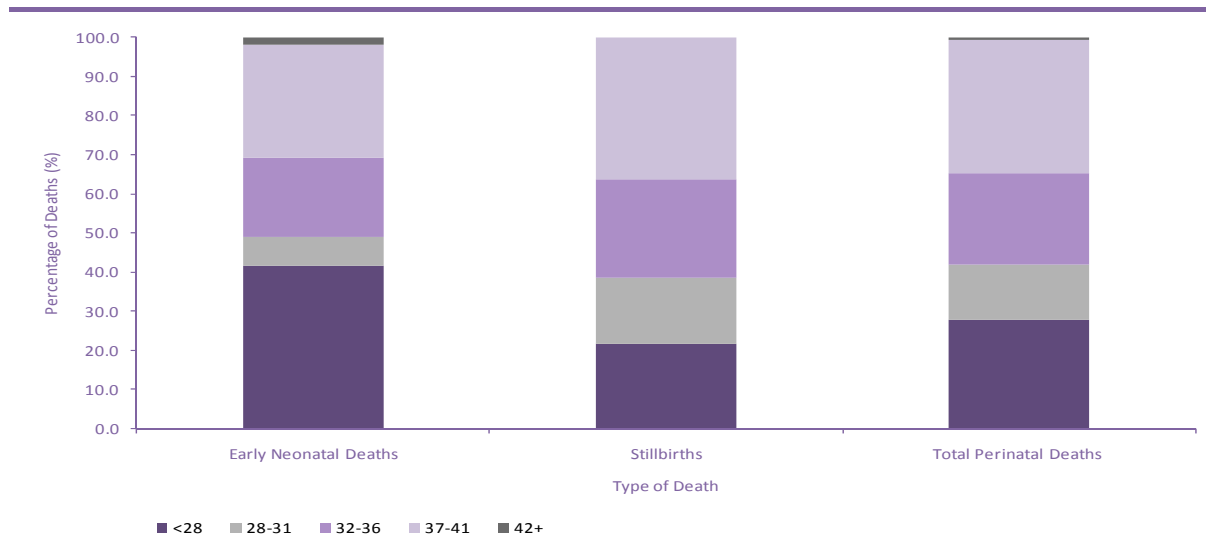
MORTALITY BY GESTATIONAL AGE

Table 5.3 illustrates the significant impact of prematurity (less than 37 completed weeks of gestation) on stillbirth and early neonatal mortality rates. Almost two-thirds of total perinatal deaths were born preterm; this was made up of 63.3 per cent of singleton and 86.7 per cent multiple perinatal deaths (see Figure 5.5). The perinatal mortality rates for babies born before 37 completed weeks of gestation were 72.5 per 1,000 total births: 89.9 per 1,000 singleton births and 29.2 per 1,000 multiple births. For babies born at 37 or more completed weeks these rates were 2.5 per 1,000 total and singleton births and 4.5 per 1,000 multiple births. Figure 5.6 shows the perinatal mortality rates by gestational age at delivery for total births, illustrating the higher rates associated with lower gestational age.

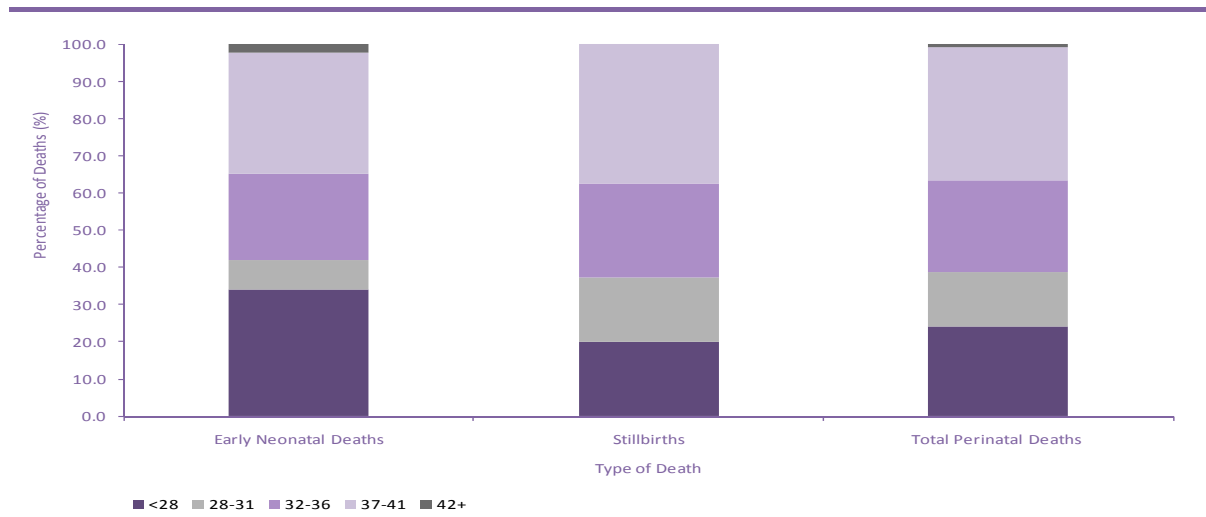
TABLE 5.3: TOTAL BIRTHS, ANTEPARTUM AND INTRAPARTUM STILLBIRTHS, EARLY NEONATAL DEATHS, AND MORTALITY RATES BY GESTATIONAL AGE

Gestational Age at Delivery (weeks)	Total Births	Ante-partum Stillbirths	Intra-partum Stillbirths	Not Stated	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Mortality Rate	Perinatal Mortality Rate	Adjusted PMR
All Births									
Less than 28	316	61	8	8	243.7	66	276.2	452.5	430.9
28-31	567	56	2	3	107.6	12	23.7	128.7	103.4
32-36	3779	80	6	4	23.8	32	8.7	32.3	20.6
37-41	68172	112	10	8	1.9	46	0.7	2.6	1.7
42 and Over	2750	0	0	0	0.0	3	1.1	1.1	0.0
Not Stated	3	0	0	0	0.0	0	0.0	0.0	0.0
Total	75,587	309	26	23	4.7	159	2.1	6.8	5.1
Singleton Births									
Less than 28	233	52	7	8	287.6	47	283.1	489.3	464.0
28-31	390	53	2	3	148.7	11	33.1	176.9	141.7
32-36	2,703	74	6	4	31.1	32	12.2	42.9	26.7
37-41	66,839	109	9	7	1.9	45	0.7	2.5	1.7
42 and Over	2,748	0	0	0	0.0	3	1.1	1.1	0.0
Not Stated	3	0	0	0	0.0	0	0.0	0.0	0.0
Total	72,916	288	24	22	4.6	138	1.9	6.5	4.7
Multiple Births									
Less than 28	83	9	1	0	120.5	19	260.3	349.4	341.5
28-31	177	3	0	0	16.9	1	5.7	22.6	22.6
32-36	1,076	6	0	0	5.6	0	0.0	5.6	5.6
37-41	1,333	3	1	1	3.8	1	0.8	4.5	3.0
42 and Over	2	0	0	0	0.0	0	0.0	0.0	0.0
Not Stated	0	0	0	0	0.0	0	0.0	0.0	0.0
Total	2,671	21	2	1	9.0	21	7.9	16.8	15.7

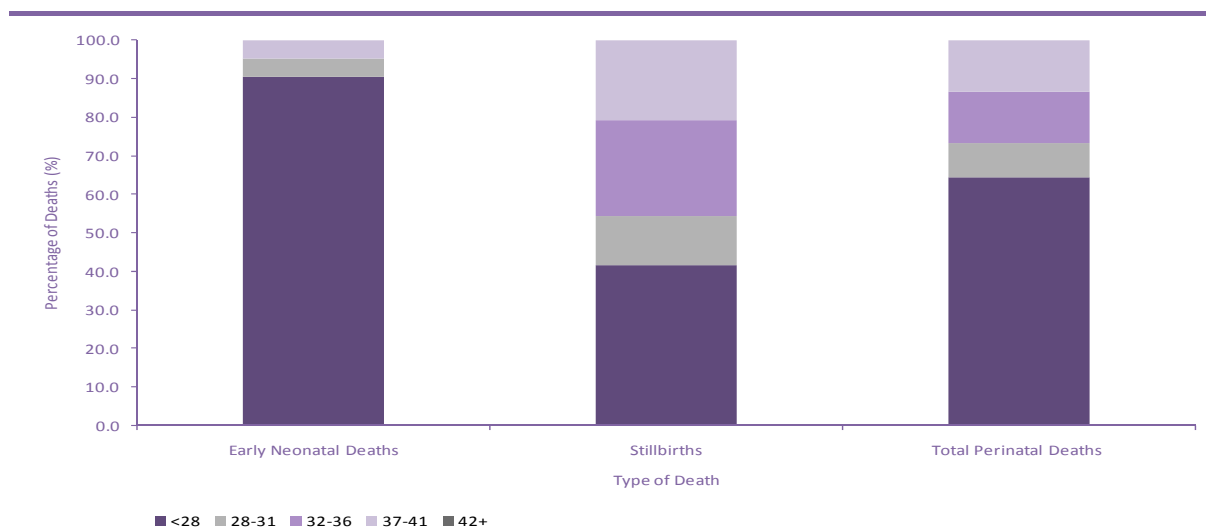
FIGURE 5.5
DEATHS BY GESTATIONAL AGE GROUPS, TOTAL, SINGLETON AND MULTIPLE BIRTHS
Total Births



Singleton Births

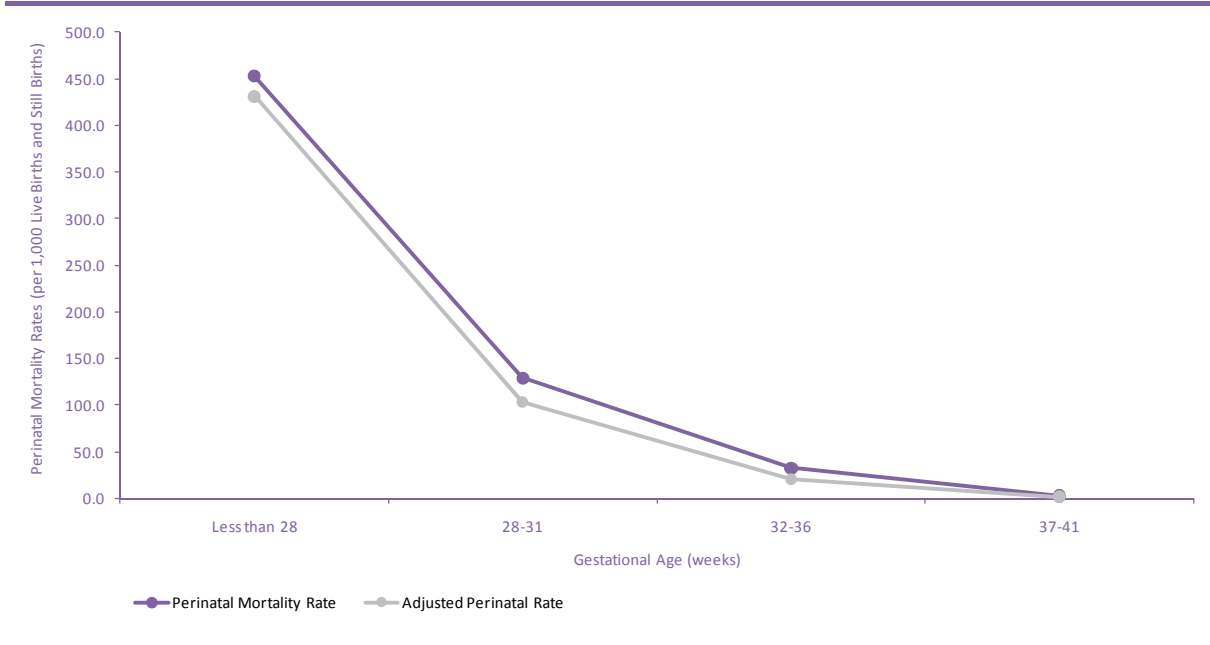


Multiple Births



Note: See Table 5.3 for data.

FIGURE 5.6
PERINATAL MORTALITY RATES BY GESTATIONAL AGE AT DELIVERY, TOTAL BIRTHS



Note: See Table 5.3 for data. Rates based on 20 or less observations are not included in this Figure.

CAUSE OF DEATH

The data presented in Table 5.4 have been coded using the WHO ICD-10 classification.²² Under this system, the main cause of death is defined as the pathological condition of the infant or foetus, in which the opinion of the certifier, made the greatest contribution towards the death.²³ Each year around 20 per cent of all perinatal deaths are classified as 'unspecified/unexplained'. The fact that over half of all perinatal deaths in Ireland do not undergo post mortem maybe a contributing factor. This finding is not unique to Ireland, as many countries report high percentages of unexplained deaths in the perinatal period in their perinatal data sets, even where different classification systems are used.

²² World Health Organisation, 2005, *International Statistical Classification of Diseases and Related Health Problems*, 10th Revision, Vols. 1-3. Geneva: World Health Organisation.

²³ See Appendix D for more detail.

TABLE 5.4: STILLBIRTHS, EARLY NEONATAL DEATHS AND MORTALITY RATES BY CAUSE OF DEATH BY ICD-10 CHAPTER AND SELECTED SUB-CATEGORIES

Cause of Death	ICD-10 Code	Total Deaths						Singleton						Multiple					
		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths	
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery	P00-P04	100	1.3	6	0.1	106	1.4	89	1.2	5	0.1	94	1.3	11	4.1	1	0.4	12	4.5
Foetus and newborn affected by maternal conditions that may be unrelated to present pregnancy	P000 - P009	3	0.0	0	0.0	3	0.0	3	0.0	0	0.0	3	0.0	0	0.0	0	0.0	0	0.0
Foetus and newborn affected by maternal complications of pregnancy	P010 - P019	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	1	0.4
Foetus and newborn affected by complications of placenta, cord and membranes	P020 - P029	94	1.2	4	0.1	98	1.3	84	1.2	3	0.0	87	1.2	10	3.7	1	0.4	11	4.1
Foetus and newborn affected by other complications of labour and delivery	P030 - P039	2	0.0	2	0.0	4	0.1	2	0.0	2	0.0	4	0.1	0	0.0	0	0.0	0	0.0
Disorders related to length of gestation and foetal growth	P05-P08	46	0.6	49	0.7	95	1.3	42	0.6	37	0.5	79	1.1	4	1.5	12	4.5	16	6.0
Slow foetal growth and foetal malnutrition	P050 - P059	8	0.1	0	0.0	8	0.1	8	0.1	0	0.0	8	0.1	0	0.0	0	0.0	0	0.0
Disorders related to short gestation and low birth weight, not elsewhere classified	P070 - P073	38	0.5	49	0.7	87	1.2	34	0.5	37	0.5	71	1.0	4	1.5	12	4.5	16	6.0
Respiratory and cardiovascular disorders specific to the perinatal period	P20-P29	31	0.4	16	0.2	47	0.6	30	0.4	12	0.2	42	0.6	1	0.4	4	1.5	5	1.9
Intrauterine hypoxia	P200 - P209	26	0.3	1	0.0	27	0.4	25	0.3	1	0.0	26	0.4	1	0.4	0	0.0	1	0.4
Birth asphyxia	P210 - P219	0	0.0	4	0.1	4	0.1	0	0.0	4	0.1	4	0.1	0	0.0	0	0.0	0	0.0
Respiratory distress of newborn	P220 - P229	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	1	0.4
Congenital pneumonia	P230 - P239	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Neonatal aspiration syndromes	P240 - P249	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Interstitial emphysema and related conditions originating in the perinatal period	P250 - P258	0	0.0	3	0.0	3	0.0	0	0.0	2	0.0	2	0.0	0	0.0	1	0.4	1	0.4
Pulmonary haemorrhage originating in the perinatal period	P260 - P269	0	0.0	4	0.1	4	0.1	0	0.0	2	0.0	2	0.0	0	0.0	2	0.8	2	0.7

TABLE 5.4: STILLBIRTHS, EARLY NEONATAL DEATHS AND MORTALITY RATES BY CAUSE OF DEATH BY ICD-10 CHAPTER AND SELECTED SUB-CATEGORIES (CONT'D)

Cause of Death	ICD-10 Code	Total Deaths						Singleton						Multiple					
		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths	
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	Total	Rate
Other respiratory conditions originating in the perinatal period	P280 - P289	1	0.0	1	0.0	2	0.0	1	0.0	1	0.0	2	0.0	0	0.0	0	0.0	0	0.0
Cardiovascular disorders originating in the perinatal period	P290 - P299	3	0.0	1	0.0	4	0.1	3	0.0	1	0.0	4	0.1	0	0.0	0	0.0	0	0.0
Infections specific to the perinatal period	P35-P39	10	0.1	2	0.0	12	0.2	9	0.1	1	0.0	10	0.1	1	0.4	1	0.4	2	0.7
Bacterial sepsis of newborn	P360 - P369	1	0.0	1	0.0	2	0.0	1	0.0	1	0.0	2	0.0	0	0.0	0	0.0	0	0.0
Other congenital infectious and parasitic diseases	P370 - P379	2	0.0	0	0.0	2	0.0	2	0.0	0	0.0	2	0.0	0	0.0	0	0.0	0	0.0
Omphalitis of newborn with or without mild haemorrhage	P38	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Other infections specific to the perinatal period	P390 - P399	6	0.1	1	0.0	7	0.1	5	0.1	0	0.0	5	0.1	1	0.4	1	0.4	2	0.7
Haemorrhagic and haematological disorders of foetus and newborn	P50-P61	5	0.1	3	0.0	8	0.1	5	0.1	3	0.0	8	0.1	0	0.0	0	0.0	0	0.0
Foetal blood loss	P500 - P509	3	0.0	0	0.0	3	0.0	3	0.0	0	0.0	3	0.0	0	0.0	0	0.0	0	0.0
Intracranial nontraumatic haemorrhage of foetus and newborn	P520 - P529	0	0.0	2	0.0	2	0.0	0	0.0	2	0.0	2	0.0	0	0.0	0	0.0	0	0.0
Other neonatal haemorrhage	P540 - P549	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Haemolytic disease of foetus and newborn	P550 - P559	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Hydrops fetalis due to haemolytic disease	P560 - P569	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Transitory endocrine and metabolic disorders specific to foetus and newborn	P70-P74	3	0.0	0	0.0	3	0.0	3	0.0	0	0.0	3	0.0	0	0.0	0	0.0	0	0.0
Transitory disorders of carbohydrate metabolism specific to foetus and newborn	P700 - P709	3	0.0	0	0.0	3	0.0	3	0.0	0	0.0	3	0.0	0	0.0	0	0.0	0	0.0

TABLE 5.4: STILLBIRTHS, EARLY NEONATAL DEATHS AND MORTALITY RATES BY CAUSE OF DEATH BY ICD-10 CHAPTER AND SELECTED SUB-CATEGORIES (CONT'D)

Cause of Death	ICD-10 Code	Total Deaths						Singleton						Multiple					
		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths		Stillbirths		Early Neonatal Deaths		Perinatal Deaths	
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Digestive system disorders of foetus and newborn	P75-P78	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Other perinatal digestive system disorders	P780 - P789	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Conditions involving the integument and temperature regulation of foetus and newborn	P80-P83	3	0.0	2	0.0	5	0.1	3	0.0	2	0.0	5	0.1	0	0.0	0	0.0	0	0.0
Other conditions of integument specific to foetus and newborn	P830 - P839	3	0.0	2	0.0	5	0.1	3	0.0	2	0.0	5	0.1	0	0.0	0	0.0	0	0.0
Other disorders originating in the perinatal period	P90-P96	98	1.3	9	0.1	107	1.4	92	1.3	8	0.1	100	1.4	6	2.2	1	0.4	7	2.6
Other disturbances of cerebral status of newborn	P910 - P919	1	0.0	2	0.0	3	0.0	1	0.0	2	0.0	3	0.0	0	0.0	0	0.0	0	0.0
Foetal death of unspecified cause, Condition originating in the perinatal period, unspecified	P95, P969	97	1.3	7	0.1	104	1.4	91	1.2	6	0.1	97	1.3	6	2.2	1	0.4	7	2.6
Congenital malformations of the nervous system	Q00-Q07	9	0.1	17	0.2	26	0.3	9	0.1	16	0.2	25	0.3	0	0.0	1	0.4	1	0.4
Anencephaly and similar malformations	Q000 - Q002	5	0.1	7	0.1	12	0.2	5	0.1	6	0.1	11	0.2	0	0.0	1	0.4	1	0.4
Encephalocele	Q010 - Q019	0	0.0	4	0.1	4	0.1	0	0.0	4	0.1	4	0.1	0	0.0	0	0.0	0	0.0
Congenital hydrocephalus	Q030 - Q039	1	0.0	1	0.0	2	0.0	1	0.0	1	0.0	2	0.0	0	0.0	0	0.0	0	0.0
Other congenital malformations of the brain	Q040 - Q049	3	0.0	4	0.1	7	0.1	3	0.0	4	0.1	7	0.1	0	0.0	0	0.0	0	0.0
Spina bifida	Q050 - Q059	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Congenital malformations of the circulatory system	Q20-Q28	5	0.1	6	0.1	11	0.1	5	0.1	6	0.1	11	0.2	0	0.0	0	0.0	0	0.0
Congenital malformations of cardiac chambers and connections	Q200 - Q209	1	0.0	1	0.0	2	0.0	1	0.0	1	0.0	2	0.0	0	0.0	0	0.0	0	0.0

TABLE 5.4: STILLBIRTHS, EARLY NEONATAL DEATHS AND MORTALITY RATES BY CAUSE OF DEATH BY ICD-10 CHAPTER AND SELECTED SUB-CATEGORIES (CONT'D)

Cause of Death	ICD-10 Code	Total Deaths						Singleton						Multiple					
		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths	
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Congenital malformations of cardiac septa	Q210 - Q219	1	0.0	1	0.0	2	0.0	1	0.0	1	0.0	2	0.0	0	0.0	0	0.0	0	0.0
Congenital malformations of aortic and mitral valves	Q230 - Q239	0	0.0	2	0.0	2	0.0	0	0.0	2	0.0	2	0.0	0	0.0	0	0.0	0	0.0
Other congenital malformations of heart	Q240 - Q249	3	0.0	2	0.0	5	0.1	3	0.0	2	0.0	5	0.1	0	0.0	0	0.0	0	0.0
Congenital malformations of the respiratory system	Q30-Q34	1	0.0	10	0.1	11	0.1	1	0.0	10	0.1	11	0.2	0	0.0	0	0.0	0	0.0
Congenital malformations of lung	Q330 - Q339	1	0.0	10	0.1	11	0.1	1	0.0	10	0.1	11	0.2	0	0.0	0	0.0	0	0.0
Other congenital malformations of the digestive system	Q38-Q45	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Congenital malformations of oesophagus	Q390 - Q399	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Congenital malformations of the urinary system	Q60-Q64	6	0.1	9	0.1	15	0.2	6	0.1	9	0.1	15	0.2	0	0.0	0	0.0	0	0.0
Renal agenesis and other reduction defects of kidney	Q600 - Q606	5	0.1	9	0.1	14	0.2	5	0.1	9	0.1	14	0.2	0	0.0	0	0.0	0	0.0
Cystic kidney disease	Q610 - Q619	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Congenital malformations and deformations of the musculoskeletal system	Q65-Q79	3	0.0	7	0.1	10	0.1	3	0.0	6	0.1	9	0.1	0	0.0	1	0.4	1	0.4
Congenital deformities of feet	Q660 - Q669	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	1	0.4
Congenital musculoskeletal deformities of head, face, spine and chest	Q670 - Q678	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Other congenital malformations of limbs	Q740 - Q749	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Other osteochondrodysplasias	Q780 - Q789	2	0.0	2	0.0	4	0.1	2	0.0	2	0.0	4	0.1	0	0.0	0	0.0	0	0.0

TABLE 5.4: STILLBIRTHS, EARLY NEONATAL DEATHS AND MORTALITY RATES BY CAUSE OF DEATH BY ICD-10 CHAPTER AND SELECTED SUB-CATEGORIES (CONT'D)

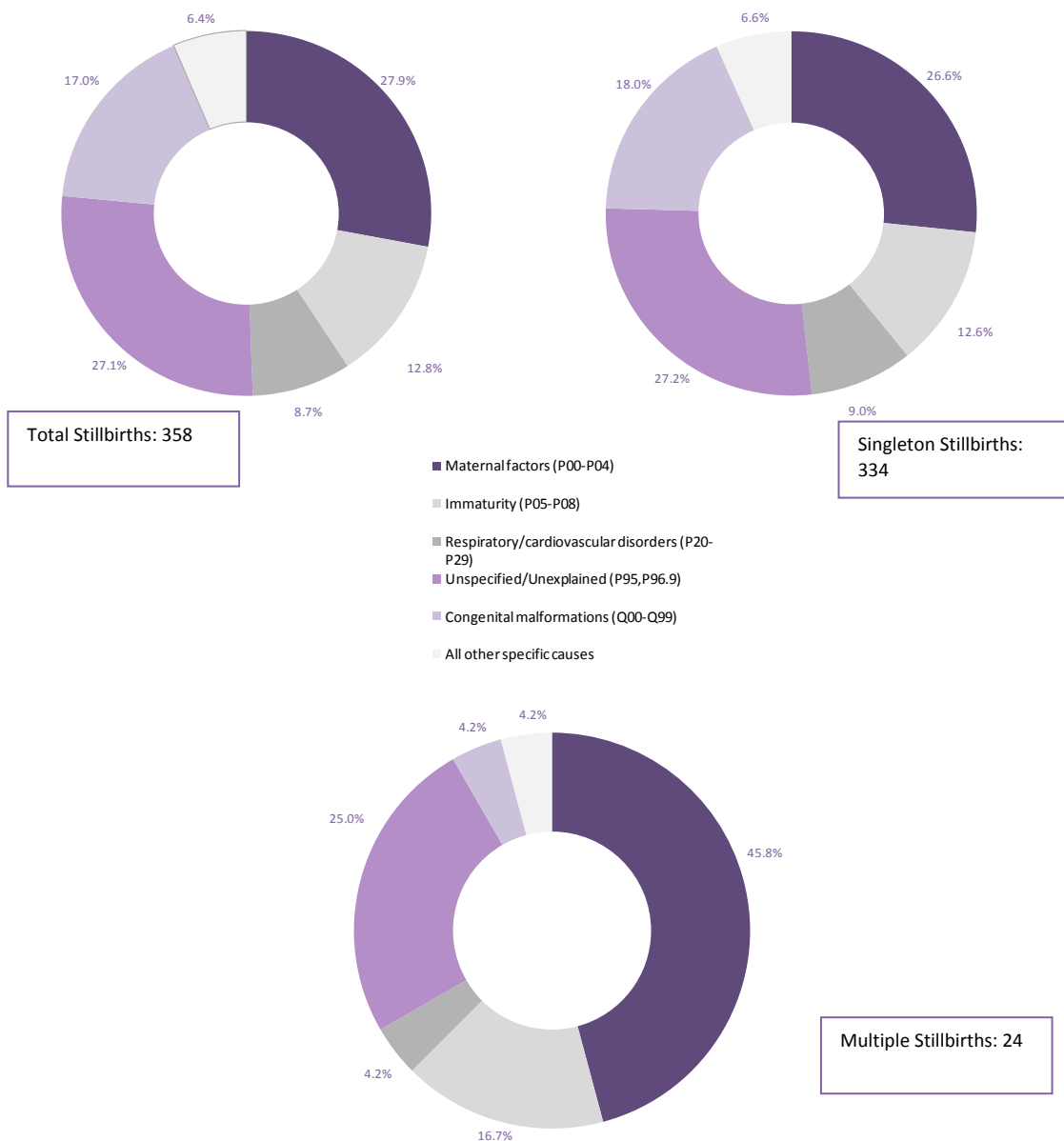
Cause of Death	ICD-10 Code	Total Deaths						Singleton						Multiple					
		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths		Stillbirths		Early Neonatal Deaths		Total Perinatal Deaths	
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Congenital malformations of musculoskeletal system, not elsewhere classified	Q790 - Q799	0	0.0	3	0.0	3	0.0	0	0.0	3	0.0	3	0.0	0	0.0	0	0.0	0	0.0
Other congenital malformations	Q80-Q89	8	0.1	7	0.1	15	0.2	8	0.1	7	0.1	15	0.2	0	0.0	0	0.0	0	0.0
Other specified congenital malformation syndromes affecting multiple systems	Q870 - Q878	1	0.0	2	0.0	3	0.0	1	0.0	2	0.0	3	0.0	0	0.0	0	0.0	0	0.0
Other congenital malformations, not elsewhere classified	Q890 - Q899	7	0.1	5	0.1	12	0.2	7	0.1	5	0.1	12	0.2	0	0.0	0	0.0	0	0.0
Chromosomal abnormalities, not elsewhere classified	Q90-Q99	28	0.4	16	0.2	44	0.6	27	0.4	16	0.2	43	0.6	1	0.4	0	0.0	1	0.4
Downs syndrome	Q900 - Q909	6	0.1	0	0.0	6	0.1	6	0.1	0	0.0	6	0.1	0	0.0	0	0.0	0	0.0
Edwards syndrome and Patau syndrome	Q910 - Q917	14	0.2	11	0.1	25	0.3	13	0.2	11	0.2	24	0.3	1	0.4	0	0.0	1	0.4
Other trisomies and partial trisomies of the autosomes, not elsewhere classified	Q920 - Q929	3	0.0	1	0.0	4	0.1	3	0.0	1	0.0	4	0.1	0	0.0	0	0.0	0	0.0
Monosomies and deletions from the autosomes, not elsewhere classified	Q930 - Q939	1	0.0	2	0.0	3	0.0	1	0.0	2	0.0	3	0.0	0	0.0	0	0.0	0	0.0
Turners syndrome	Q960 - Q969	2	0.0	0	0.0	2	0.0	2	0.0	0	0.0	2	0.0	0	0.0	0	0.0	0	0.0
Other sex chromosome abnormalities, male phenotype, not elsewhere classified	Q980 - Q989	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Other chromosome abnormalities, not elsewhere classified	Q990 - Q999	2	0.0	1	0.0	3	0.0	2	0.0	1	0.0	3	0.0	0	0.0	0	0.0	0	0.0
Total		358	4.7	159	2.1	517	6.8	334	4.6	138	1.9	472	6.5	24	9.0	21	7.9	45	16.8

Note: N equals number of deaths.

STILLBIRTHS

Maternal factors (P00-P04) were the leading cause of death for total stillbirths and multiple stillbirths accounting for 27.9 and 45.8 per cent respectively. Apart from unspecified/unexplained deaths, this was also the leading cause of death for singleton stillbirths (26.6 per cent), see Figure 5.7. The cause of death was unexplained for over 27 per cent of all stillbirths in 2008.

FIGURE 5.7
STILLBIRTHS BY CAUSE OF DEATH, TOTAL, SINGLETON AND MULTIPLE BIRTHS

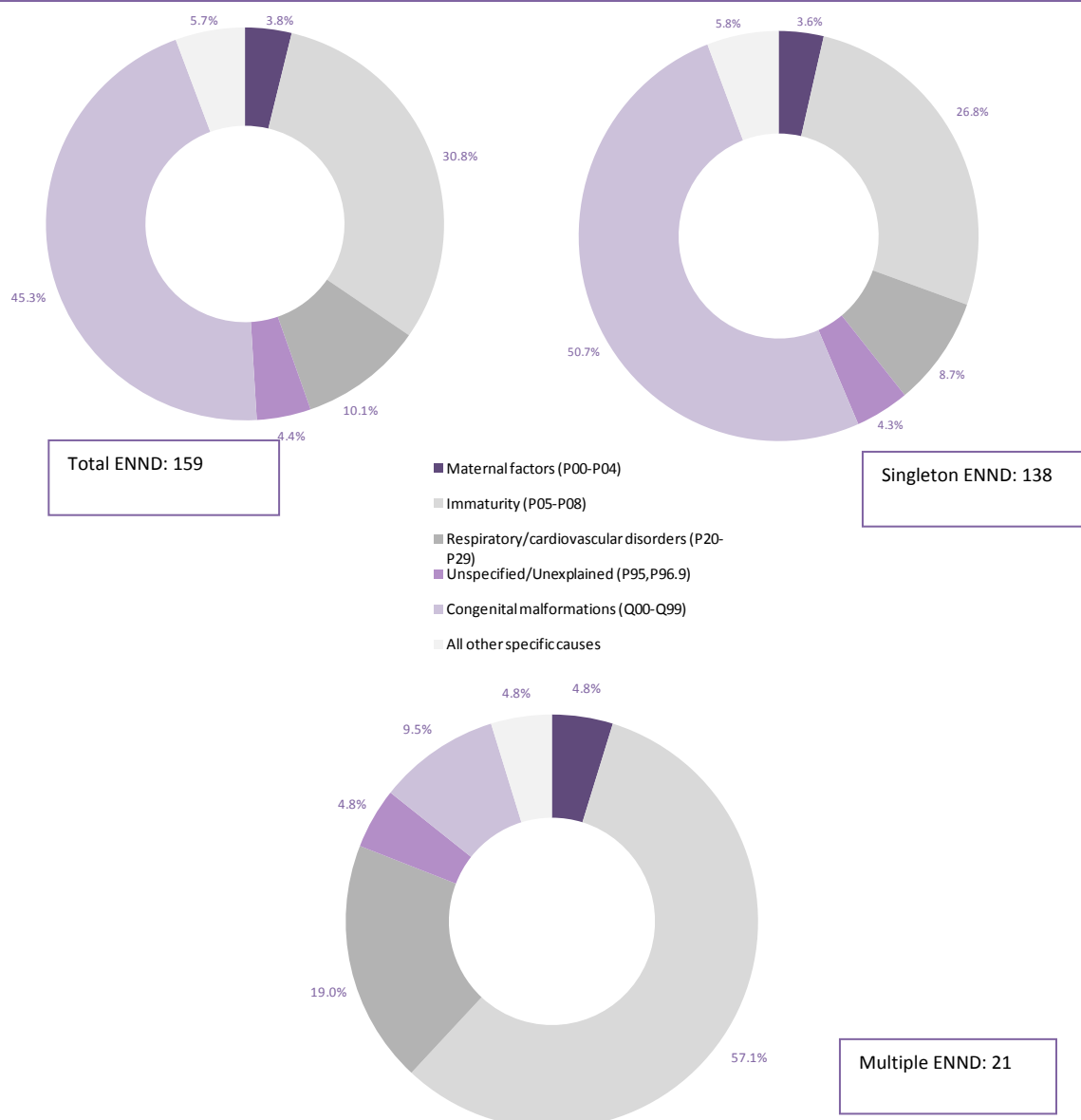


Note: See Table 5.4 for data.

EARLY NEONATAL DEATHS (ENND)

Over 45 per cent of total early neonatal deaths and 50 per cent of singleton early neonatal deaths were due to congenital malformations (Q00-Q99). Immaturity (P05-P08) was the leading cause of death among multiple early neonatal deaths (57.1 per cent) and the second most common cause for total and singleton early neonatal deaths at 30.8 per cent and 26.8 per cent respectively (see Figure 5.8).

FIGURE 5.8
EARLY NEONATAL DEATHS BY CAUSE OF DEATH, TOTAL, SINGLETON AND MULTIPLE BIRTHS

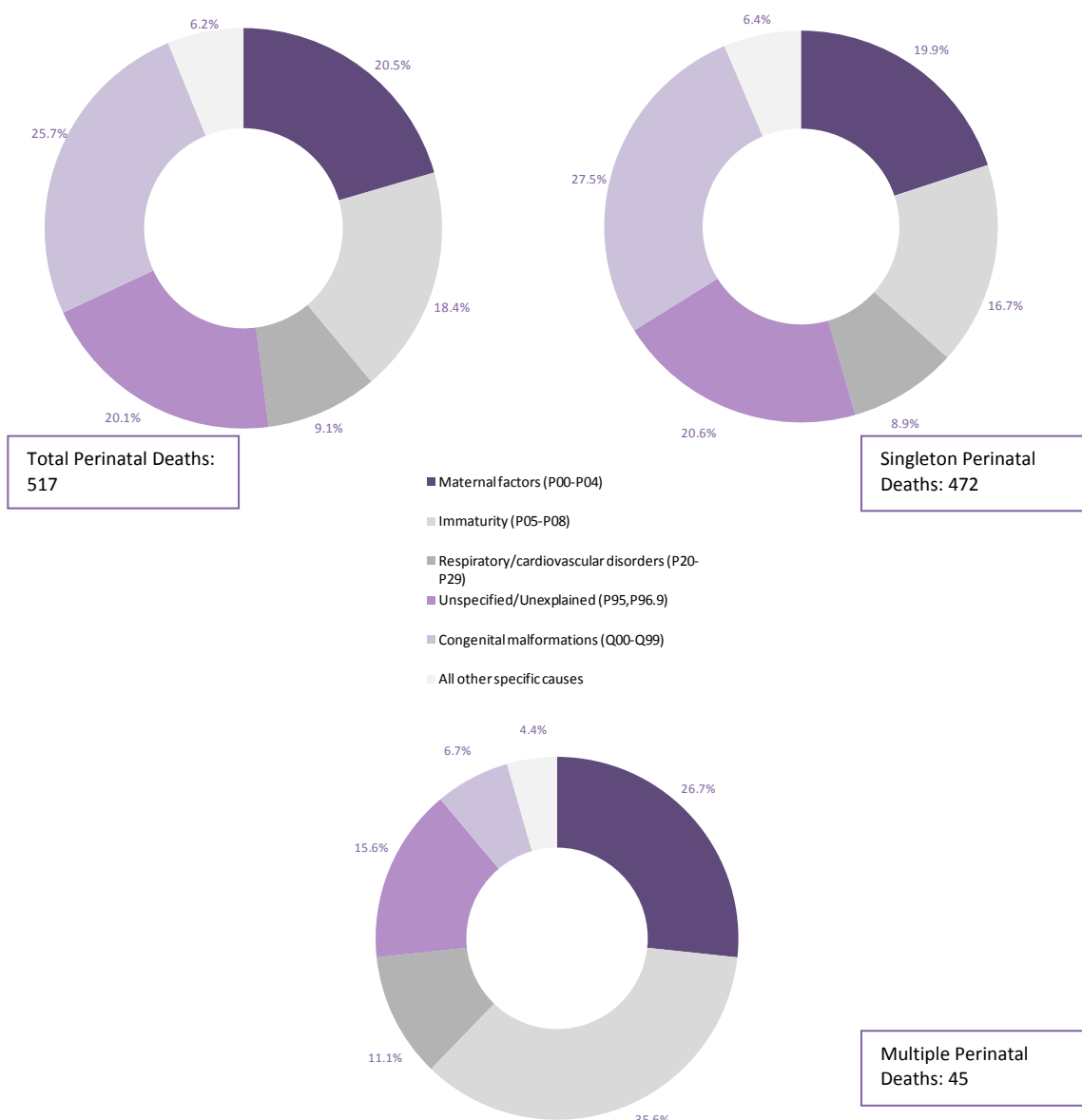


Note: See Table 5.4 for data.

TOTAL PERINATAL DEATHS

The leading cause of death for total perinatal deaths was congenital malformations (25.7 per cent) followed by maternal factors (20.5 per cent), see Figure 5.9. For singleton births, congenital malformations were the greatest contributor to cause of death, accounting for 27.5 per cent of total singleton perinatal deaths. For multiple births, the largest contributor was immaturity (35.6 per cent) followed by maternal factors at 26.7 per cent. Overall, 20.6 per cent and 15.6 per cent of singleton and multiple deaths respectively were unexplained.

FIGURE 5.9
PERINATAL DEATHS BY CAUSE OF DEATH, TOTAL, SINGLETON AND MULTIPLE BIRTHS



Note: See Table 5.4 for data.

AGE AT DEATH

Age at death is recorded for early neonatal deaths and is shown in Table 5.5.

TABLE 5.5: AGE AT DEATH, EARLY NEONATAL DEATHS

Time	Total Births		Singleton Births		Multiple Births	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Completed Hours						
<1	39	24.5	32	23.2	7	33.3
1	29	18.2	26	18.8	3	14.3
2	7	4.4	5	3.6	2	9.5
3	4	2.5	4	2.9	0	0.0
4	3	1.9	3	2.2	0	0.0
5	7	4.4	6	4.3	1	4.8
6	3	1.9	2	1.4	1	4.8
7	5	3.1	5	3.6	0	0.0
8	2	1.3	1	0.7	1	4.8
9	2	1.3	2	1.4	0	0.0
10	2	1.3	2	1.4	0	0.0
11	5	3.1	5	3.6	0	0.0
12	2	1.3	2	1.4	0	0.0
13	0	0.0	0	0.0	0	0.0
14	1	0.6	1	0.7	0	0.0
15	1	0.6	1	0.7	0	0.0
16	0	0.0	0	0.0	0	0.0
17	0	0.0	0	0.0	0	0.0
18	1	0.6	1	0.7	0	0.0
19	2	1.3	2	1.4	0	0.0
20	3	1.9	3	2.2	0	0.0
21	0	0.0	0	0.0	0	0.0
22	1	0.6	1	0.7	0	0.0
23	0	0.0	0	0.0	0	0.0
Total under 1 day	119	74.8	104	75.4	15	71.4
Completed Days						
1	13	8.2	11	8.0	2	9.5
2	19	11.9	15	10.9	4	19.0
3	3	1.9	3	2.2	0	0.0
4	2	1.3	2	1.4	0	0.0
5	2	1.3	2	1.4	0	0.0
6	1	0.6	1	0.7	0	0.0
Total under 1 Week	40	25.2	34	24.6	6	28.6
Total	159	100	138	100	21	100

POST-MORTEM EXAMINATIONS

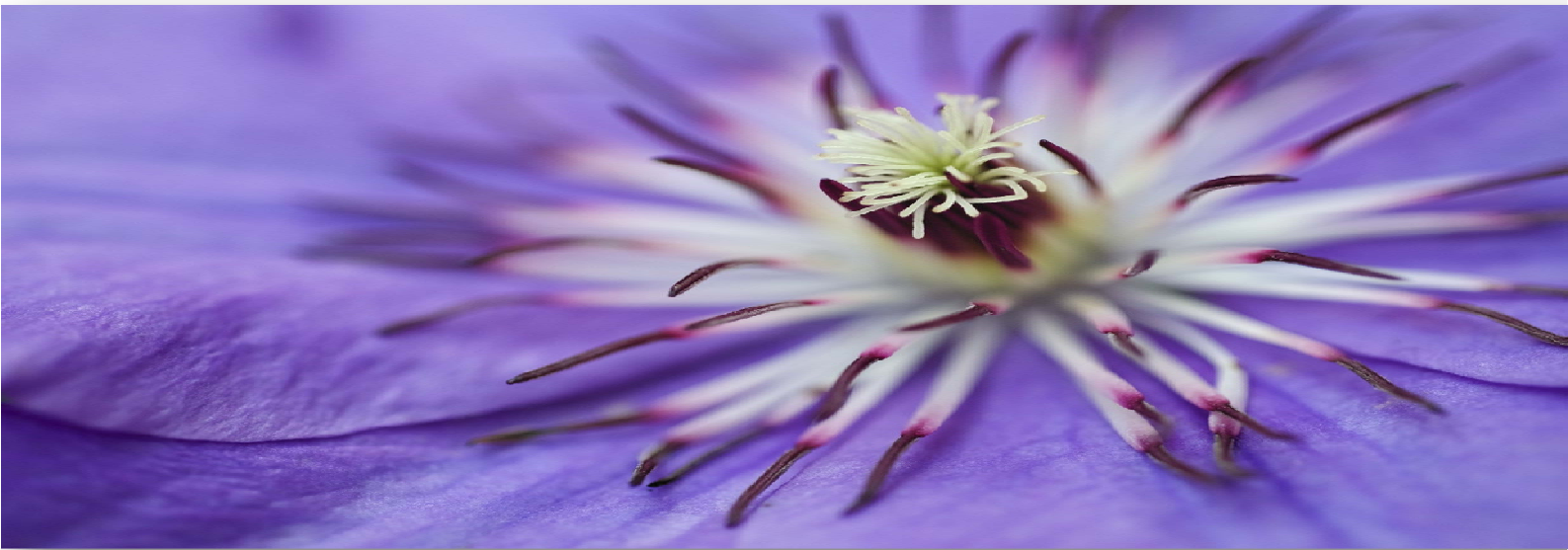
Data on post-mortem examinations are shown in Table 5.6. Post-mortem examinations were less likely in the case of early neonatal deaths compared to stillbirths and this trend is consistent over recent years. The percentage of early neonatal deaths undergoing post-mortem examinations was 28.9 per cent compared to 48.9 per cent for stillbirths. A post-mortem examination was undertaken in 43.4 per cent of total perinatal deaths in 2008.

TABLE 5.6: STILLBIRTHS AND EARLY NEONATAL DEATHS UNDERGOING POST-MORTEM EXAMINATIONS

Post-Mortem Frequency Row Per Cent Col. Per Cent	Type of Death		
	Early Neonatal Deaths	Stillbirths	Total
Total Births			
Post-Mortem	46 20.8 28.9	175 79.2 48.9	221 100.0 42.7
No Post-Mortem	109 37.8 68.6	179 62.2 50.0	288 100.0 55.7
Not Stated	4 50.0 2.5	4 50.0 1.1	8 100.0 1.5
Total	159 30.8 100	358 69.2 100	517 100 100
Singleton Births			
Post-Mortem	39 18.9 28.3	167 81.1 50.0	206 100.0 43.6
No Post-Mortem	96 37.1 69.6	163 62.9 48.8	259 100 54.9
Not Stated	3 42.9 2.2	4 57.1 1.2	7 100.0 1.5
Total	138 29.2 100	334 70.8 100	472 100 100
Multiple Births			
Post-Mortem	7 46.7 33.3	8 53.3 33.3	15 100.0 33.3
No Post-Mortem	13 44.8 61.9	16 55.2 66.7	29 100 64.4
Not Stated	1 100.0 4.8	0 0.0 0.0	1 100.0 2.2
Total	21 46.7 100	24 53.3 100	45 100 100

SECTION SIX

DOMICILIARY BIRTHS



INTRODUCTION

In the NPRS, domiciliary births are defined as planned home births attended by an independent midwife and are not associated with a hospital. Births delivered under hospital-administered home birth schemes are recorded as hospital births. Domiciliary births have been included, unless otherwise stated, in the analysis presented in previous sections.

DOMICILIARY BIRTHS, 1999–2008

Table 6.1 presents selected statistics for domiciliary births for the period 1999 to 2008. Domiciliary births represented 0.2 per cent of births reported in 2008. The number of domiciliary births has declined by 55.7 per cent between 1999 and 2008. The lowest number of domiciliary births (158) over this 10-year period was reported for 2008. The highest number of domiciliary births (288) was reported in 2002 (see Figure 6.1).

The average age of mothers having domiciliary births over this period was 33.8 years; this has remained stable, ranging from 33.2 years in 2001 to 34.3 years in 2008.

Table 6.1 highlights trends for domiciliary births from 1999 to 2008 and shows that those women choosing a domiciliary delivery had an average age of 34 years, with a maternal parity of 1.6 previous births.

The average birthweight for domiciliary births in 2008 was 3,667 grams. Exclusively breastfeeding was reported for over 95 per cent of domiciliary births.

For domiciliary births recorded for the period 1999 to 2008 a total of six perinatal deaths were recorded for domiciliary births, two stillbirths and four early neonatal deaths were reported.

More detailed analysis of domiciliary births for 2008 are presented in Tables 6.2 to 6.7, including the maternal characteristics of maternal age, parity and marital status, as well as details of the perinatal characteristics and care including gestational age, birthweight and type of feeding.

TABLE 6.1: TRENDS IN DOMICILIARY BIRTHS - SELECTED STATISTICS, 1999–2008

Selected Statistics	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
General Characteristics										
Total Births	246	216	245	288	236	202	183	170	186	158
Average Age of Mother in years ¹	33.5	33.3	33.2	34.1	34.0	34.3	33.4	34.3	34.1	34.3
Average Maternal Parity ¹	1.5	1.6	1.4	2.1	1.6	1.6	1.7	1.7	1.6	1.5
Single Mothers (%) ^{1,2}	25.2	29.6	31.6	22.6	28.0	29.2	23.5	20.0	16.1	25.3
Average Weight in grams ³	3699.5	3726.7	3686.8	3730.1	3754.3	3738.4	3760.1	3742.2	3699.2	3667.1
Low Birthweight <2,500 grams (%) ³	0.4	1.9	0.0	0.4	0.0	1.0	0.6	0.6	1.1	0.6
Average Gestational Age at delivery in weeks	40.0	39.9	40.0	40.1	40.1	40.0	40.0	40.1	40.0	40.1
Average Interval since last birth in years	3.5	3.4	3.8	3.7	3.7	3.5	3.3	3.4	3.4	3.6
Perinatal Care										
Combined Antenatal Care - Midwife and G.P./Hospital(%) ⁴	59.8	57.9	55.3	57.3	66.1	64.4	71.6	76.5	60.8	77.9
Immunity to Rubella (%) ¹	92.3	90.7	93.4	91.6	94.1	97.0	95.1	96.5	100.0	96.2
Mothers Exclusively Breastfeeding (%) ⁵	98.3	96.6	95.0	94.0	94.1	97.5	94.0	97.1	95.7	95.6

Notes: 'Not Stated' values are not included in the calculation of percentages.

¹ Based on maternities.

² Data recording marital status as 'never married' are classified as 'single' marital status in this report.

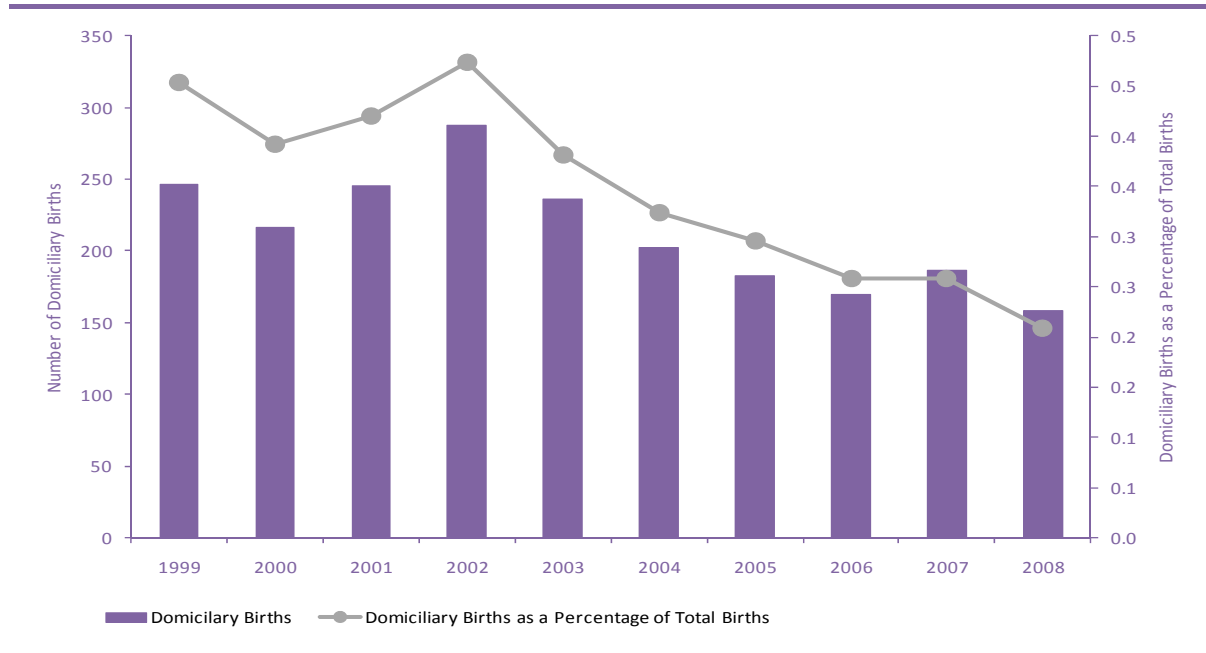
³ Based on live births.

⁴ Based on maternities. This figure applies to the percentage of home births where antenatal care is stated as 'combined', rather than 'midwife only'.

⁵ Based on maternities with live births. Excludes early neonatal deaths.

There was one set of domiciliary twin births in 2001.

FIGURE 6.1:
NUMBER AND PERCENTAGE OF DOMICILIARY BIRTHS REPORTED, 1999–2008



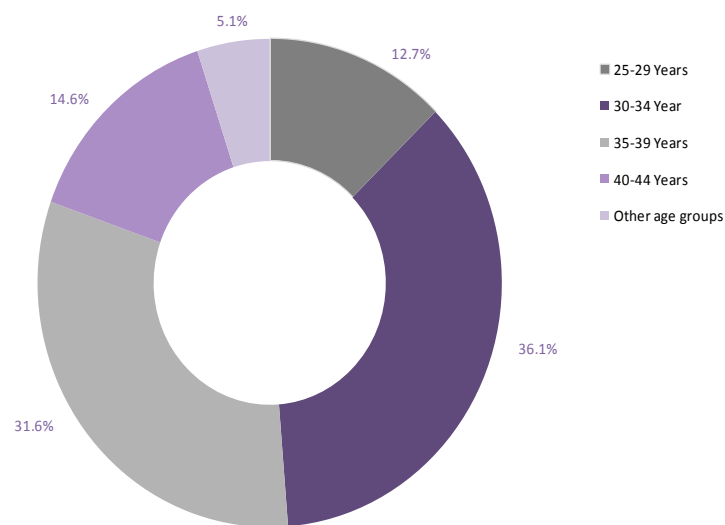
Note: See Tables 2.2 and 6.1 for data.

MATERNAL AGE

Table 6.2 shows that over 77 per cent of mothers had 1 or more previous births and over 45 per cent had two or more previous births. Maternal parity rose with age with 84.7 per cent of births to mothers aged 30 and older having one or more previous births. Figure 6.2 shows that mothers aged 30–34 years accounted for the largest percentage of domiciliary births (36.1 per cent), followed by mothers aged 35–39 years at 31.1 per cent.

TABLE 6.2: AGE OF MOTHER BY MATERNAL PARITY

Age of Mother Frequency Row Per Cent Col. Per Cent	Maternal Parity						Total
	0	1	2	3	4	5	
20-24 Years	5	2	0	0	0	0	7
	71.4	28.6	0.0	0.0	0.0	0.0	100
	14.3	3.9	0.0	0.0	0.0	0.0	4.4
25-29 Years	10	8	1	1	0	0	20
	50.0	40.0	5.0	5.0	0.0	0.0	100
	28.6	15.7	2.4	5.6	0.0	0.0	12.7
30-34 Year	12	23	15	4	3	0	57
	21.1	40.4	26.3	7.0	5.3	0.0	100
	34.3	45.1	36.6	22.2	33.3	0.0	36.1
35-39 Years	7	15	19	6	2	1	50
	14.0	30.0	38.0	12.0	4.0	2.0	100
	20.0	29.4	46.3	33.3	22.2	25.0	31.6
40-44 Years	1	3	5	7	4	3	23
	4.3	13.0	21.7	30.4	17.4	13.0	100
	2.9	5.9	12.2	38.9	44.4	75.0	14.6
45 Years and Over	0	0	1	0	0	0	1
	0.0	0.0	100.0	0.0	0.0	0.0	100
	0.0	0.0	2.4	0.0	0.0	0.0	0.6
Total	35	51	41	18	9	4	158
	22.2	32.3	25.9	11.4	5.7	2.5	100
	100	100	100	100	100	100	100

FIGURE 6.2:
AGE OF MOTHER

Note: See Table 6.2 for data. Other age groups includes 20-24 years and 45 years and older.

MARITAL STATUS

Over 71 per cent of domiciliary births were to mothers who were married. Within this category, mothers aged 30–34 years accounted for 37.2 per cent of domiciliary births (see Table 6.3).

TABLE 6.3: MOTHER'S MARITAL STATUS BY AGE OF MOTHER

Mother's Marital Status Frequency Row Per Cent Col. Per Cent	Age of Mother						Total
	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40-44 Years	45 Years and Over	
Married	2	12	42	36	20	1	113
	1.8	10.6	37.2	31.9	17.7	0.9	100
	28.6	60.0	73.7	72.0	87.0	100.0	71.5
Never Married	5	7	14	11	3	0	40
	12.5	17.5	35.0	27.5	7.5	0.0	100
	71.4	35.0	24.6	22.0	13.0	0.0	25.3
Separated	0	0	1	2	0	0	3
	0.0	0.0	33.3	66.7	0.0	0.0	100
	0.0	0.0	1.8	4.0	0.0	0.0	1.9
Divorced	0	1	0	1	0	0	2
	0.0	50.0	0.0	50.0	0.0	0.0	100
	0.0	5.0	0.0	2.0	0.0	0.0	1.3
Total	7	20	57	50	23	1	158
	4.4	12.7	36.1	31.6	14.6	0.6	100.0
	100	100	100	100	100	100	100

GESTATIONAL AGE

The average gestational age at delivery for domiciliary births was 40.1 weeks. The majority of births (93.7 per cent) were between 37-41 weeks (see Table 6.4). Over 95 per cent of mothers aged 25–29 years, 30–34 years and over 40 years delivered within this period. Of those delivering over 42 weeks, 60.0 per cent were aged between 35–39 years.

TABLE 6.4: AGE OF MOTHER BY GESTATIONAL AGE AT DELIVERY

Age of Mother Frequency Row Per Cent Col. Per Cent	Gestational Age (weeks)			Total Maternities
	37-41	42 and Over	Total	
20-24 Years	6	1	7	7
	85.7	14.3	100.0	100
	4.1	10.0	4.4	4.4
25-29 Years	19	1	20	20
	95.0	5.0	100.0	100
	12.8	10.0	12.7	12.7
30-34 Year	55	2	57	57
	96.5	3.5	100.0	100
	37.2	20.0	36.1	36.1
35-39 Years	44	6	50	50
	88.0	12.0	100.0	100
	29.7	60.0	31.6	31.6
40-44 Years	23	0	23	23
	100.0	0.0	100.0	100
	15.5	0.0	14.6	14.6
45 Years and Over	1	0	1	1
	100.0	0.0	100.0	100
	0.7	0.0	0.6	0.6
Total	148	10	158	158
	93.7	6.3	100.0	100
	100	100	100	100

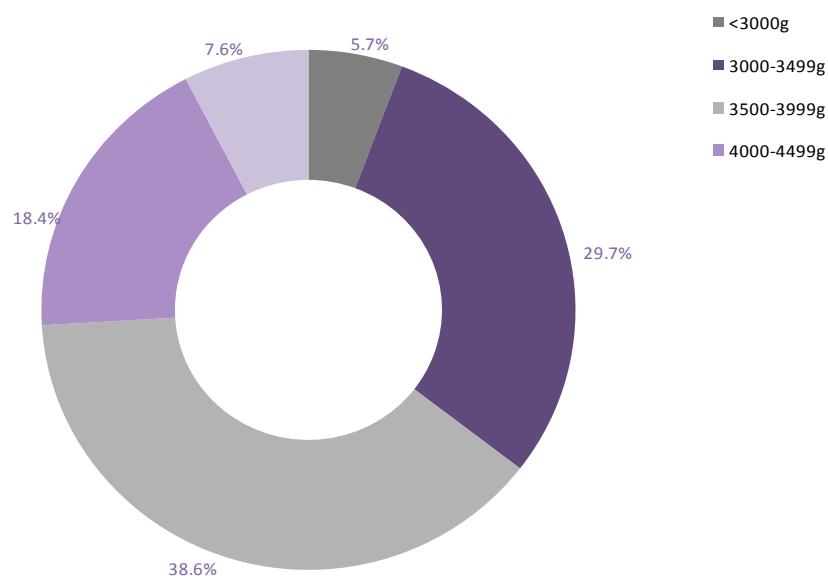
BIRTHWEIGHT

The average birthweight for domiciliary births was over 3,600 grams. All births weighing less than 3,000 grams occurred during weeks 37–41 weeks of gestation (see Table 6.5). Over 38 per cent of births weighed between 3,500–3,999 grams (see Figure 6.3), and of those 95.1 per cent of these occurred within weeks 37–41 of gestation.

TABLE 6.5: BIRTHWEIGHT BY GESTATIONAL AGE AT DELIVERY

Birthweight (grams) Frequency Row Per Cent Col. Per Cent	Gestational Age (weeks)		
	37–41	42 and Over	Total
2000-2499	1 100.0 0.7	0 0.0 0.0	1 100 0.6
2500-2999	8 100.0 5.4	0 0.0 0.0	8 100 5.1
3000-3499	46 97.9 31.1	1 2.1 10.0	47 100 29.7
3500-3999	58 95.1 39.2	3 4.9 30.0	61 100 38.6
4000-4499	26 89.7 17.6	3 10.3 30.0	29 100 18.4
4500 and Over	9 75.0 6.1	3 25.0 30.0	12 100 7.6
Total	148 93.7 100	10 6.3 100	158 100 100

**FIGURE 6.3:
BIRTHWEIGHT GROUPS**



Note: See Table 6.5 for data.

OCCUPATION

Table 6.6 shows that over 28 per cent of domiciliary births were to mothers whose occupation was classified as home duties.

TABLE 6.6: MOTHER'S OCCUPATION BY BIRTHWEIGHT

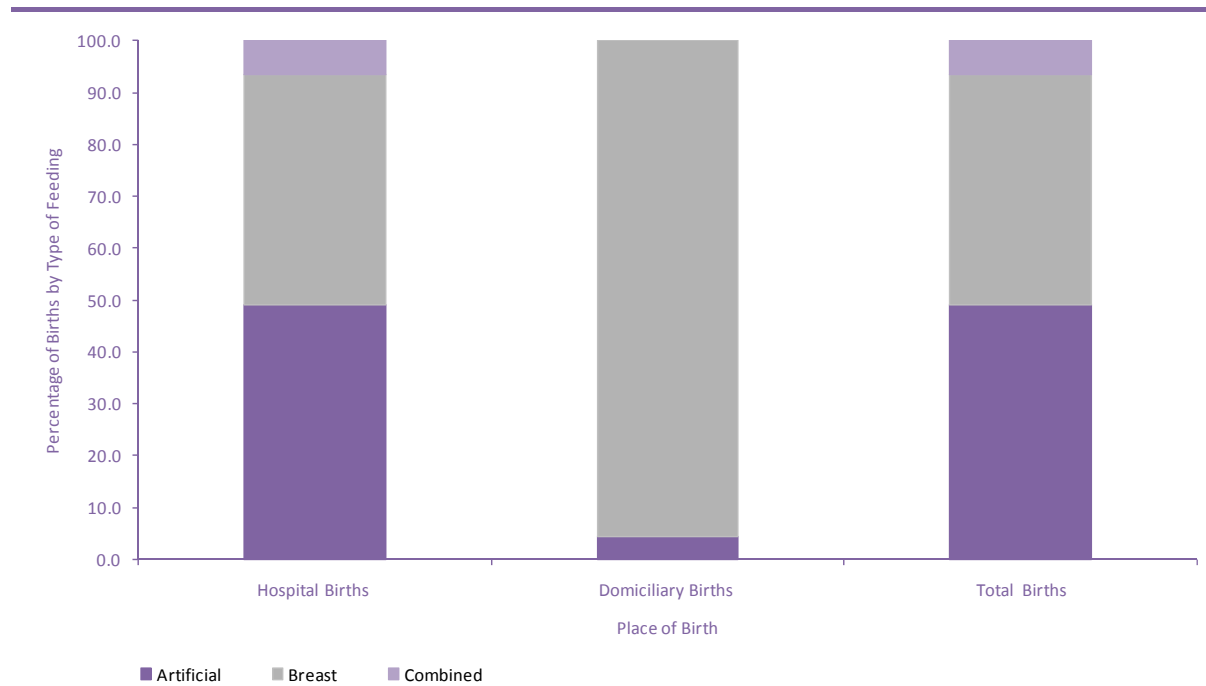
Mother's Occupation Frequency Row Per Cent Col. Per Cent	Birthweight (grams)						Total
	2000-2499	2500-2999	3000-3499	3500-3999	4000-4499	4500 and Over	
Farmers & Farm Managers	0 0.0 0.0	0 0.0 0.0	1 100.0 2.1	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	1 100 0.6
Higher Professional	0 0.0 0.0	1 5.6 12.5	7 38.9 14.9	5 27.8 8.2	3 16.7 10.3	2 11.1 16.7	18 100 11.4
Lower Professional	0 0.0 0.0	2 5.6 25.0	13 36.1 27.7	15 41.7 24.6	5 13.9 17.2	1 2.8 8.3	36 100 22.8
Employers & Managers	0 0.0 0.0	0 0.0 0.0	1 14.3 2.1	1 14.3 1.6	4 57.1 13.8	1 14.3 8.3	7 100 4.4
Salaried Employees	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	1 50.0 1.6	1 50.0 3.4	0 0.0 0.0	2 100 1.3
Intermediate Non-Manual Workers	0 0.0 0.0	2 9.1 25.0	5 22.7 10.6	11 50.0 18.0	1 4.5 3.4	3 13.6 25.0	22 100 13.9
Other Non-Manual Workers	0 0.0 0.0	1 5.9 12.5	6 35.3 12.8	5 29.4 8.2	4 23.5 13.8	1 5.9 8.3	17 100 10.8
Skilled Manual Workers	0 0.0 0.0	0 0.0 0.0	2 66.7 4.3	1 33.3 1.6	0 0.0 0.0	0 0.0 0.0	3 100 1.9
Unemployed	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	2 100.0 3.3	0 0.0 0.0	0 0.0 0.0	2 100 1.3
Not Classifiable	1 20.0 100.0	0 0.0 0.0	2 40.0 4.3	2 40.0 3.3	0 0.0 0.0	0 0.0 0.0	5 100 3.2
Home Duties	0 0.0 0.0	2 4.4 25.0	10 22.2 21.3	18 40.0 29.5	11 24.4 37.9	4 8.9 33.3	45 100 28.5
Total	1 0.6 100	8 5.1 100	47 29.7 100	61 38.6 100	29 18.4 100	12 7.6 100	158 100 100

Note: See Appendix C for a description of the classification system for occupation.

INFANT'S TYPE OF FEEDING

Figure 6.4 compares infant's type of feeding by place of birth; twice as many domiciliary births were breastfed compared with hospital births (95.6 per cent and 44.3 per cent respectively).

FIGURE 6.4:
INFANT'S TYPE OF FEEDING BY PLACE OF BIRTH



Notes: See Appendix G, Table G18 for data. Excludes type of feeding unknown, based on live births and excludes early neonatal deaths.

DOMICILIARY BIRTHS BY MOTHER'S COUNTY OF RESIDENCE

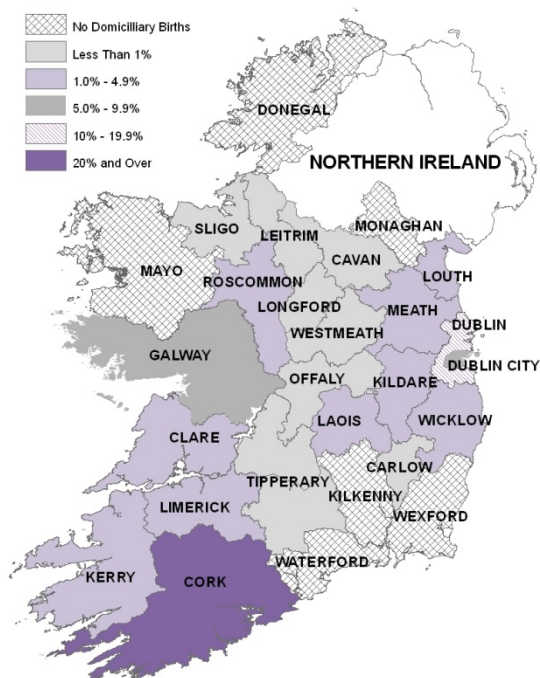
Table 6.7 presents the distribution of domiciliary births by mother's county of residence. Cork had the highest number of domiciliary births at 69 followed by Dublin County at 27. Together, Cork, Dublin County, Galway, Dublin City and Wicklow reported over 76 per cent of the total domiciliary births that occurred in 2008. Figure 6.5 presents a percentage breakdown of domiciliary births by mother's county of residence, with no domiciliary births reported in 6 counties.

TABLE 6.7: DOMICILIARY BIRTHS BY MOTHER'S COUNTY OF RESIDENCE

Mother's County of Residence	Number	Per Cent
Cork	69	43.7
Dublin County	27	17.1
Galway	11	7.0
Dublin City	8	5.1
Wicklow	6	3.8
Other Counties	37	23.4
Total	158	100

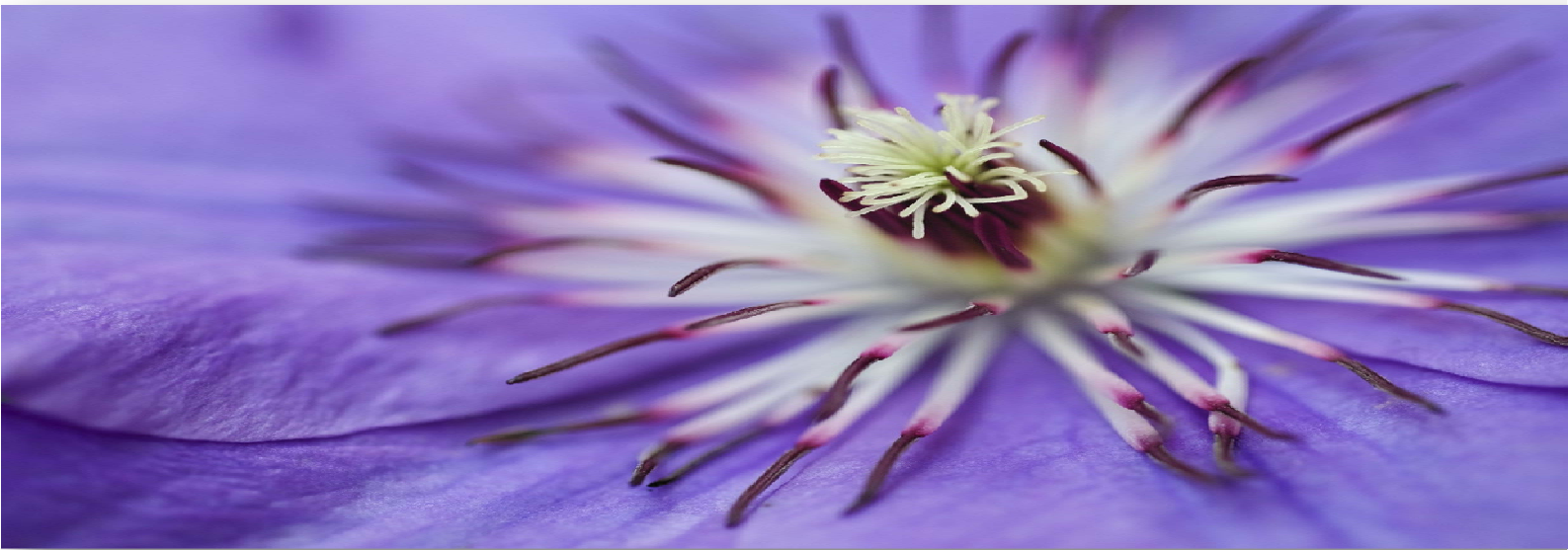
Note: The following counties reported between 1 and 5 domiciliary births in 2008: Clare, Kerry, Kildare, Louth, Laois, Meath, Limerick, Roscommon, Carlow, Cavan, Leitrim, Longford, Offaly, Sligo, Tipperary and Westmeath

**FIGURE 6.5:
DOMICILIARY BIRTHS BY MOTHER'S COUNTY OF RESIDENCE**



Note: See Table 6.7 for data.

APPENDICES



APPENDIX A

DEFINITIONS

This section collates the definitions of the terms used in the analyses for this report.

Age at Death: The age of early neonatal deaths is given in completed hours if the infant survived less than one day and in completed days otherwise.

Antenatal Length of Stay: This is computed as the difference, in days, between a mother's date of admission and her date of delivery. Domiciliary births are not included in tables relating to this variable.

Antepartum and Intrapartum Stillbirths: These refer to stillbirths occurring prior to and during labour respectively.

Birth Rate: The Birth Rate or Crude Birth Rate is the ratio of total live births to total population over a specified period of time. The birth rate is often expressed as the number of live births per 1,000 members of the population in a particular time period (for example one year).

Birthweight: Birthweight is given in grams and hospitals are asked to record the weight within the first hour after birth. In accordance with WHO guidelines, only births weighing 500 grams or more are included in any analysis of NPRS data.

Born Before Arrival (BBA): Where BBA is recorded as place of birth this indicates that an infant was delivered before arrival at hospital.

Cause of Death: This categorisation indicates the principal underlying pathological cause, which in the opinion of the certifier made the greatest contribution to the death of the infant or foetus. In assigning cause of death in the NPRS, the guidelines recommended by the WHO have been followed. A summary of these guidelines is provided in Appendix D. The Tenth Revision of the ICD (ICD-10) came into effect for coding Irish births from 1 January 2005 onwards.

Congenital Anomalies: These are physiological or structural abnormalities that develop at or before birth and are present at the time of birth. Congenital anomalies are those diseases/conditions categorised in *ICD-10*, Chapter XVII, *Congenital Malformations, Deformities and Chromosomal Abnormalities* (Q00.0-Q99.9).

Domiciliary Birth: Domiciliary births are *planned* home births. The vast majority of these are attended by an independent midwife and are not associated with a hospital. In 2008, there were 58 births under hospital administered home birth schemes. For the purposes of this report these births are treated as hospital births due to their small numbers.

Early Neonatal Death (ENND) and Early Neonatal Mortality Rate: An early neonatal death refers to the death of a live born infant during the first week of life. The **early neonatal mortality rate** is calculated as follows:

$$\frac{\text{Number of Early Neonatal Deaths} \times 1,000}{\text{Total Number of Live Births}}$$

Hospital Admission Booked or Unbooked: This indicates whether a mother's admission to hospital for delivery was booked or unbooked prior to delivery. Domiciliary births are not included in the tables relating to this variable.

Immunity to Rubella: An affirmative answer should be recorded only where there is documented evidence of a rubella antibody test. A history of rubella or previous immunisation is not sufficient.

Length of Infant's Stay: This is computed as the difference, in days, between the infant's date of birth and the date of the infant's discharge from hospital. A return of 'not stated' for this variable may indicate that the completed form was returned before the infant had been discharged. Where an infant was transferred to another hospital, the date of the transfer is given as the date of the infant's discharge. Domiciliary births and perinatal deaths are not included in the tables relating to this variable.

Live Birth: A live birth is defined as the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. In accordance with WHO guidelines, only live births weighing 500 grams or more are included in any analysis of NPRS data.

Marital Status: Five categories are used:

1. Married
2. Never Married (classified as 'Single' marital status in discussion in this report)
3. Widowed
4. Separated; includes, deserted, legally separated, Church decree of nullity and otherwise separated
5. Divorced.

Method of Delivery: Six categories are used:

1. Spontaneous cephalic delivery
2. Breech delivery, spontaneous, with or without forceps to after-coming head, breech extraction
3. Forceps delivery
4. Vacuum extraction²⁴
5. Caesarean section
6. Other Specified and Combined (for example, combination of spontaneous delivery followed by a vacuum extraction or caesarean section).

Mother's and Father's Nationality: This indicates place of birth for mother and father. This definition is for the sole purpose of giving the necessary directions for the completion of the Birth Notification Form and is not a legal definition. Details are given in Appendix F.

Mother's and Father's Occupation: Occupations are coded and grouped, with minor modifications, according to the system of socio-economic groupings as used by the Central Statistics Office in the 1991 *Census of Population*, Volume 6. Details are given in Appendix C.

Parity: Maternal parity indicates a mother's total number of previous live births and stillbirths.

Primiparous: Women who have had no previous pregnancy resulting in a live birth or stillbirth.

Multiparous: Women who have had at least one previous pregnancy resulting in a live birth or stillbirth.

Perinatal Death and Perinatal Mortality Rate (PMR): Perinatal deaths include stillbirths and early neonatal deaths. The **perinatal mortality rate (PMR)** is calculated as follows:

$$\frac{\text{Number of Stillbirths and Early Neonatal Deaths} \times 1,000}{\text{Total Number of Live Births and Stillbirths}}$$

In this report a second perinatal mortality rate has been calculated excluding all stillbirths and early neonatal deaths due to congenital anomalies. This **adjusted rate (Adjusted PMR)** to some extent removes those perinatal events where death was unavoidable, but no attempt has been made to exclude only invariably fatal congenital anomalies.

Perinatal Period: For the purposes of NPRS perinatal period covers pregnancy, delivery and ends seven completed days after birth.

Period of Gestation: Gestational age at delivery is recorded in completed weeks, and is measured or estimated according to the best method available in each case.

²⁴ Also known as Ventouse Deliveries (Source: World Health Organization, 2005, *International Statistical Classification of Diseases and Related Health Problems*, 10th Revision, Vol. 1. Geneva: World Health Organization).

Plurality: The number of births resulting from a single pregnancy.

Singleton birth: Results when one baby is born from a single pregnancy

Multiple births: Results when more than one baby is born from a single pregnancy

Post-mortem: This indicates whether or not a post-mortem examination was performed. In some cases a return of 'not stated' may be due to the notification form being returned prior to post-mortem.

Postnatal Length of Stay: This is computed as the difference, in days, between the date of delivery and the date of the mother's discharge from hospital. A return of 'not stated' for this variable may indicate that the completed form was returned before the mother had been discharged. Domiciliary births are not included in tables relating to this variable.

Size of Maternity Unit: Size in this context refers to the number of live births and stillbirths occurring during the year.

Stillbirth and Stillbirth Rate: Foetal death is defined as death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy. A foetal death is indicated by the fact that, after such separation, the foetus 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. Following WHO guidelines, a stillbirth in this report refers to the death of a foetus weighing at least 500 grams. The **stillbirth rate** is given as follows:

$$\frac{\text{Number of Stillbirths} \times 1,000}{\text{Total Number of Live Births and Stillbirths}}$$

Time since Last Birth: This variable gives the time, grouped into yearly intervals, since the mother's last live birth or stillbirth.

Twinning Rate: This is given by:

$$\frac{\text{Number of Twin Maternities} \times 1,000}{\text{Total Number of Maternities}}$$

Twin maternities, which resulted in stillbirths, are included in the calculation of the twinning rate.

Transfer of Infants: This identifies infants who were transferred to another hospital for medical reasons.

Type of Feeding: This indicates whether artificial feeding, breastfeeding, or a combination of both was being used at the time of discharge. Type of feeding is based on live births only (excluding early neonatal deaths).

APPENDIX B

COPY OF PART 3 OF THE BIRTH NOTIFICATION FORM USED BY NPRS

The following format was used for births in 2008.

Notification of Birth - To: National Perinatal Reporting System, The Economic & Social Research Institute, Whitaker Square, Sir John Rogerson's Quay, Dublin 2

TYPE OF BIRTH (Live = 1, Still = 2) 1 PLACE OF BIRTH (Hospital = 1, SBA = 2, Domiciliary = 3) 2 NAME AND ADDRESS OF HOSPITAL _____

HOSPITAL NO. 3 _____ CASE NO. 6 _____ Y Y Y Y _____

INFANT'S DETAILS

DATE OF BIRTH (DDMMYYYY) 14 _____

TIME OF BIRTH _____

IF MULTIPLE BIRTH ORDER OF BIRTH No. 22 of 23

SEX (Male = 1, Female = 2, Indeterminate = 3) 24

BIRTHWEIGHT 25 _____ GRAMMES

PERIOD OF GESTATION 29 _____ WEEKS

FATHER'S DETAILS

COUNTRY 31 _____

COUNTRY 34 _____

NATIONALITY 38 _____

OCCUPATION 42 _____

DATE OF BIRTH (DDMMYYYY) 44 _____

MOTHER'S DETAILS

COUNTRY 52 _____

COUNTRY 55 _____

NATIONALITY 59 _____

OCCUPATION 63 _____

DATE OF BIRTH (DDMMYYYY) 65 _____

MARITAL STATUS (Married = 1, Never Married = 2, Widowed = 3, Marital Status Separated = 4, Divorced = 5) 73

DATE OF PRESENT MARRIAGE (DDMMYYYY) 74 _____

DATE OF LAST BIRTH (live or still) (DDMMYYYY) 82 _____

NO. OF PREVIOUS LIVE BIRTHS 90

CHILDREN STILL LIVING 92

STILLBIRTHS 94

SPONTANEOUS ABORTIONS 96

PERINATAL DEATH

TYPE OF DEATH (Early Neonatal = 1, Stillbirth = 2) 98

WAS AUTOPSY PERFORMED (Yes = 1, No = 2) 99

AGE AT DEATH 100 _____ DAYS 101 _____ HOURS

PLACE OF DEATH 103 _____

IF STILLBIRTH DID DEATH OCCUR BEFORE LABOUR (1) DURING LABOUR (2) NOT KNOWN (3) 106 _____

CAUSE OF DEATH

MAIN DISEASE OR CONDITION IN FETUS OR INFANT _____ 107 _____

OTHER DISEASES OR CONDITIONS IN FETUS OR INFANT _____ 112 _____

MOTHER'S HEALTH

ANTENATAL CARE THIS PREGNANCY (Hospital / Obstetrician = 1, G.P. Only = 2, Combined = 3, None = 4, Misc. Only = 5) 117

DATE OF FIRST VISIT TO DOCTOR DURING PREGNANCY (DDMMYYYY) 118 _____

DATE OF FIRST VISIT TO HOSPITAL DURING PREGNANCY (DDMMYYYY) 126 _____

WAS MOTHER IMMUNE TO RUBELLA (Yes = 1, No = 2, Not Known = 3) 134

METHOD OF DELIVERY (Spontaneous = 1, Breech & Forceps = 2, Forceps = 3, Vac. Extraction = 4, Caesarean Sec. = 5, Other = 6) 135

MAIN MATERNAL DISEASE OR CONDITION AFFECTING FETUS OR INFANT _____ 136 _____

OTHER MATERNAL DISEASES OR CONDITIONS AFFECTING FETUS OR INFANT _____ 141 _____

INFANT'S HEALTH

TYPE OF FEEDING (Artificial = 1, Breast = 2, Combined = 3) 146

WAS BCG ADMINISTERED (Yes = 1, No = 2) 147

MAIN DISEASE OR CONGENITAL MALFORMATION AFFECTING INFANT _____ 148 _____

OTHER DISEASES OR CONGENITAL MALFORMATIONS AFFECTING INFANT _____ 153 _____

HOSPITAL

WAS ADMISSION BOOKED (Yes = 1, No = 2) 158

DATE OF MOTHER'S ADMISSION (DDMMYYYY) 159 _____

DATE OF MOTHER'S DISCHARGE (DDMMYYYY) 167 _____

DATE OF INFANT'S DISCHARGE (DDMMYYYY) 175 _____

WAS INFANT TRANSFERRED TO OTHER HOSPITAL FOR MEDICAL REASONS (Yes = 1, No = 2) 183

IF 'YES', NAME OF HOSPITAL _____ 184 _____

GENERAL PRACTITIONER ATTENDED BY MOTHER

Signature _____ Date _____

APPENDIX C

CLASSIFICATION OF OCCUPATION

Occupations have been coded and classified in a set of socio-economic groups according to a system devised by the CSO. The final CSO category of 'Unknown' has been differentiated into five distinct groups for the purposes of the Perinatal Reporting System. These are 'Unemployed', 'Not Classifiable', 'Not Applicable', 'Home Duties', and 'Not Stated'. Occupation is coded as unemployed when occupation is given as unemployed and where no previous occupation is stated. If a previous occupation is stated then occupation is coded to the relevant category. 'Not Classifiable' has been used to categorise indecipherable, unclear, or unlisted occupations where efforts to clarify the information have failed. 'Home Duties' is entered where occupation has been entered as 'full-time mother/father/parent', 'stay at home mother/father/parent', 'housewife', 'home duties', etc. 'Not Stated' applies to those cases where either the mother's or father's occupation has been left blank or has been recorded as 'unknown'.

Under Father's occupation, the following applies:

'Not Applicable' is entered when the marital status of the mother has been given as never married, widowed, separated or divorced, and where father's occupation has been left blank. 'Not Stated' applies to those cases where the marital status of the mother is recorded as either married or not stated, and where father's occupation has been left blank or has been recorded as 'unknown'. In either case, if an occupation is given for the father then the appropriate occupational code has been used.

The full list of socio-economic groups used in this report is as follows:

- Farmers & Farm Managers
- Other Agricultural Occupations & Fishermen
- Higher Professional
- Lower Professional
- Employers & Managers
- Salaried Employees
- Intermediate Non-Manual Workers
- Other Non-Manual Workers
- Skilled Manual Workers
- Semi-Skilled Manual Workers
- Unskilled Manual Workers
- Unemployed
- Not Classifiable
- Not Applicable (Father's Occupation Only)
- Home Duties
- Not Stated.

APPENDIX D

CAUSE OF DEATH CLASSIFICATION

The main cause of death has been determined according to the guidelines set out by the WHO in the Tenth Revision of the ICD.²⁵ Briefly, the principal coding criteria are as follows.

The main cause of death as far as possible should indicate the pathological condition of the infant or foetus, which in the opinion of the certifier made the greatest contribution towards the death.

The following rules are extracted from *ICD-10, Second Edition, 2005, 4. Rules and guidelines for mortality and morbidity coding*. These rules have been applied to cause of death coding in the NPRS data set as follows:

Section (A) – main disease or condition in foetus or infant

Section (B) – other diseases or conditions in foetus or infant

Section (C) – main maternal disease or condition affecting foetus or infant

Section (D) – other maternal disease or condition affecting foetus or infant.

Rule P1. Mode of death or prematurity entered in section (a):

If heart or cardiac failure, asphyxia or anoxia (any condition in P20.-, P21.-) or prematurity (any condition in P07.-) is entered in section (a) and other conditions of the infant or foetus are entered in either section (a) or section (b), code the first-mentioned of these other conditions as if it had been entered alone in section (a) and code the condition actually entered in section (a) as if it had been entered in section (b).

Rule P2. Two or more conditions entered in sections (a) or (c):

If two or more conditions are entered in section (a) or section (c), code the first-mentioned of these as if it had been entered alone in section (a) or (c) and code the others as if they had been entered in sections (b) or (d).

²⁵ World Health Organization, 2005, *International Statistical Classification of Diseases and Related Health Problems, 10th Revision*, Vols. 1- 3. Geneva: World Health Organization

Rule P3. No entry in sections (a) or (c)

If there is no entry in section (a) but there are conditions of the infant or foetus entered in section (b), code the first-mentioned of these as if it had been entered in section (a); if there are no entries in either section (a) or section (b), either code P95 (Foetal death of unspecified cause) for stillbirths or code P96.9 (Condition originating in the perinatal period, unspecified) for early neonatal deaths should be used for section (a).

Similarly, if there is no entry in section (c) but there are maternal conditions entered in section (d), code the first-mentioned of these as if it had been entered in section (c); if there are no entries in either section (c) or section (d) use some artificial code, e.g. xxx.x for section (c) to indicate that no maternal condition was reported.

Rule P4. Conditions entered in wrong section

If a maternal condition (i.e. conditions in P00-P04) is entered in section (a) or section (b), or if a condition of the infant or foetus is entered in section (c) or section (d), code the conditions as if they had been entered in the respective correct section.

For the purpose of the cause of death tables included in this report, one further criterion has been applied. Where no infant's condition is given then, where a specific maternal condition is given (any condition in P00-P04), the main cause of death is classified under the maternal condition.

Table D1 summarises these rules.

TABLE D1
Cause of Death Coding Rules

ICD-10 Rule	Cause of Death as recorded on the Birth Notification Form				Action
	Section A	Section B	Section C	Section D	
	Main disease or condition in foetus or infant	Other disease or condition in foetus or infant	Main maternal disease or condition affecting foetus or infant	Other maternal disease or condition affecting foetus or infant	
Rule 1	Heart or cardiac failure, asphyxia, anoxia, prematurity P20.-, P21.- or P07.-)	Other condition	No entry	No entry	Code the stated 'other condition' in section A and move condition entered in section A to section B.
Rule 2	Two or more conditions listed	No entry	Two or more conditions listed	No entry	Code the first mentioned condition in sections A and C respectively and code the second mentioned conditions in sections B and D respectively.
Rule 3	No entry	Condition entered	No entry	Condition entered	Code the first mentioned condition in section B to section A and the first mentioned condition in section D to section C.
	No entry	No entry	No entry	No entry	Code 'Foetal death of unspecified cause' (P95) for stillbirths or 'Conditions originating in the perinatal period, unspecified' (P96.9) for early neonatal deaths in section A.
Rule 4	Maternal condition entered (P00-P04)	Maternal condition entered (P00-P04)	Infant condition entered	Infant condition entered	Code maternal conditions in sections C and D respectively. Code infant conditions in sections A and B respectively.
Additional Rule	No entry	No entry	Maternal condition (P00-P04)	No entry	Code maternal condition to section A.

Table D2 illustrates the main chapter blocks relating to cause of death categories in this report.

TABLE D2

ICD 10, Cause of Death Codes

ICD-10 CODE	CAUSE OF DEATH
P00–P04	Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery
P05–P08	Disorders related to length of gestation and foetal growth
P10–P15	Birth trauma
P20–P29	Respiratory and cardiovascular disorders specific to the perinatal period
P35–P39	Infections specific to the perinatal period
P50–P61	Haemorrhagic and haematological disorders of foetus and newborn
P70–P74	Transitory endocrine and metabolic disorders specific to foetus and newborn
P75–P78	Digestive system disorders of foetus and newborn
P80–P83	Conditions involving the integument and temperature regulation of foetus and newborn
P90–P96	Other disorders originating in the perinatal period
Q00–Q07	Congenital malformations of the nervous system
Q10–Q18	Congenital malformations of eye, ear, face and neck
Q20–Q28	Congenital malformations of the circulatory system
Q30–Q34	Congenital malformations of the respiratory system
Q35–Q37	Cleft lip and cleft palate
Q38–Q45	Other congenital malformations of the digestive system
Q50–Q56	Congenital malformations of genital organs
Q60–Q64	Congenital malformations of the urinary system
Q65–Q79	Congenital malformations and deformations of the musculoskeletal system
Q80–Q89	Other congenital malformations
Q90–Q99	Chromosomal abnormalities, not elsewhere classified

All other codes (A00–O99, R00–Z99) have been classified in the category ‘all other causes’.

APPENDIX E

CLASSIFICATION OF COUNTY OF RESIDENCE

The following codes are applied to mother's and father's county of residence. Where a Dublin postal code, such as Dublin 13, is entered then a code of 10 is applied for Dublin City. Where there is no postal code and Dublin is recorded then a code of 11 is applied for Dublin County. Where a mother's or father's county of residence is unknown the code 99 is applied. The code 90 is applied where the address given is outside the Republic of Ireland.

10	Dublin City	50	Donegal
11	Dublin County	51	Sligo
12	Kildare	52	Leitrim
13	Wicklow	60	Carlow
20	Laois	61	Kilkenny
21	Offaly	62	Tipperary South Riding
22	Longford	63	Waterford
23	Westmeath	64	Wexford
30	Clare	70	Cork
31	Limerick	71	Kerry
32	Tipperary North Riding	80	Galway
40	Meath	81	Mayo
41	Cavan	82	Roscommon
42	Monaghan	90	Other – all places outside Republic of Ireland
43	Louth	99	Not Stated

Note: For the purposes of this report Tipperary North Riding and Tipperary South Riding have been combined for County Tipperary

APPENDIX F

CLASSIFICATION OF NATIONALITY

Nationality for mother and father is defined by the place of their birth. This definition is for the sole purpose of giving the necessary directions for the completion of the Birth Notification Form and is not a legal definition.

Nationalities have been coded and classified into a set of groups according to a system devised by the CSO.

Country groupings are as follows:

Ireland includes the following:

Ireland
Irish American
Irish English
Irish European
Irish Other

UK includes the following:

England
Great Britain
Northern Ireland
Scotland
Wales

EU 15 (excluding Ireland and the UK) includes the following:

Austria	Italy
Belgium	Luxembourg
Denmark	Netherlands
Finland	Portugal
France	Spain
Germany	Sweden
Greece	

EU 15 to EU 27 accession states includes the following:

Bulgaria	Lithuania
Cyprus	Malta
Czech Republic	Poland
Estonia	Slovakia
Hungary	Slovenia
Latvia	Romania

Rest of Europe includes the following:

Andorra	Jersey
Armenia	Liechtenstein
Azerbaijan	Macedonia, The Former Yugoslav Republic of,
Belarus	Moldova, Republic of
Bosnia and Herzegovina	Monaco
Croatia	Norway
Faroe Islands	Russian Federation
Georgia	San Marino
Gibraltar	Switzerland
Guernsey	Turkey
Iceland	Ukraine
Isle of Man	Vatican City
	Yugoslavia, Federal Republic of.

Africa includes the following:

Algeria	Malawi
Angola	Mali
Benin	Mauritania
Botswana	Mauritius
Burkina Faso	Mayotte
Burundi	Morocco
Cameroon	Mozambique
Cape Verde	Namibia
Central African Republic	Niger
Chad	Nigeria
Comoros	Reunion
Congo	Rwanda
Congo, The Democratic Republic of the	Saint Helena
Cote d'Ivoire	Sao Tome and Principe
Djibouti	Senegal
Egypt	Seychelles
Equatorial Guinea	Sierra Leone
Eritrea	Somalia
Ethiopia	South Africa
Gabon	Sudan
Gambia	Swaziland
Ghana	Tanzania, United Republic of
Guinea	Togo
Guinea-Bissau	Tunisia
Kenya	Uganda
Lesotho	Western Sahara
Liberia	Zambia
Libyan Arab Jamahiriya	Zimbabwe
Madagascar	

Asia includes the following:

Afghanistan	Macao
Bahrain	Malaysia
Bangladesh	Maldives
Bhutan	Mongolia
British Indian Ocean Territory	Myanmar
Brunei Darussalam	Nepal
Cambodia	Oman
China	Pakistan
East Timor	Palestinian Territory, Occupied
Hong Kong	Philippines
India	Qatar
Indonesia	Saudi Arabia
Iran, Islamic Republic of	Singapore
Iraq	Sri Lanka
Israel	Syrian Arab Republic
Japan	Taiwan, Province of China
Jordan	Tajikistan
Kazakhstan	Thailand
Korea, Democratic People's Republic of	Turkmenistan
Korea, Republic of	United Arab Emirates
Kuwait	Uzbekistan
Kyrgyzstan	Vietnam
Lao People's Democratic Republic	Yemen
Lebanon	

America includes the following:

Anguilla	Guyana
Antigua and Barbuda	Haiti
Argentina	Honduras
Aruba	Jamaica
Bahamas	Martinique
Barbados	Mexico
Belize	Montserrat
Bermuda	Netherlands Antilles
Bolivia	Nicaragua
Brazil	Panama
Canada	Paraguay
Cayman Islands	Peru
Chile	Puerto Rico
Colombia	Saint Kitts and Nevis
Costa Rica	Saint Lucia
Cuba	Saint Pierre and Miquelon
Dominica	Saint Vincent and the Grenadines
Dominican Republic	Suriname
Ecuador	Trinidad and Tobago
El Salvador	Turks and Caicos Islands
Falkland Islands (Malvinas)	United States
French Guiana	Uruguay
Greenland	Venezuela
Grenada	Virgin Islands, British
Guadeloupe	Virgin Island, US.
Guatemala	

Australia includes the following:

Australia

New Zealand and Other Oceania includes the following:

American Samoa	Niue
Antarctica	Norfolk Island
Bouvet Island	Northern Mariana Islands
Christmas Island	Palau
Cocos (Keeling) Islands	Papua New Guinea
Cook Islands	Pitcairn
Fiji	Samoa
French Polynesia	Solomon Islands
French Southern Territories	South Georgia and the South Sandwich Islands
Guam	Svalbard and Jan Mayen
Heard Island and McDonald Islands	Tokelau
Kiribati	Tonga
Marshall Islands	Tuvalu
Micronesia, Federated States of	United States Minor Outlying Islands
Nauru	Vanuatu
New Caledonia	Wallis and Futuna
New Zealand	

Multi-Nationality includes the following:

Mixed/Multi-Nationality (stated as so).

No Nationality:

Stated as so.

Not Stated:

Where nationality is not provided.

Not Applicable:

This applies to father's nationality only. Where mother's marital status is stated as 'never married', 'widowed', 'separated' or 'divorced' the General Register Office does not require father's details to register the birth, and as such this information is generally not provided.

All Other Nationalities:

Where nationality is not recorded to any category listed above.

APPENDIX G

SOURCE DATA FOR FIGURES

TABLE G1: PERCENTAGE DISTRIBUTION OF TOTAL BIRTHS BY MOTHER'S MARITAL STATUS, 2004–2008

Marital Status	2004	2005	2006	2007	2008
Married	67.7	67.6	66.8	66.4	66.1
Never Married	30.5	30.5	31.4	31.7	32.3
Widowed	0.1	0.1	0.2	0.1	0.1
Separated	1.2	1.2	1.1	1.1	0.9
Divorced	0.4	0.5	0.6	0.6	0.6

TABLE G2: MOTHER'S COUNTY OF RESIDENCE BY MOTHER'S MARITAL STATUS, TOTAL BIRTHS

Mother's County of Residence	Mother's Marital Status						
	Married	Never Married	Widowed	Separated	Divorced	Not Stated	Total
	Frequency						
	Row Per Cent						
	Col. Per Cent						
Carlow	681	376	2	7	10	0	1,076
	63.3	34.9	0.2	0.7	0.9	0.0	100
	1.4	1.5	2.6	1.0	2.1	0.0	1.4
Cavan	892	336	2	18	13	1	1,262
	70.7	26.6	0.2	1.4	1.0	0.1	100
	1.8	1.4	2.6	2.6	2.7	1.6	1.7
Clare	1,306	525	1	7	3	1	1,843
	70.9	28.5	0.1	0.4	0.2	0.1	100
	2.6	2.2	1.3	1.0	0.6	1.6	2.4
Cork	5,915	2,354	8	81	68	1	8,427
	70.2	27.9	0.1	1.0	0.8	0.0	100
	11.8	9.7	10.4	11.8	14.1	1.6	11.1
Donegal	1,469	730	6	26	24	1	2,256
	65.1	32.4	0.3	1.2	1.1	0.0	100
	2.9	3.0	7.8	3.8	5.0	1.6	3.0
Dublin City	8,715	6,074	8	140	81	24	15,042
	57.9	40.4	0.1	0.9	0.5	0.2	100
	17.5	24.9	10.4	20.3	16.8	37.5	19.9
Dublin County	3,967	1,569	3	50	40	9	5,638
	70.4	27.8	0.1	0.9	0.7	0.2	100
	7.9	6.4	3.9	7.3	8.3	14.1	7.5
Galway	3,030	1,071	4	34	24	0	4,163
	72.8	25.7	0.1	0.8	0.6	0.0	100
	6.1	4.4	5.2	4.9	5.0	0.0	5.5
Kerry	1,425	618	5	23	6	0	2,077
	68.6	29.8	0.2	1.1	0.3	0.0	100
	2.9	2.5	6.5	3.3	1.2	0.0	2.7
Kildare	2,754	1,220	2	24	12	1	4,013
	68.6	30.4	0.0	0.6	0.3	0.0	100
	5.5	5.0	2.6	3.5	2.5	1.6	5.3
Kilkenny	991	397	0	8	9	0	1,405
	70.5	28.3	0.0	0.6	0.6	0.0	100
	2.0	1.6	0.0	1.2	1.9	0.0	1.9
Laois	895	464	0	6	2	0	1,367
	65.5	33.9	0.0	0.4	0.1	0.0	100
	1.8	1.9	0.0	0.9	0.4	0.0	1.8
Leitrim	387	123	2	6	5	0	523
	74.0	23.5	0.4	1.1	1.0	0.0	100
	0.8	0.5	2.6	0.9	1.0	0.0	0.7
Limerick	2,052	1,121	2	30	8	1	3,214
	63.8	34.9	0.1	0.9	0.2	0.0	100
	4.1	4.6	2.6	4.4	1.7	1.6	4.3
Longford	515	200	3	11	3	0	732
	70.4	27.3	0.4	1.5	0.4	0.0	100
	1.0	0.8	3.9	1.6	0.6	0.0	1.0
Louth	1,213	742	4	30	19	1	2,009
	60.4	36.9	0.2	1.5	0.9	0.0	100
	2.4	3.0	5.2	4.4	4.0	1.6	2.7
Mayo	1,362	497	3	11	23	1	1,897
	71.8	26.2	0.2	0.6	1.2	0.1	100
	2.7	2.0	3.9	1.6	4.8	1.6	2.5

TABLE G2: MOTHER'S COUNTY OF RESIDENCE BY MOTHER'S MARITAL STATUS, TOTAL BIRTHS (CONT'D.)

Mother's County of Residence Frequency Row Per Cent Col. Per Cent	Mother's Marital Status						
	Married	Never Married	Widowed	Separated	Divorced	Not Stated	Total
Meath	2,594	951	1	37	31	1	3,615
	71.8	26.3	0.0	1.0	0.9	0.0	100
	5.2	3.9	1.3	5.4	6.4	1.6	4.8
Monaghan	617	240	0	8	13	0	878
	70.3	27.3	0.0	0.9	1.5	0.0	100
	1.2	1.0	0.0	1.2	2.7	0.0	1.2
Offaly	833	389	3	8	3	1	1,237
	67.3	31.4	0.2	0.6	0.2	0.1	100
	1.7	1.6	3.9	1.2	0.6	1.6	1.6
Roscommon	684	206	2	9	4	0	905
	75.6	22.8	0.2	1.0	0.4	0.0	100
	1.4	0.8	2.6	1.3	0.8	0.0	1.2
Sligo	662	288	2	4	5	0	961
	68.9	30.0	0.2	0.4	0.5	0.0	100
	1.3	1.2	2.6	0.6	1.0	0.0	1.3
Tipperary	1,605	829	6	23	9	4	2,476
	64.8	33.5	0.2	0.9	0.4	0.2	100
	3.2	3.4	7.8	3.3	1.9	6.3	3.3
Waterford	1,195	775	1	25	12	1	2,009
	59.5	38.6	0.0	1.2	0.6	0.0	100
	2.4	3.2	1.3	3.6	2.5	1.6	2.7
Westmeath	997	489	1	8	9	1	1,505
	66.2	32.5	0.1	0.5	0.6	0.1	100
	2.0	2.0	1.3	1.2	1.9	1.6	2.0
Wexford	1,497	957	3	31	30	2	2,520
	59.4	38.0	0.1	1.2	1.2	0.1	100
	3.0	3.9	3.9	4.5	6.2	3.1	3.3
Wicklow	1,657	804	3	23	14	12	2,513
	65.9	32.0	0.1	0.9	0.6	0.5	100
	3.3	3.3	3.9	3.3	2.9	18.8	3.3
Other	10	11	0	0	1	0	22
	45.5	50.0	0.0	0.0	4.5	0.0	100
	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Not Stated	0	1	0	0	0	1	2
	0.0	50.0	0.0	0.0	0.0	50.0	100
	0.0	0.0	0.0	0.0	0.0	1.6	0.0
Total	49,920	24,357	77	688	481	64	75,587
	66.0	32.2	0.1	0.9	0.6	0.1	100
	100	100	100	100	100	100	100

Note: See Appendix E for details of county of residence classification.

TABLE G3: PERCENTAGE DISTRIBUTION OF TOTAL BIRTHS BY MOTHER'S NATIONALITY, 2004–2008

Mother's Nationality	2004	2005	2006	2007	2008
Ireland	84.4	83.5	81.6	79.3	77.5
UK	3.1	3.4	3.3	3.0	2.7
EU Accession States*	0.9	1.9	3.9	7.2	9.3
Africa	5.6	4.4	4.0	3.6	3.4
Asia	2.5	2.9	3.1	3.6	3.7

Notes: Percentages calculated for the five most frequent nationalities in 2008. 'Not Stated' values are not included in the calculation of percentages.

*Please note that the following EU Accession States joined the EU in 2004, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia. Bulgaria and Romania joined the EU 2007.

See Appendix F for a description of the classification system for nationality.

TABLE G4: MOTHER'S AVERAGE AGE BY MOTHER'S NATIONALITY, TOTAL BIRTHS

Mother's Nationality	Average Age in Years
Ireland	31.6
UK	31.7
EU15 (excluding Ireland & UK)	32.6
EU15 to EU27 Accession States	27.5
Rest of Europe	29.6
Africa	30.7
Asia	30.4
America	31.4
Australia	33.5
Total	31.2

Notes: Average ages calculated for nationalities with greater than 100 births.
See Appendix F for a description of the classification system for nationality.

TABLE G5: PERCENTAGE DISTRIBUTION OF TOTAL BIRTHS TO PRIMIPAROUS WOMEN BY MATERNAL AGE, 2004 AND 2008

Maternal Age (years)	2004	2008
<20 Years	9.1	6.9
20-24 Years	20.2	19.3
25-29 Years	26.9	28.4
30-34 Years	31.3	30.9
35-39 Years	10.7	12.3
40+ Years	1.9	2.2
Total	100	100

TABLE G6: PERCENTAGE DISTRIBUTION OF TOTAL BIRTHS TO MULTIPAROUS WOMEN BY MATERNAL AGE, 2004 AND 2008

Maternal Age (years)	2004	2008
<20 Years	0.7	0.5
20-24 Years	8.8	7.2
25-29 Years	21.1	20.4
30-34 Years	37.0	36.0
35-39 Years	27.1	29.9
40+ Years	5.3	5.9
Total	100	100

TABLE G7: AGE OF MOTHER BY MATERNAL PARITY, TOTAL MATERNITIES

Age of Mother Frequency Row Percent	Maternal Parity									Total
	0	1	2	3	4	5	6	More than 6	Not Stated	
< 20 Years	2,175	201	12	1	1	0	0	0	0	2,390
	91.0	8.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	100
20-24 Years	6,153	2,323	608	119	27	7	1	1	0	9,239
	66.6	25.1	6.6	1.3	0.3	0.1	0.0	0.0	0.0	100
25-29 Years	8,985	5,667	2,081	661	233	68	27	4	4	17,730
	50.7	32.0	11.7	3.7	1.3	0.4	0.2	0.0	0.0	100
30-34 Years	9,691	8,958	4,329	1,419	441	154	72	49	4	25,117
	38.6	35.7	17.2	5.6	1.8	0.6	0.3	0.2	0.0	100
35-39 Years	3,795	5,426	4,477	1,885	603	183	82	96	3	16,550
	22.9	32.8	27.1	11.4	3.6	1.1	0.5	0.6	0.0	100
40+ Years	657	886	701	497	221	109	48	47	0	3,166
	20.8	28.0	22.1	15.7	7.0	3.4	1.5	1.5	0.0	100
Not Stated	24	11	10	2	1	1	0	0	1	50
	48.0	22.0	20.0	4.0	2.0	2.0	0.0	0.0	2.0	100
Total	31,480	23,472	12,218	4,584	1,527	522	230	197	12	74,242
	42.4	31.6	16.5	6.2	2.1	0.7	0.3	0.3	0.0	100

TABLE G8: BIRTHWEIGHT GROUPS FOR PRIMIPAROUS WOMEN

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Birthweight	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
All Births									
500-749	101	67	34	336.6	30	447.8	633.7	610.5	83
750-999	92	80	12	130.4	7	87.5	206.5	170.5	80
1000-1249	110	93	17	154.5	6	64.5	209.1	171.4	88
1250-1499	155	144	11	71.0	4	27.8	96.8	66.7	130
1500-1999	501	472	29	57.9	5	10.6	67.9	43.0	385
2000-2499	1,298	1,275	23	17.7	9	7.1	24.7	18.6	1,127
2500-2999	4,387	4,368	19	4.3	5	1.1	5.5	4.3	4,198
3000-3499	11,200	11,181	19	1.7	5	0.4	2.1	1.7	11,146
3500-3999	10,242	10,234	8	0.8	2	0.2	1.0	1.0	10,237
4000-4499	3,432	3,430	2	0.6	3	0.9	1.5	1.2	3,432
4500 and Over	573	573	0	0.0	0	0.0	0.0	0.0	573
Not Stated	1	1	0	0.0	0	0.0	0.0	0.0	1
Total	32,092	31,918	174	5.4	76	2.4	7.8	6.2	31,480
Singleton Births									
500-749	68	40	28	411.8	18	450.0	676.5	645.2	68
750-999	64	52	12	187.5	6	115.4	281.3	233.3	64
1000-1249	77	61	16	207.8	5	82.0	272.7	222.2	77
1250-1499	109	99	10	91.7	4	40.4	128.4	86.5	109
1500-1999	297	269	28	94.3	5	18.6	111.1	70.4	297
2000-2499	959	939	20	20.9	9	9.6	30.2	22.1	959
2500-2999	3,985	3,967	18	4.5	5	1.3	5.8	4.5	3,985
3000-3499	11,079	11,060	19	1.7	5	0.5	2.2	1.7	11,079
3500-3999	10,234	10,226	8	0.8	2	0.2	1.0	1.0	10,234
4000-4499	3,432	3,430	2	0.6	3	0.9	1.5	1.2	3,432
4500 and Over	573	573	0	0.0	0	0.0	0.0	0.0	573
Not Stated	1	1	0	0.0	0	0.0	0.0	0.0	1
Total	30,878	30,717	161	5.2	62	2.0	7.2	5.5	30,878
Multiple Births									
500-749	33	27	6	181.8	12	444.4	545.5	545.5	15
750-999	28	28	0	0.0	1	35.7	35.7	35.7	16
1000-1249	33	32	1	30.3	1	31.3	60.6	60.6	11
1250-1499	46	45	1	21.7	0	0.0	21.7	21.7	21
1500-1999	204	203	1	4.9	0	0.0	4.9	4.9	88
2000-2499	339	336	3	8.8	0	0.0	8.8	8.8	168
2500-2999	402	401	1	2.5	0	0.0	2.5	2.5	213
3000-3499	121	121	0	0.0	0	0.0	0.0	0.0	67
3500-3999	8	8	0	0.0	0	0.0	0.0	0.0	3
4000-4499	0	0	0	0.0	0	0.0	0.0	0.0	0
4500 and Over	0	0	0	0.0	0	0.0	0.0	0.0	0
Not Stated	0	0	0	0.0	0	0.0	0.0	0.0	0
Total	1,214	1,201	13	10.7	14	11.7	22.2	22.2	602

TABLE G9: BIRTHWEIGHT GROUPS FOR MULTIPAROUS WOMEN

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Birthweight	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
All Births									
500-749	78	40	38	487.2	19	243.6	730.8	704.2	73
750-999	69	57	12	173.9	9	130.4	304.3	238.1	64
1000-1249	77	68	9	116.9	2	26.0	142.9	108.1	63
1250-1499	108	98	10	92.6	7	64.8	157.4	90.0	93
1500-1999	452	424	28	61.9	12	26.5	88.5	59.4	366
2000-2499	1,210	1,193	17	14.0	14	11.6	25.6	10.9	1,011
2500-2999	4,490	4,460	30	6.7	6	1.3	8.0	6.2	4,226
3000-3499	13,131	13,116	15	1.1	4	0.3	1.4	1.1	13,005
3500-3999	15,648	15,630	18	1.2	6	0.4	1.5	0.8	15,629
4000-4499	6,725	6,719	6	0.9	3	0.4	1.3	1.0	6,725
4500 and Over	1,494	1,493	1	0.7	0	0.0	0.7	0.7	1,494
Not Stated	1	1	0	0.0	0	0.0	0.0	0.0	1
Total	43,483	43,299	184	4.2	82	1.9	6.1	4.3	42,750
Singleton Births									
500-749	66	32	34	515.2	13	197.0	712.1	683.3	66
750-999	56	45	11	196.4	9	160.7	357.1	280.0	56
1000-1249	56	48	8	142.9	2	35.7	178.6	148.1	56
1250-1499	74	64	10	135.1	7	94.6	229.7	136.4	74
1500-1999	292	267	25	85.6	12	41.1	126.7	82.7	292
2000-2499	831	815	16	19.3	13	15.6	34.9	14.7	831
2500-2999	3,939	3,910	29	7.4	6	1.5	8.9	6.9	3,939
3000-3499	12,887	12,872	15	1.2	4	0.3	1.5	1.2	12,887
3500-3999	15,606	15,588	18	1.2	6	0.4	1.5	0.8	15,606
4000-4499	6,724	6,718	6	0.9	3	0.4	1.3	1.0	6,724
4500 and Over	1,494	1,493	1	0.7	0	0.0	0.7	0.7	1,494
Not Stated	1	1	0	0.0	0	0.0	0.0	0.0	1
Total	42,026	41,853	173	4.1	75	1.8	5.9	4.1	42,026
Multiple Births									
500-749	12	8	4	333.3	6	500.0	833.3	818.2	7
750-999	13	12	1	76.9	0	0.0	76.9	76.9	8
1000-1249	21	20	1	47.6	0	0.0	47.6	0.0	7
1250-1499	34	34	0	0.0	0	0.0	0.0	0.0	19
1500-1999	160	157	3	18.8	0	0.0	18.8	18.8	74
2000-2499	379	378	1	2.6	1	2.6	5.3	2.6	180
2500-2999	551	550	1	1.8	0	0.0	1.8	1.8	287
3000-3499	244	244	0	0.0	0	0.0	0.0	0.0	118
3500-3999	42	42	0	0.0	0	0.0	0.0	0.0	23
4000-4499	1	1	0	0.0	0	0.0	0.0	0.0	1
4500 and Over	0	0	0	0.0	0	0.0	0.0	0.0	0
Not Stated	0	0	0	0.0	0	0.0	0.0	0.0	0
Total	1,457	1,446	11	7.5	7	4.8	12.4	10.3	724

TABLE G10: BIRTHWEIGHT GROUPS, NUMBERS AND PERCENTAGES, TOTAL LIVE BIRTHS

Birthweight (grams)	Number	Per Cent
Less than 1,500 grams	647	0.8
1,500 - 2,499 grams	3,364	4.5
2,500 - 4,499 grams	69,149	91.9
4,500 grams and over	2,067	2.7
Not Stated	2	0.0
Total	75,229	100

TABLE G11: BIRTHWEIGHT GROUPS BY SEX, TOTAL LIVE BIRTHS

Birthweight (grams)	Male		Female		Indeterminate		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
500-749	53	0.1	54	0.1	0	0.0	107	0.1
750-999	65	0.2	72	0.2	0	0.0	137	0.2
1000-1249	86	0.2	75	0.2	0	0.0	161	0.2
1250-1499	107	0.3	134	0.4	1	33.3	242	0.3
1500-1999	450	1.2	445	1.2	1	33.3	896	1.2
2000-2499	1,145	3.0	1,322	3.6	1	33.3	2,468	3.3
2500-2999	3,883	10.0	4,945	13.5	0	0.0	8,828	11.7
3000-3499	11,325	29.3	12,976	35.5	0	0.0	24,301	32.3
3500-3999	13,991	36.2	11,879	32.5	0	0.0	25,870	34.4
4000-4499	6,190	16.0	3,960	10.8	0	0.0	10,150	13.5
4500 and Over	1,398	3.6	669	1.8	0	0.0	2,067	2.7
Not Stated	1	0.0	1	0.0	0	0.0	2	0.0
Total	38,694	100	36,532	100	3	100	75,229	100

TABLE G12: GESTATIONAL AGE AT DELIVERY, PRIMIPAROUS WOMEN

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Gestation (Weeks)	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR*	Maternities
All Births									
Less than 28	182	148	34	186.8	39	263.5	401.1	384.2	154
28-31	303	264	39	128.7	4	15.2	141.9	115.6	250
32-36	1,900	1,857	43	22.6	16	8.6	31.1	20.7	1,629
37-41	28,164	28,106	58	2.1	15	0.5	2.6	2.0	27,904
42 and Over	1,542	1,542	0	0.0	2	1.3	1.3	0.0	1,542
Not Stated	1	1	0	0.0	0	0.0	0.0	0.0	1
Total	32,092	31,918	174	5.4	76	2.4	7.8	6.2	31,480
Singleton Births									
Less than 28	124	96	28	225.8	26	270.8	435.5	411.8	124
28-31	203	165	38	187.2	3	18.2	202.0	164.9	203
32-36	1,366	1,326	40	29.3	16	12.1	41.0	26.7	1,366
37-41	27,642	27,587	55	2.0	15	0.5	2.5	2.0	27,642
42 and Over	1,542	1,542	0	0.0	2	1.3	1.3	0.0	1,542
Not Stated	1	1	0	0.0	0	0.0	0.0	0.0	1
Total	30,878	30,717	161	5.2	62	2.0	7.2	5.5	30,878
Multiple Births									
Less than 28	58	52	6	103.4	13	250.0	327.6	327.6	30
28-31	100	99	1	10.0	1	10.1	20.0	20.0	47
32-36	534	531	3	5.6	0	0.0	5.6	5.6	263
37-41	522	519	3	5.7	0	0.0	5.7	5.7	262
42 and Over	0	0	0	0.0	0	0.0	0.0	0.0	0
Not Stated	0	0	0	0.0	0	0.0	0.0	0.0	0
Total	1,214	1,201	13	10.7	14	11.7	22.2	22.2	602

Note: There were 12 maternities with parity unknown; these were excluded from this table.

TABLE G13: GESTATIONAL AGE AT DELIVERY, MULTIPAROUS WOMEN

Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

Gestation (Weeks)	Total Births	Live Births	Stillbirths	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Rate	Perinatal Mortality Rate	Adjusted PMR	Maternities
All Births									
Less than 28	134	91	43	320.9	27	296.7	522.4	496.1	123
28-31	264	242	22	83.3	8	33.1	113.6	89.5	224
32-36	1,878	1,831	47	25.0	15	8.2	33.0	20.0	1,603
37-41	39,997	39,925	72	1.8	31	0.8	2.6	1.6	39,591
42 and Over	1,208	1,208	0	0.0	1	0.8	0.8	0.0	1,207
Not Stated	2	2	0	0.0	0	0.0	0.0	0.0	2
Total	43,483	43,299	184	4.2	82	1.9	6.1	4.3	42,750
Singleton Births									
Less than 28	109	70	39	357.8	21	300.0	550.5	524.3	109
28-31	187	167	20	107.0	8	47.9	149.7	116.7	187
32-36	1,336	1,292	44	32.9	15	11.6	44.2	25.9	1,336
37-41	39,186	39,116	70	1.8	30	0.8	2.6	1.6	39,186
42 and Over	1,206	1,206	0	0.0	1	0.8	0.8	0.0	1,206
Not Stated	2	2	0	0.0	0	0.0	0.0	0.0	2
Total	42,026	41,853	173	4.1	75	1.8	5.9	4.1	42,026
Multiple Births									
Less than 28	25	21	4	160.0	6	285.7	400.0	375.0	14
28-31	77	75	2	26.0	0	0.0	26.0	26.0	37
32-36	542	539	3	5.5	0	0.0	5.5	5.5	267
37-41	811	809	2	2.5	1	1.2	3.7	1.2	405
42 and Over	2	2	0	0.0	0	0.0	0.0	0.0	1
Not Stated	0	0	0	0.0	0	0.0	0.0	0.0	0
Total	1,457	1,446	11	7.5	7	4.8	12.4	10.3	724

Note: There were 12 maternities with parity unknown; these were excluded from this table.

TABLE G15: METHOD OF DELIVERY BY PARITY, TOTAL, SINGLETON AND MULTIPLE BIRTHS

Method of Delivery	Total Births		Singleton Births		Multiple Births	
	Number	Per cent	Number	Per cent	Number	Per cent
All Births						
Spontaneous	42,836	56.7	42,225	57.9	611	22.9
Breech/Forceps	401	0.5	293	0.4	108	4.0
Forceps	2,773	3.7	2,725	3.7	48	1.8
Vacuum extraction	9,413	12.5	9,221	12.6	192	7.2
Caesarean section	20,095	26.6	18,385	25.2	1,710	64.0
Other specified & combined	49	0.1	47	0.1	2	0.1
Not stated	8	0.0	8	0.0	0	0.0
Total	75,575	100	72,904	100	2,671	100
Births to Primiparous Women						
Spontaneous	13,770	42.9	13,600	44.0	170	14.0
Breech/Forceps	204	0.6	164	0.5	40	3.3
Forceps	2,283	7.1	2,246	7.3	37	3.0
Vacuum extraction	6,785	21.1	6,689	21.7	96	7.9
Caesarean section	9,042	28.2	8,171	26.5	871	71.7
Other specified & combined	7	0.0	7	0.0	0	0.0
Not stated	1	0.0	1	0.0	0	0.0
Total	32,092	100	30,878	100	1,214	100
Births to Multiparous Women						
Spontaneous	29,066	66.8	28,625	68.1	441	30.3
Breech/Forceps	197	0.5	129	0.3	68	4.7
Forceps	490	1.1	479	1.1	11	0.8
Vacuum extraction	2,628	6.0	2,532	6.0	96	6.6
Caesarean section	11,053	25.4	10,214	24.3	839	57.6
Other specified & combined	42	0.1	40	0.1	2	0.1
Not stated	7	0.0	7	0.0	0	0.0
Total	43,483	100	42,026	100	1,457	100

Note: There were 12 maternities with parity unknown; these were excluded from this table.

TABLE G16: MOTHER'S COUNTY OF RESIDENCE BY INFANT'S TYPE OF FEEDING, TOTAL LIVE BIRTHS

Mother's County of Residence Frequency Row Per Cent Col. Per Cent	Type of Feeding				
	Artificial	Breast	Combined	Not Stated	Total
Carlow	535	518	16	0	1,069
	50.0	48.5	1.5	0.0	100.0
	1.5	1.6	0.3	0.0	1.4
Cavan	645	571	43	0	1,259
	51.2	45.4	3.4	0.0	100.0
	1.8	1.7	0.9	0.0	1.7
Clare	1,393	372	67	0	1,832
	76.0	20.3	3.7	0.0	100.0
	3.8	1.1	1.3	0.0	2.4
Cork	4,012	3,457	902	3	8,374
	47.9	41.3	10.8	0.0	100.0
	10.9	10.4	18.1	2.5	11.2
Donegal	1,385	679	178	0	2,242
	61.8	30.3	7.9	0.0	100.0
	3.8	2.0	3.6	0.0	3.0
Dublin City	6,385	7,582	966	3	14,936
	42.7				
		50.8	6.5	0.0	100.0
Dublin County	2,080	3,127	391	6	5,604
		22.8	19.4	2.5	19.9
	37.1	55.8	7.0	0.1	100.0
Galway	1,857	1,377	895	1	4,130
	45.0	33.3	21.7	0.0	100.0
	5.1	4.1	18.0	0.8	5.5
Kerry	1,019	892	151	1	2,063
	49.4	43.2	7.3	0.0	100.0
	2.8	2.7	3.0	0.8	2.7
Kildare	1,800	1,993	193	4	3,990
	45.1	49.9	4.8	0.1	100.0
	4.9	6.0	3.9	3.3	5.3
Kilkenny	637	748	9	1	1,395
	45.7	53.6	0.6	0.1	100.0
	1.7	2.2	0.2	0.8	1.9
Laois	632	685	42	0	1,359
	46.5	50.4	3.1	0.0	100.0
	1.7	2.1	0.8	0.0	1.8
Leitrim	236	240	44	0	520
	45.4	46.2	8.5	0.0	100.0
	0.6	0.7	0.9	0.0	0.7
Limerick	2,528	607	54	1	3,190
	79.2	19.0	1.7	0.0	100.0
	6.9	1.8	1.1	0.8	4.2
Longford	363	339	25	0	727
	49.9	46.6	3.4	0.0	100.0
	1.0	1.0	0.5	0.0	1.0
Louth	1,029	845	121	0	1,995
	51.6	42.4	6.1		
				0.0	100.0
Mayo	843	914	80	54	1,891
	44.6	48.3	4.2	2.9	100.0
	2.3	2.7	1.6	44.3	2.5

TABLE G16: MOTHER'S COUNTY OF RESIDENCE BY INFANT'S TYPE OF FEEDING, TOTAL LIVE BIRTHS (CONT'D.)

Mother's County of Residence Frequency Row Per Cent Col. Per Cent	Type of Feeding				
	Artificial	Breast	Combined	Not Stated	Total
Meath	1,617	1,772	197	0	3,586
	45.1	49.4	5.5	0.0	100.0
	4.4	5.3	4.0	0.0	4.8
Monaghan	470	366	37	0	873
	53.8	41.9	4.2	0.0	100.0
	1.3	1.1	0.7	0.0	1.2
Offaly	655	551	25	0	1,231
	53.2	44.8	2.0	0.0	100.0
	1.8	1.7	0.5	0.0	1.6
Roscommon	422	415	53	3	893
	47.3	46.5	5.9	0.3	100.0
	1.2	1.2	1.1	2.5	1.2
Sligo	522	339	92	2	955
	54.7	35.5	9.6	0.2	100.0
	1.4	1.0	1.9	1.6	1.3
Tipperary	1,474	932	20	31	2,457
	60.0	37.9	0.8	1.3	100.0
	4.0	2.8	0.4	25.4	3.3
Waterford	973	966	52	0	1,991
	48.9	48.5	2.6	0.0	100.0
	2.7	2.9	1.0	0.0	2.7
Westmeath	689	754	51	0	1,494
	46.1	50.5	3.4	0.0	100.0
	1.9	2.3	1.0	0.0	2.0
Wexford	1,402	980	120	0	2,502
	56.0	39.2	4.8	0.0	100.0
	3.8	2.9	2.4	0.0	3.3
Wicklow	1,061	1,272	145	12	2,490
	42.6	51.1	5.8	0.5	100.0
	2.9	3.8	2.9	9.8	3.3
Other	8	11	2	0	21
	38.1	52.4	9.5	0.0	100.0
	0.0	0.0	0.0	0.0	0.0
Not Stated	0	1	0	0	1
	0.0	100.0	0.0	0.0	100.0
	0.0	0.0	0.0	0.0	0.0
Total	36,672	33,305	4,971	122	75,070
	48.9	44.4	6.6	0.2	100
	100	100	100	100	100

Note: See Appendix E for details of county of residence classification.

TABLE G17: TOTAL BIRTHS, ANTEPARTUM AND INTRAPARTUM STILLBIRTHS, EARLY NEONATAL DEATHS, AND MORTALITY RATES BY BIRTHWEIGHT

Birthweight (grams)	Total Births	Ante-partum Stillbirths	Intra-partum Stillbirths	Not Stated	Stillbirth Rate	Early Neonatal Deaths	Early Neonatal Mortality Rate	Perinatal Mortality Rate	Adjusted PMR
Total Births									
500-749	179	59	7	6	402.2	49	457.9	676.0	650.6
750-999	161	21	1	2	149.1	16	116.8	248.4	198.7
1000-1249	187	22	2	2	139.0	8	49.7	181.8	145.3
1250-1499	263	19	1	1	79.8	11	45.5	121.7	76.0
1500-1999	953	53	3	1	59.8	17	19.0	77.6	50.8
2000-2499	2,508	33	4	3	15.9	23	9.3	25.1	14.9
2500-2999	8,877	42	2	5	5.5	11	1.2	6.8	5.3
3000-3499	24,335	27	4	3	1.4	9	0.4	1.8	1.4
3500-3999	25,896	25	1	0	1.0	9	0.3	1.4	0.9
4000-4499	10,158	7	1	0	0.8	6	0.6	1.4	1.1
4500 and Over	2,068	1	0	0	0.5	0	0.0	0.5	0.5
Not Stated	2	0	0	0	0.0	0	0.0	0.0	0.0
Total	75,587	309	26	23	4.7	159	2.1	6.8	5.1
Singleton Births									
500-749	134	50	6	6	462.7	31	430.6	694.0	663.9
750-999	120	20	1	2	191.7	15	154.6	316.7	254.5
1000-1249	133	20	2	2	180.5	7	64.2	233.1	190.5
1250-1499	183	18	1	1	109.3	11	67.5	169.4	105.9
1500-1999	589	49	3	1	90.0	17	31.7	118.8	76.5
2000-2499	1,790	30	3	3	20.1	22	12.5	32.4	18.7
2500-2999	7,924	41	2	4	5.9	11	1.4	7.3	5.7
3000-3499	23,970	27	4	3	1.4	9	0.4	1.8	1.4
3500-3999	25,846	25	1	0	1.0	9	0.3	1.4	0.9
4000-4499	10,157	7	1	0	0.8	6	0.6	1.4	1.1
4500 and Over	2,068	1	0	0	0.5	0	0.0	0.5	0.5
Not Stated	2	0	0	0	0.0	0	0.0	0.0	0.0
Total	72,916	288	24	22	4.6	138	1.9	6.5	4.7
Multiple Births									
500-749	45	9	1	0	222.2	18	514.3	622.2	613.6
750-999	41	1	0	0	24.4	1	25.0	48.8	48.8
1000-1249	54	2	0	0	37.0	1	19.2	55.6	37.7
1250-1499	80	1	0	0	12.5	0	0.0	12.5	12.5
1500-1999	364	4	0	0	11.0	0	0.0	11.0	11.0
2000-2499	718	3	1	0	5.6	1	1.4	7.0	5.6
2500-2999	953	1	0	1	2.1	0	0.0	2.1	2.1
3000-3499	365	0	0	0	0.0	0	0.0	0.0	0.0
3500-3999	50	0	0	0	0.0	0	0.0	0.0	0.0
4000-4499	1	0	0	0	0.0	0	0.0	0.0	0.0
4500 and Over	0	0	0	0	0.0	0	0.0	0.0	0.0
Not Stated	0	0	0	0	0.0	0	0.0	0.0	0.0
Total	2,671	21	2	1	9.0	21	7.9	16.8	15.7

TABLE G18: TYPE OF FEEDING BY PLACE OF BIRTH, TOTAL LIVE BIRTHS

Type of Feeding	Hospital		Domiciliary		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
Artificial	36,665	49.0	7	4.4	36,672	48.9
Breast	33,154	44.3	151	95.6	33,305	44.4
Combined	4,971	6.6	0	0.0	4,971	6.6
Total	74,790	100	158	100	74,948	100

Note: This table excludes type of feeding unknown and early neonatal deaths.



**Health Research and Information Division
The Economic and Social Research Institute**

Whitaker Square
Sir John Rogerson's Quay
Dublin 2
Ireland

Telephone + 353 1 8632000
Fax + 353 1 8632100

www.esri.ie

ISBN 978-0-7070-0312-2