

# Perinatal Statistics Report

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Health Research and Information Division

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2011





# 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 indebted to these individuals for their support and efforts.

In addition to financing the NPRS, the Department of Health and the Health Service Executive continue 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 (Director of the HSE Obstetrics and Gynaecology programme), Alan Cahill and Gráinne Cosgrove (DoH) 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 system. Collection and preparation of the data are undertaken by Malgorzata Chance, Catherine Glennon, Anna Lewandowska, and Izabela Sikora. 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 Léan McMahon and Deirdre Murphy for reviewing and commenting on earlier drafts of this report.

Inevitably, a number of individuals have to carry most of the responsibility for producing a report of this type. In this case Sheelagh Bonham, Aisling Mulligan, and Sinead O'Hara, were to the fore in the preparation of the report for publication with assistance from Nathan Cunningham, Karen Kearns, Shane Leavy and Laura Metcalfe. 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 .....	vii
<b>SECTION ONE</b>	<b>1</b>
<b>INTRODUCTION</b>	
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
<b>SECTION TWO</b>	<b>7</b>
<b>TIME TRENDS AND INTERNATIONAL COMPARISONS</b>	
Introduction .....	8
Trends in Selected Statistics .....	8
Perinatal Mortality .....	11
Birth Rates .....	13
Fertility .....	15
Singleton and Multiple Births .....	16
Method of Delivery for Primiparous and Multiparous Women.....	18
<b>SECTION THREE</b>	<b>21</b>
<b>GENERAL CHARACTERISTICS</b>	
Introduction .....	22
Maternal Age .....	23
Mother's Marital Status .....	25
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 .....	40
Interval Since Last Birth .....	41
Birthweight .....	42
Gestational Age .....	46
Month of Birth .....	48

<b>SECTION FOUR</b>	<b>51</b>
<b>PERINATAL CARE</b>	
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: Immune Status of Mother .....	59
Method of Delivery .....	59
Method of Delivery by Maternities and Parity .....	59
Method of Delivery by Births and Parity .....	61
Method of Delivery by Births and Plurality .....	62
Method of Delivery by Maternal Age .....	63
Distribution of Births by Size of Maternity Unit .....	64
Inter-Hospital Transfer of Infants .....	65
Infant's Length of Stay .....	66
Infant's Type of Feeding .....	67
<b>SECTION FIVE</b>	<b>75</b>
<b>PERINATAL OUTCOMES</b>	
Introduction .....	76
Mortality by Birthweight and Parity .....	76
Cause of Death by Birthweight .....	79
Mortality by Gestational Age .....	84
Cause of Death .....	86
Age at Death .....	93
Post-Mortem Examinations .....	94
<b>APPENDICES</b>	<b>95</b>
Appendix A: Definitions .....	96
Appendix B: Copy of Part 3 of the Birth Notification Form .....	100
Appendix C: Classification of Occupation .....	101
Appendix D: Cause of Death Classification .....	102
Appendix E: Classification of County of Residence .....	106
Appendix F: Classification of Nationality .....	107
Appendix G: Source Data for Figures .....	111
Appendix H: Domiciliary Births .....	125

## LIST OF TABLES

### Tables for Time Trends and International Comparisons:

2.1	Trends in Selected Statistics, 2002–2011 .....	10
2.2	Live Births, Stillbirths, Early Neonatal Deaths, and Perinatal Deaths, 2002–2011 .....	11
2.3	Singleton and Multiple Births, 2002–2011 .....	17
2.4	Live Births, Stillbirths and Early Neonatal Deaths, Numbers and Rates, Singleton and Multiple Births, 2002–2011 .....	17
2.5	Percentage Distribution of Maternities by Method of Delivery, Primiparous and Multiparous Women, 2002–2011 .....	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 .....	37
3.8	Previous Stillbirths .....	40
3.9	Interval in Years Since Last Birth .....	41
3.10	Birthweight (grams).....	43
3.11	Gestational Age (weeks) at Delivery .....	46
3.12	Month of Birth .....	48

### Tables for Perinatal Care:

4.1	Type of Antenatal Care .....	53
4.2	Time of First Visit (weeks) 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 .....	57
4.6	Rubella: Immune Status of Mother, Numbers and Percentages .....	59
4.7a	Method of Delivery for Total Maternities by Parity .....	60
4.7b	Method of Delivery for Total Births by Parity .....	61
4.8a	Method of Delivery, Total Births .....	62
4.8b	Method of Delivery by Maternal Age .....	63
4.9	Size of Maternity Unit (Number of Live Births and Stillbirths Annually) .....	64
4.10	Inter-Hospital Transfer of Infants .....	65
4.11	Infant's Length of Stay (days) in Hospital, Live Births .....	66
4.12	Age of Mother by Infant's Type of Feeding, Numbers and Percentages, Total Live Births .....	68
4.13	Mother's Occupation by Infant's Type of Feeding, Total Live Births .....	71

**Tables for Perinatal Outcomes:**

5.1	Birthweight (grams): Total Births, Antepartum and Intrapartum Stillbirths, Early Neonatal Deaths, and Mortality Rates.....	77
5.2	Cause of Death by ICD-10 Chapter by Birthweight, Numbers and Perinatal Mortality Rate .....	80
5.3	Gestational Age (weeks): Total Births, Antepartum, and Intrapartum Stillbirths, Early Neonatal Deaths, and Mortality Rates.....	84
5.4	Cause of Death by ICD-10 Chapter and Subcategories, Numbers and Mortality Rates .....	87
5.5	Age at Death, Early Neonatal Deaths .....	93
5.6	Post-Mortem Examinations, Total Deaths .....	94

**Appendix Tables:**

D1	Cause of Death Coding Rules .....	104
D2	ICD-10, Cause of Death Codes .....	105

**Tables for Source Data for Figures:**

G1	Percentage Distribution of Total Births by Mother's Marital Status, 2007–2011.....	111
G2	Mother's County of Residence by Mother's Marital Status, Total Births .....	112
G3	Percentage Distribution of Total Births by Mother's Nationality, 2007–2011.....	113
G4	Mother's Average Age by Mother's Nationality, Total Maternities .....	114
G5	Age of Mother by Maternal Parity, Total Maternities .....	114
G6	Percentage Distribution of Total Births to Primiparous Women by Maternal Age, 2007 and 2011 .....	114
G7	Percentage Distribution of Total Births to Multiparous Women by Maternal Age, 2007 and 2011 .....	114
G8	Birthweight (grams) for Primiparous Women.....	115
G9	Birthweight (grams) for Multiparous Women .....	116
G10	Birthweight (grams), Numbers and Percentages, Total Live Births .....	117
G11	Birthweight (grams) by Sex, Total Live Births .....	117
G12	Gestational Age (weeks) at Delivery, Primiparous Women .....	118
G13	Gestational Age (weeks) at Delivery, Multiparous Women .....	118
G14	Method of Delivery by Mother's Postnatal Length of Stay, Singleton and Multiple Births .....	119
G15	Method of Delivery by Parity, Total, Singleton and Multiple Births .....	120
G16	Mother's County of Residence by Infant's Type of Feeding, Total Live Births .....	121
G17	Mother's Nationality by Infant's Type of Feeding, Total Live Births .....	123
G18	Birthweight (grams): Total Births, Antepartum and Intrapartum Stillbirths, Early Neonatal Deaths, and Mortality Rates .....	124

**Tables for Domiciliary Births:**

H1	Trends in Domiciliary Births - Selected Statistics, 2002-2011 .....	126
H2	Age of Mother by Maternal Parity .....	127
H3	Mother's Marital Status by Age of Mother .....	128
H4	Age of Mother by Gestational Age (weeks) at Delivery .....	128
H5	Birthweight (grams) by Gestational Age (weeks) at Delivery .....	129
H6	Mother's Occupation by Birthweight .....	129
H7	Mother's Occupation by Type of Feeding .....	130

## 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, 2002–2011 .....	12
2.2	Perinatal Mortality Rates for Selected EU Countries, 2011 .....	13
2.3	Trends in Birth Rates for Selected EU Countries, 2002–2011 .....	14
2.4	Birth Rates per 1,000 Population for EU Countries, 2011 .....	14
2.5	Age-Specific Fertility Rates (ASFRs) and Total Period Fertility Rates (TPFRs), Ireland, 2002–2011 .....	15
2.6	Total Period Fertility Rates for Selected EU Countries, 2011 .....	16
2.7	Percentage Distribution of Maternities Delivering by Caesarean Section for Total, Primiparous and Multiparous Women, 2002–2011 .....	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, 2007–2011 .....	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 Rate by Father's Occupation, Total Births .....	31
3.6	Percentage Distribution of Births by Nationality for Non-Irish Born Mothers, Total Births, 2007–2011 .....	34
3.7	Average Age of Mother by Mother's Nationality, Total Maternities .....	34
3.8	Parity by Age of Mother, Total Maternities .....	38
3.9	Total Births to Primiparous Women by Mother's Age Group, 2007 and 2011 .....	39
3.10	Total Births to Multiparous Women by Mother's Age Group, 2007 and 2011 .....	39
3.11	Birthweight: Cumulative Percentages of Total Live Births .....	44
3.12	Percentage of Births by Birthweight Groups, Total Live Births .....	44
3.13	Percentage Distribution for Males and Females across Birthweight Groups, Total Live Births .....	45
3.14	Perinatal Mortality Rates by Gestational Age (weeks) at Delivery, Total Births .....	47
3.15	Percentage of Births by Month of Birth, Total Births .....	49

### Figures for Perinatal Care:

4.1	Mother's Postnatal Length of Stay by Method of Delivery, Singleton Births .....	58
4.2	Mother's Postnatal Length of Stay by Method of Delivery, Multiple Births .....	58
4.3	Percentage Distribution of Maternities by Method of Delivery .....	60
4.4	Percentage Distribution of Total Live Births by Method of Delivery .....	63
4.5	Percentage of Total Births by Method of Delivery and Age of Mother .....	64
4.6	Percentage Distribution of Births by Size of Maternity Unit, Total Births .....	65
4.7	Percentage Distribution of Total Live Births by Infant's Length of Stay .....	67
4.8	Percentage Distribution of Infant's Type of Feeding by Age of Mother, Total Live Births .....	69
4.9	Percentage Distribution of Breastfed Infants by Mother's County of Residence, Total Live Births .....	70
4.10	Percentage Distribution of Infant's Type of Feeding by Mother's Occupation, Total Live Births .....	72
4.11	Percentage Distribution of Breastfed Infants by Mother's Nationality, Total Live Births .....	73

**Figures for Perinatal Outcomes:**


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5.1	Deaths by Birthweight Groups and Parity .....	78
5.2	Perinatal Mortality Rates by Birthweight Groups, Total Births .....	79
5.3	Total Deaths with Birthweight < 2,500 grams by Cause of Death .....	83
5.4	Total Deaths with Birthweight ≥ 2,500 grams by Cause of Death .....	83
5.5	Deaths by Gestational Age (weeks) Groups, Total, Singleton and Multiple Births.....	85
5.6	Perinatal Mortality Rates by Gestational Age (weeks) at Delivery, Total Births .....	86
5.7	Stillbirths by Cause of Death, Total, Singleton and Multiple Births .....	90
5.8	Early Neonatal Deaths by Cause of Death, Total, Singleton and Multiple Births .....	91
5.9	Perinatal Deaths by Cause of Death, Total, Singleton and Multiple Births .....	92

**Figures for Domiciliary Births:**


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H1	Number and Percentage of Domiciliary Births Reported, 2002–2011 .....	127
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## KEY FINDINGS

The Perinatal Statistics Report 2011 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 2011.

### SUMMARY STATISTICS, 2011

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 <sup>#</sup>	
	Number	Number	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*
Singleton	71,651	71,375	276	3.9	126	1.8	402	5.6	275	3.8
Multiple	2,726	2,705	21	7.7	27	10.0	48	17.6	33	12.2
<b>Total</b>	<b>74,377</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>450</b>	<b>6.1</b>	<b>308</b>	<b>4.1</b>

Notes: \* Rate per 1,000 births. 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.

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

### BABIES, 2011

- 74,377 births were reported to NPRS in 2011, representing a 1.6 per cent decrease between 2010 and 2011
- 6% of total births were preterm (less than 37 weeks gestation)
- 5% of live births were low birthweight (less than 2,500 grams)
- 3% of live births were high birthweight (4,500 grams or more)
- 55% of babies recorded any breastfeeding in 2011, compared to 51% in 2007 and 44% in 2002
- 47% of babies were exclusively breastfed, compared to 45% in 2007 and 41% in 2002
- 28% of total live births were delivered by caesarean section, with 27% of singleton and 66% of multiple live births delivered by this method. In 2002, 22% of total live births were delivered by caesarean section
- 96% of singleton births and 66% of multiple births were discharged from hospital within 5 days of birth
- The perinatal mortality rate was 6.1 per 1,000 live births and stillbirths (5.6 per 1,000 singleton births and 17.6 per 1,000 multiple births). This rate has fallen by 28% since 2002, when it was 8.4 per 1,000 live births and stillbirths
- At 10.7 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 5.3 per 1,000 live births and stillbirths was for babies born to mothers aged between the 25 to 29 and 35 to 39 year age groups.

### MOTHERS, 2011

- The average age of mothers has increased from 30.4 years in 2002 to 31.7 years in 2011
- 29% of mothers were aged 35 years or older, up from 23% in 2002
- 17% of first births were to women aged 35 years or older compared to 11% in 2002
- 2% of total mothers giving birth were aged 19 years or younger, compared to 5% in 2002
- 40% gave birth for the first time, with an average age for first time mothers of 29.8 years
- 33% of births were to single mothers, who had an average age of 28.3 years
- 2% had a multiple pregnancy
- 55% of mothers recorded any breastfeeding, compared to 51% in 2007 and 44% in 2002
- 47% of mothers exclusively breastfed, compared to 45% in 2007 and 41% in 2002
- 57% of women having a singleton live birth delivered spontaneously, while deliveries using forceps accounted for 4%, vacuum extractions for 12%, and 27% by caesarean section
- For women having a singleton birth 55% had a postnatal length of stay of 2 days or less and 43% had a postnatal length of stay of 3-5 days
- For women having a multiple birth 13% had a postnatal length of stay of 2 days or less and 74% had a postnatal length of stay of 3-5 days
- 24% of births in 2011 were to mothers born outside Ireland compared to 21% in 2007.



# SECTION ONE

## INTRODUCTION

## INTRODUCTION

The National Perinatal Reporting System (NPRS) within the Health Research and Information Division (HRID) at the Economic and Social Research Institute (ESRI) is responsible for the collection, processing, management and reporting of data on all births nationally. As the only complete national reporting system on births, it is a valuable resource for informing policy and service planning. The analysis presented in this report is based on data collected from Part 3 of the Birth Notification Form (BNF01/2003) which is used to notify local registrars of all live births and stillbirths occurring in Ireland (see Appendix B). Since 1999 the ESRI has managed the NPRS on behalf of the Department of Health and the Health Service Executive.

## PURPOSE OF THIS REPORT

The principal aim of this report is to present national statistics on perinatal events for the year 2011.<sup>1</sup> In so doing, the 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** provides background information relating to the NPRS system, 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 2002 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 occupation), 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

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<sup>1</sup> Previous reports in this series can be downloaded from [www.esri.ie/health\\_information/nprs/nprs\\_reports/](http://www.esri.ie/health_information/nprs/nprs_reports/)

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.

**APPENDICES** include definitions, source data tables for figures, and other relevant information for use when reading the report. Appendix H deals with domiciliary births, including trends since 2002 and tables on selected variables for 2011.

## CONVENTIONS USED IN THIS REPORT

- In accordance with the World Health Organization (WHO) guidelines, only births weighing 500 grams or more are included in any analysis of NPRS data. (See [www.who.int/classifications/icd/ICD-10\\_2nd\\_ed\\_volume2.pdf](http://www.who.int/classifications/icd/ICD-10_2nd_ed_volume2.pdf) ; pg 96, 5.7.2. Reporting Criteria)
- The majority of tables report total, singleton and multiple births alongside the number of maternities, where applicable. Other tables report total maternities by primiparous and multiparous women for selected variables (see Appendix A for definitions).
- Unless otherwise stated, discussion on total births in this report includes live births and stillbirths for singleton and multiple births.
- Caution should be exercised when interpreting rates based on small numbers. *Rates based on 20 observations or fewer 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.* For further information on calculation of rates see Appendix A.
- 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 presented in data tables. 'Not Stated' values are reported by hospitals when information is not available.
- Deliveries under hospital schemes (including domino, early transfer home, planned community midwives, and midwifery-led units) are treated as hospital births.
- Fathers' details are only required for registration purposes where mother's marital status is recorded as 'married'. As a result, the proportion of records for which information is available is not complete and a category of 'not applicable' is required, this category is combined with 'not stated' for the purposes of presenting data on father's occupation and father's nationality in this report.

## NATIONAL MINIMUM DATA SET

The NPRS data set provides a national minimum data set, which is intended to serve as a basis for the analyses of key indicators 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 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
- 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)
- Multiple birth indicator
- 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, number for hospital to which infant was transferred.

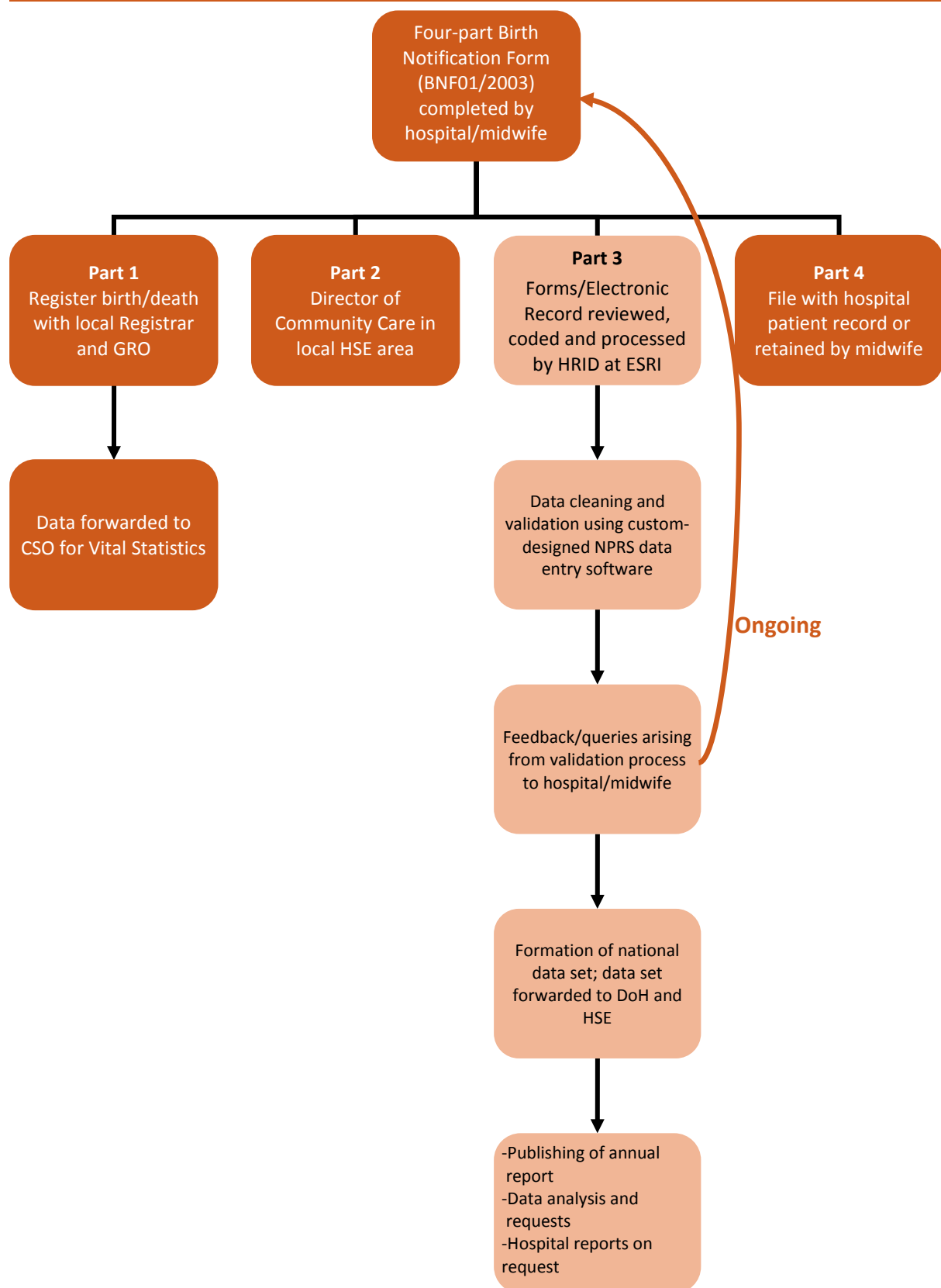
## DATA COLLECTION AND QUALITY

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 cross-checked 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, logic, and coding errors. If problems are identified, clarification can be sought from the hospital or midwife and corrections can be made at the point of data entry. This data validation process is continually reviewed and new checks are incorporated based on data quality activities and research. 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.

DoH denotes Department of Health.  
GRO denotes General Register Office.

# SECTION TWO

## TIME TRENDS AND INTERNATIONAL COMPARISONS

## INTRODUCTION

This section presents selected statistics, together with data on the following three key indicators:

- 1) perinatal mortality
- 2) birth rate
- 3) 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 2002 to 2011.<sup>2</sup> Analysis on single and multiple births and method of delivery for the period 2002 to 2011 are also presented.

## TRENDS IN SELECTED STATISTICS

Table 2.1 presents trends in selected statistics and shows that;

- Total births increased from 60,865 births in 2002 to 74,377 births in 2011, a 22.2 per cent increase over the decade. The number of total births reported has decreased between 2010 and 2011 by 1.6 per cent.
- Mothers giving birth in Ireland in 2011 (31.7 years) were on average 1.3 years older than those who gave birth in 2002 (30.4 years) and just slightly older than those giving birth in 2010 (31.5 years).
- The percentage of total births to single mothers has increased from 30.0 to 33.3 per cent, representing an 11.0 per cent increase over the decade 2002 to 2011. Total births to single mothers increased by 0.9 per cent between 2010 and 2011.
- The average age of single mothers has increased from 25.7 years in 2002 to 28.3 years in 2011, a rate of increase of 10.1 per cent over the decade. There was a 1.1 per cent increase between 2010 and 2011.
- Average parity (number of previous live births and stillbirths) has decreased slightly from 1.1 to 1.0 over the period and is unchanged from 2010. Interval in years since last delivery has remained relatively stable and was 3.8 years in 2011, compared with 3.9 years in 2010.
- Immunity to rubella for mothers increased from 86.5 per cent in 2002 to 92.3 per cent in 2010 and was recorded at 94.3 per cent in 2011.
- The percentage of women recording any breastfeeding was 43.9 per cent in 2002. This rate has increased to 55.3 per cent in 2011 which represents an increase of 26.0 per cent in the proportion of women recording any breastfeeding over the decade. An increase of just 2.2 per cent is estimated for the period 2010 to 2011.
- The percentage of women exclusively breastfeeding has increased from 41.1 per cent in 2002 to 47.0 per cent in 2011. This represents an increase of 14.4 per cent in the proportion of women recording exclusive breastfeeding over the decade. This rate increased by 1.7 per cent between 2010 and 2011.

<sup>2</sup> Previous reports in this series can be downloaded from [www.esri.ie/health\\_information/nprs/nprs\\_reports/](http://www.esri.ie/health_information/nprs/nprs_reports/)

Additional data relating to the birth episode show that:

- Mother's average length of stay was recorded at 4.1 days in 2002 and has decreased to 3.3 days in 2011 representing a decrease of 19.5 per cent over the decade. The decline since 2010 is estimated at 2.9 per cent.
- The number of women choosing combined antenatal care has increased by 4.3 per cent over the decade 2002 to 2011. There was, however, a slight decrease to 77.3 per cent in 2011 compared with 80.9 per cent in 2010.
- Booked admissions for 2011 are estimated at 99.3 per cent which is unchanged from 2010.

Method of delivery is reported by total live births and by total maternities.

- For total live births the percentage of spontaneous deliveries fell from 62.4 per cent in 2002 to 55.8 per cent in 2011. The upward trend in delivery by Caesarean section continues with a rate of 22.4 per cent reported in 2002 compared with 28.1 per cent for 2011. This represents an increase of 25.4 per cent in the proportion of Caesarean section deliveries for live births over the decade, and a 3.7 per cent increase between 2010 and 2011.
- For total maternities, the percentage of spontaneous deliveries fell from 63.0 per cent in 2002 to 56.6 per cent in 2011. The trend in delivery by Caesarean section has increased from 21.9 per cent in 2002 to 27.3 per cent in 2011, which represents an increase of 24.7 per cent in the proportion of Caesarean section deliveries for maternities over the decade, and a 3.8 per cent increase between 2010 and 2011.

Regarding infant's characteristics, trends have been largely consistent over the decade 2002 to 2011.

- The average birthweight for total live births was 3,467.0 grams in 2011 which is broadly consistent with the preceding decade and almost unchanged since 2010 (3,468.4 grams).
- While the average birthweight for singleton births of 3505.0 grams has remained consistent over the decade, slightly more variation is observed for multiple births, ranging from a high of 2,489.7 grams in 2002 to a low of 2,421.4 grams in 2007 and 2,464.6 grams in 2011.
- The percentage of total births recording low birthweight (<2,500 grams) was 4.9 per cent in 2002 compared with 5.2 per cent for 2011. This represents a 6.1 per cent increase in the proportion of low birthweight babies over the decade and a 2.0 per cent increase between 2010 and 2011.
- The percentage of total births classified as high birthweight (4,500 grams or more) has decreased from 2.9 per cent in 2002 to 2.6 per cent in 2011. In 2010, 2.7 per cent of total births classified as high birthweight.
- For total births, the infant's average length of stay declined from 3.9 days in 2002 to 3.2 days in 2011. This represents a 17.9 per cent decrease over the decade, with no change from 2010 reported.

TABLE 2.1

Trends in Selected Statistics, 2002–2011

			2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	% Change	
			2002–2011		2010–2011									
Total Births	N		60,865	61,989	62,406	61,786	65,810	71,963	75,587	76,023	75,600	74,377	22.2	-1.6
Birth Rate <sup>1</sup>	Per 1,000 population		15.5	15.5	15.3	14.9	15.5	16.4	16.8	16.7	16.5	16.2	4.5	-1.8
<b>Maternal Characteristics</b>														
Age of mother (years) <sup>2</sup>	Avg		30.4	30.6	30.8	31.0	31.0	31.1	31.1	31.3	31.5	31.7	4.3	0.6
Age of single mother (years) <sup>2,3</sup>	Avg		25.7	26.1	26.4	26.6	26.8	27.1	27.3	27.5	28.0	28.3	10.1	1.1
Single mothers <sup>2,3</sup>	%		30.0	30.2	30.6	30.7	31.5	31.8	32.4	32.4	33.0	33.3	11.0	0.9
Maternal parity <sup>2</sup>	Avg		1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	-9.1	0.0
Number of previous stillbirths per 1,000 maternities <sup>2</sup>	Avg		12.6	12.6	12.6	12.8	10.6	10.8	10.9	11.7	11.5	11.9	-5.6	3.5
Gestational age at delivery (weeks) <sup>2</sup>	Avg		39.5	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.3	-0.5	-0.3
Interval since last birth (years) <sup>4</sup>	Avg		3.9	3.8	3.7	3.8	3.8	3.9	3.9	3.8	3.9	3.8	-2.6	-2.6
Immunity to rubella <sup>2</sup>	%		86.5	87.3	90.5	90.3	92.2	92.4	90.0	90.5	92.3	94.3	9.0	2.2
Any breastfeeding <sup>1,2,5,6</sup>	%		43.9	44.8	45.7	47.7	48.9	50.7	51.2	52.8	54.1	55.3	26.0	2.2
Exclusive breastfeeding <sup>1,2,5</sup>	%		41.1	41.3	42.5	44.1	44.5	45.2	44.7	45.5	46.2	47.0	14.4	1.7
Mother's length of stay (days) <sup>1,2,7</sup>	Avg		4.1	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	-19.5	-2.9
<b>Perinatal Care</b>														
Hospital & G.P. combined antenatal care <sup>2</sup>	%		74.1	75.9	77.3	77.5	79.0	77.5	79.4	80.8	80.9	77.3	4.3	-4.4
Booked hospital admissions <sup>2,7</sup>	%		97.7	97.6	98.4	98.5	99.0	99.1	98.9	99.0	99.3	99.3	1.6	0.0
Method of delivery <sup>8</sup>	Spontaneous	%	62.4	61.2	59.6	59.0	58.8	57.3	56.6	56.4	56.5	55.8	-10.6	-1.2
	Caesarean section	%	22.4	24.2	25.2	25.9	25.4	26.2	26.7	26.9	27.1	28.1	25.4	3.7
	Forceps <sup>10</sup>	%	3.2	2.9	2.5	2.8	3.0	3.7	3.7	4.1	4.0	4.1	28.1	2.5
Method of delivery <sup>8</sup>	Spontaneous	%	63.0	61.9	60.2	59.7	59.4	58.0	57.4	57.0	57.2	56.6	-10.2	-1.0
	Caesarean section	%	21.9	23.6	24.6	25.3	24.8	25.5	25.9	26.2	26.3	27.3	24.7	3.8
	Forceps <sup>10</sup>	%	3.2	2.9	2.5	2.8	3.0	3.7	3.7	4.1	4.0	4.1	28.1	2.5
<b>Infant Characteristics</b>														
Birthweight (grams) <sup>1</sup>	Total births	Avg	3474.1	3471.1	3476.6	3472.0	3473.0	3465.4	3464.0	3466.1	3468.4	3467.0	-0.2	0.0
	Singleton births	Avg	3503.7	3500.6	3508.0	3503.2	3503.9	3499.3	3501.9	3498.9	3504.0	3505.0	0.0	0.0
	Multiple births	Avg	2489.7	2487.1	2471.2	2469.2	2464.8	2421.4	2424.5	2465.2	2447.2	2464.6	-1.0	0.7
Low birthweight (<2500 grams) <sup>1</sup>	Total births	%	4.9	5.1	5.0	5.0	5.0	5.3	5.3	5.0	5.1	5.2	6.1	2.0
	Singleton births	%	3.8	3.9	3.7	3.8	3.7	3.8	3.8	3.7	3.6	3.6	-5.3	0.0
	Multiple births	%	44.2	45.1	45.6	45.6	46.4	50.4	48.4	45.4	47.6	46.0	4.1	-3.4
High birthweight (≥4500 grams) <sup>1</sup>	Total births	%	2.9	2.8	2.8	2.9	2.9	2.8	2.7	2.7	2.7	2.6	-10.3	-3.7
	Total births	Avg	3.9	3.8	3.8	3.7	3.7	3.5	3.4	3.3	3.2	3.2	-17.9	0.0
	Singleton births	Avg	3.7	3.6	3.6	3.5	3.5	3.3	3.1	3.1	3.0	3.0	-18.9	0.0
Infant's length of stay (days) <sup>1,5,7</sup>	Multiple births	Avg	10.2	10.1	10.6	10.1	9.9	10.0	9.9	9.0	9.5	8.6	-15.7	-9.5
	Post-mortems for early neonatal deaths	%	42.1	41.7	38.2	24.4	26.9	30.8	29.7	34.0	34.4	25.9	-38.5	-24.7

Notes: <sup>1</sup>Not Stated' values are not included in the calculation of percentages.

<sup>2</sup>Based on live births. <sup>3</sup>Based on maternities. <sup>4</sup>Data recording marital status as 'never married' are classified as 'single' in this report. <sup>5</sup>Based on multiparous maternities. <sup>6</sup>Excludes early neonatal deaths. <sup>7</sup>Any breastfeeding includes type of feeding recorded as either breast or combined. <sup>8</sup>Excludes domiciliary births. <sup>9</sup>See also Section 4 'Method of Delivery for Primiparous and Multiparous Women'. <sup>10</sup>These figures were based on total live births, as each infant in a multiple pregnancy can have a different method of delivery. <sup>10</sup>Excludes breech deliveries.

## PERINATAL MORTALITY

Despite improvements in reducing perinatal mortality in recent decades, the perinatal period continues to be a time of relatively high risk.<sup>3</sup> Stillbirths account for 66.0 per cent of perinatal deaths in 2011.<sup>4,5</sup> Table 2.2 presents the numbers and rates for total births and perinatal deaths for Ireland from 2002 to 2011.

- In 2011 approximately 1 in every 250 births was stillborn and 1 in every 484 live births died in the first week of life.
- The perinatal mortality rate has fallen from 8.4 per 1,000 live births and stillbirths in 2002 to 6.1 per 1,000 in 2011. This represents a 27.4 per cent decrease over the decade, and a 10.3 per cent decrease since 2010 (see Figure 2.1).

**TABLE 2.2**

Live Births, Stillbirths, Early Neonatal Deaths, and Perinatal Deaths, 2002–2011

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	% Change	
	Number of Births and Perinatal Deaths										2002– 2011	2010– 2011
<b>Total Births</b>	<b>60,865</b>	<b>61,989</b>	<b>62,406</b>	<b>61,786</b>	<b>65,810</b>	<b>71,963</b>	<b>75,587</b>	<b>76,023</b>	<b>75,600</b>	<b>74,377</b>	<b>22.2</b>	<b>-1.6</b>
Live Births	60,522	61,632	62,067	61,480	65,502	71,570	75,229	75,651	75,245	74,080	22.4	-1.5
Stillbirths	343	357	339	306	308	393	358	372	355	297	-13.4	-16.3
Early Neonatal Deaths	170	177	168	139	152	132	159	155	161	153	-10.0	-5.0
Perinatal Deaths	513	534	507	445	460	525	517	527	516	450	-12.3	-12.8
Adjusted Perinatal Deaths	396	384	382	330	345	383	384	381	368	308	-22.2	-16.3
	Rates (per 1,000 births)*											
Stillbirth	5.6	5.8	5.4	5.0	4.7	5.5	4.7	4.9	4.7	4.0	-28.6	-14.9
Early Neonatal Death	2.8	2.9	2.7	2.3	2.3	1.8	2.1	2.0	2.1	2.1	-25.0	0.0
Perinatal Mortality	8.4	8.6	8.1	7.2	7.0	7.3	6.8	6.9	6.8	6.1	-27.4	-10.3
Adjusted Perinatal Mortality	6.5	6.2	6.1	5.4	5.3	5.3	5.1	5.0	4.9	4.1	-36.9	-16.3

Notes: \* 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.  
For numbers and rates by singleton and multiple births see Section Two 'Singleton and Multiple Births'.

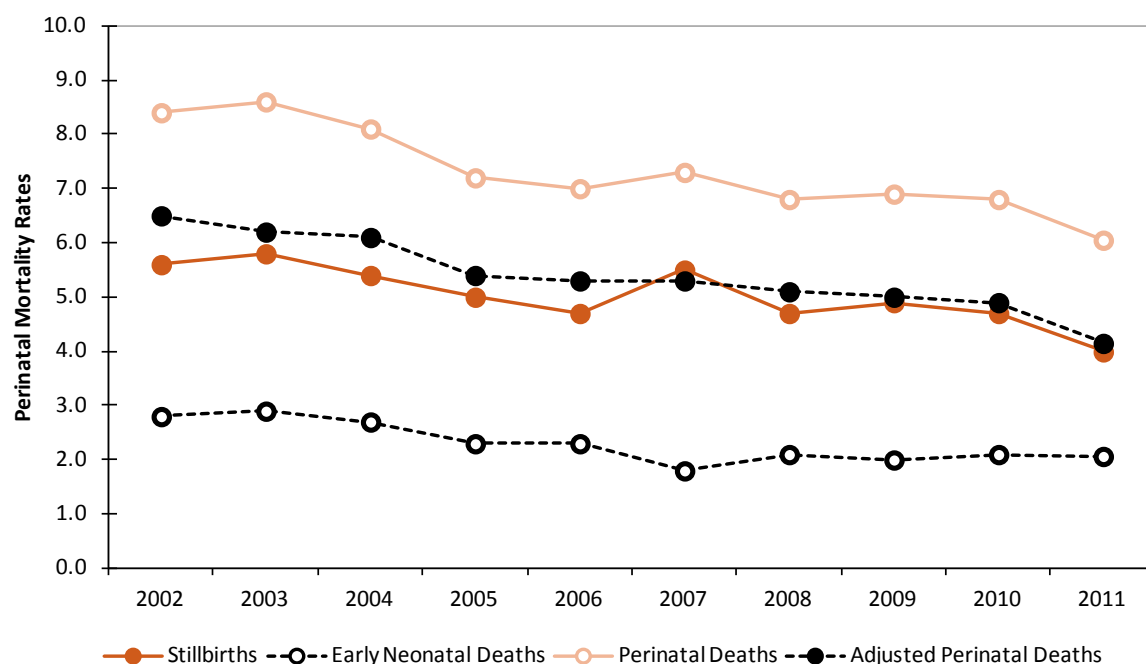
<sup>3</sup> EURO-PERISTAT Project, with SCPE, EUROCAT, EURONEOSTAT. European Perinatal Health Report, 2008. [www.europeristat.com](http://www.europeristat.com)

<sup>4</sup> Details on rate calculations are in Appendix A.

<sup>5</sup> 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.

**FIGURE 2.1**

Stillbirth, Early Neonatal and Perinatal Mortality Rates, Ireland, 2002–2011



Note: See Table 2.2 for data.

Using available data, a European comparison<sup>6</sup> of perinatal mortality rates in Figure 2.2 shows that for the countries included;

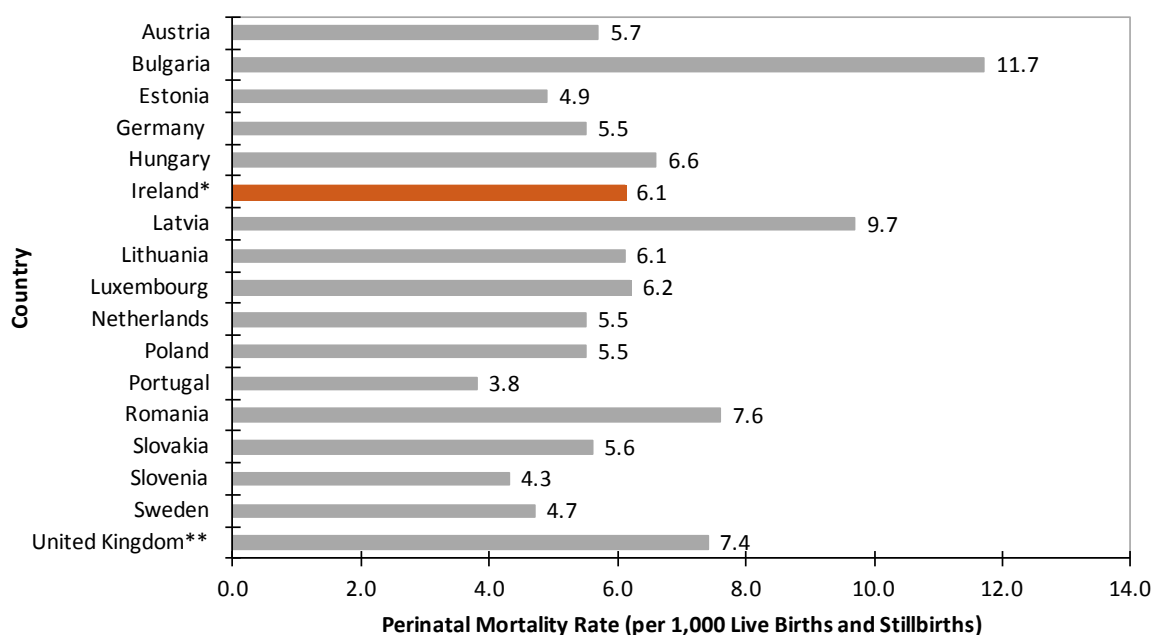
- Bulgaria recorded the highest perinatal mortality rate for 2011, at 11.7 per 1,000 live births and stillbirths.
- Portugal had the lowest perinatal mortality rate recording 3.8 per 1,000 live births and stillbirths.
- At 6.1 per 1,000 live births and stillbirths, the perinatal mortality rate for Ireland ranked 10<sup>th</sup> lowest out of the 16 EU27 countries for which 2011 data were available.

<sup>6</sup> 'Population and Social Conditions', Eurostat, Data Navigation Tree, date consulted December 2012.  
<http://epp.eurostat.ec.europa.eu>

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, 2011



Sources: 'Population and Social Conditions', Eurostat, Data Navigation Tree, date consulted December 2012.

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

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

\*\* Perinatal Mortality Rate for UK is based on 2010 data.

## BIRTH RATES<sup>7</sup>

The birth rate is based on the total number of live births per 1,000 population.<sup>8</sup> Figure 2.3 presents trends in birth rates for selected EU countries and total live births for Ireland over the decade 2002 to 2011. Figure 2.4 presents birth rates in the 27 EU countries in 2011.

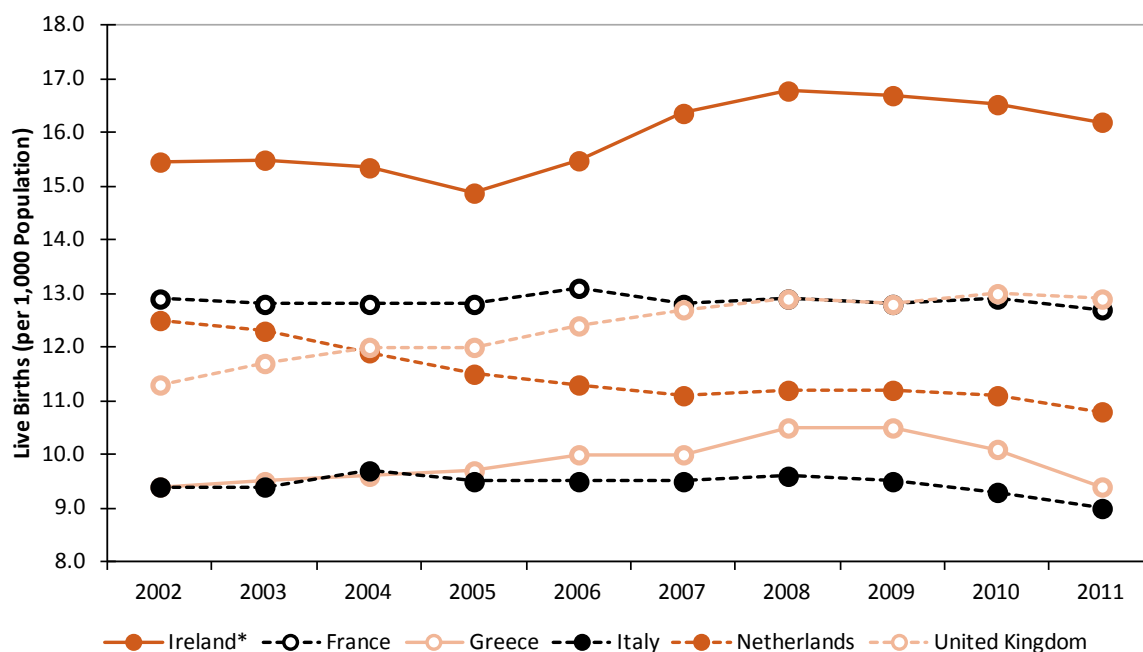
- Of the countries reviewed, Ireland has consistently had the highest birth rate over the period, increasing from 15.5 per 1000 population in 2002 to 16.2 per 1,000 population in 2011.<sup>9</sup>
- The birth rate for Ireland has declined from a high of 16.8 per 1,000 population in 2008 to 16.5 per 1,000 in 2010 and 16.2 per 1,000 in 2011.
- After Ireland, the countries with the next highest birth rates are the United Kingdom and France (12.9 and 12.7 respectively) followed by Belgium and Sweden (11.9 and 11.8 respectively). In 2011, Germany (8.1) had the lowest birth rate with Hungary (8.8) next in line (see Figure 2.4).

<sup>7</sup> 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.

<sup>8</sup> The population estimates used in the denominator of the birth rate were calculated by the CSO Statistical Databases, date consulted December 2012. [www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0](http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0)

<sup>9</sup> The CSO estimates the Irish birth rate at 16.3 per 1,000 of the population for 2011. See Vital Statistics, Fourth Quarter and Yearly Summary 2011, July 2012. CSO 2011 data are provisional and are based on the number of births registered within the year as opposed to births occurring in the year.

**FIGURE 2.3**  
Trends in Birth Rates for Selected EU Countries, 2002–2011



Sources: 'Population and Social Conditions', Eurostat, Data Navigation Tree, date consulted December 2012.

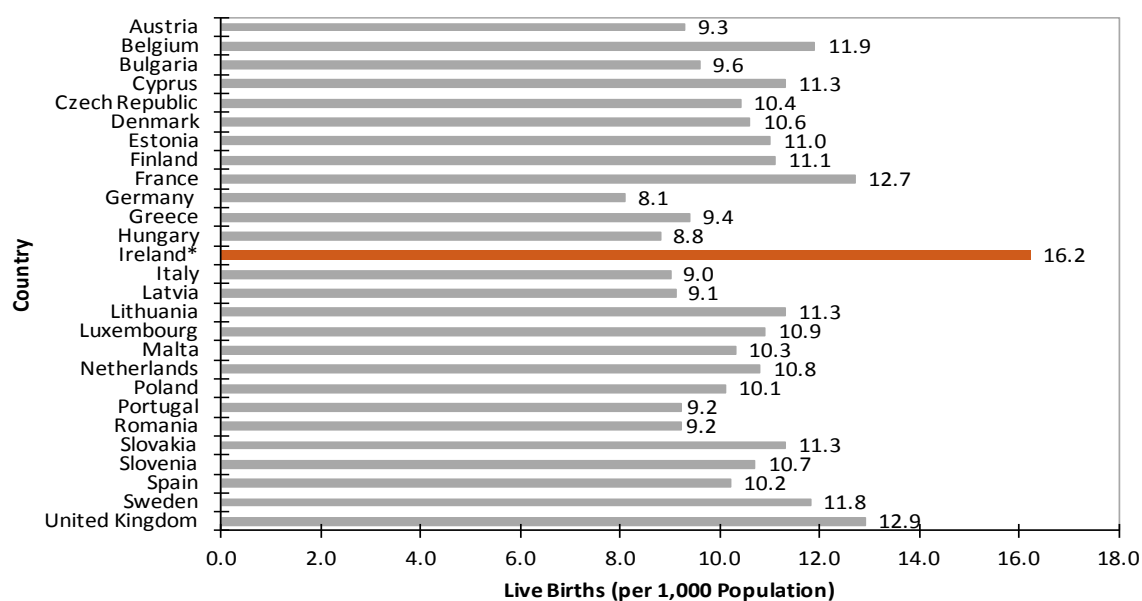
<http://epp.eurostat.ec.europa.eu>

\*Data for Ireland are based on NPRS data on live births from 2002 onwards. Population estimates were obtained from the CSO Statistical Databases, date consulted December 2012. Population estimates for 2011 were obtained from *Census 2011*.

[www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0](http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0)

As these estimates are based on the revised population estimates published by the Central Statistics Office, based on *Census 2011* results, the birth rates for the period 2007–2010 previously reported have been adjusted accordingly.

**FIGURE 2.4**  
Birth Rates per 1,000 Population for EU Countries, 2011



Sources: 'Population and Social Conditions', Eurostat, Data Navigation Tree, date consulted December 2012.

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

\* Data for Ireland are based on NPRS data on live births. Population estimates for 2011 were obtained from *Census 2011*. CSO Statistical Databases, date consulted December 2012.

[www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0](http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0)

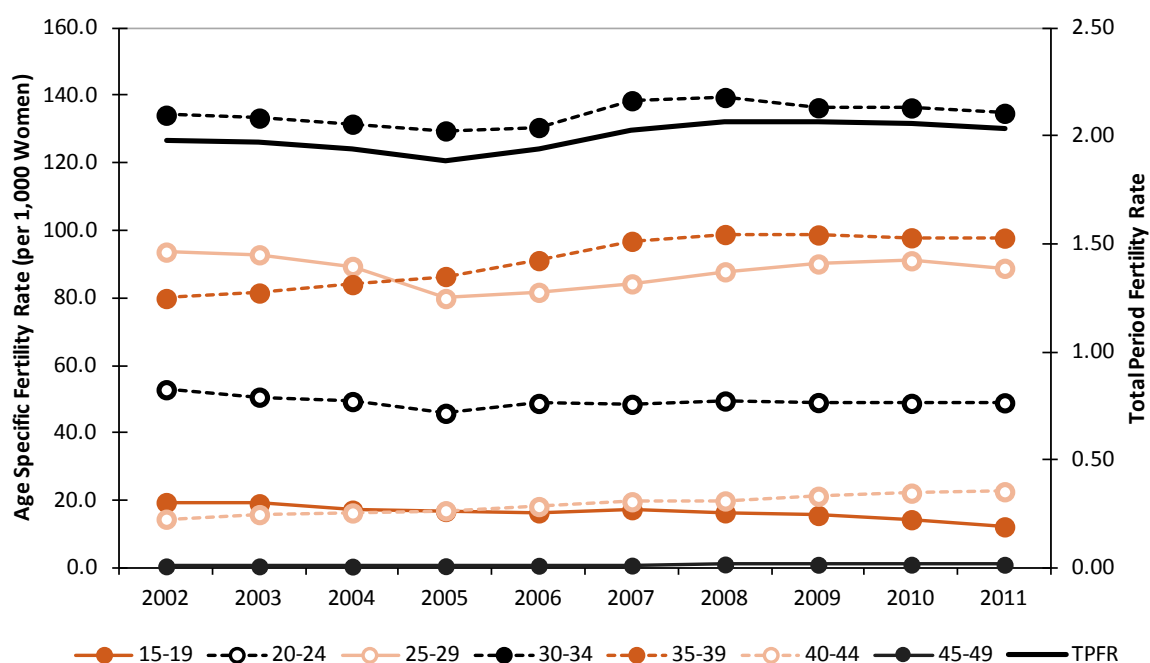
## FERTILITY

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.<sup>10</sup> The ASFR refers to the number of live births to women in a particular age group per 1,000 women. Figure 2.5 displays the trend in the TPFR in Ireland from 2002 to 2011.

- The Irish TPFR has increased overall from an average of 1.98 in 2002 to 2.03 in 2011.<sup>11</sup>
- The ASFRs show women aged 35 to 39 recorded an annual increase in fertility between 2002 and 2008 and reported a slight decrease between 2009 and 2011.
- Whilst women in the younger age groups (20 to 24 years) recorded decreasing rates up to 2005, these rates have shown a more consistent trend in recent years.
- 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 higher than that reported for the 15 to 19 year age group in 2011, a trend observed in greater proportions since 2005.

**FIGURE 2.5**

Age-Specific Fertility Rates (ASFRs) and Total Period Fertility Rates (TPFRs), Ireland, 2002–2011



Sources: Total period fertility rates (TPFRs) and age-specific fertility rates (ASFRs) are calculated using NPRS data from 2002 onwards. Female population estimates from 2002 onwards were obtained from the CSO Statistical Databases, date consulted December 2012. Female population estimates for 2011 were obtained from *Census 2011*. [www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0](http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0) As these estimates are based on the revised population estimates published by the Central Statistics Office, based on *Census 2011* results, the TPFRs and ASFRs for the period 2007–2010 previously reported have been adjusted accordingly.

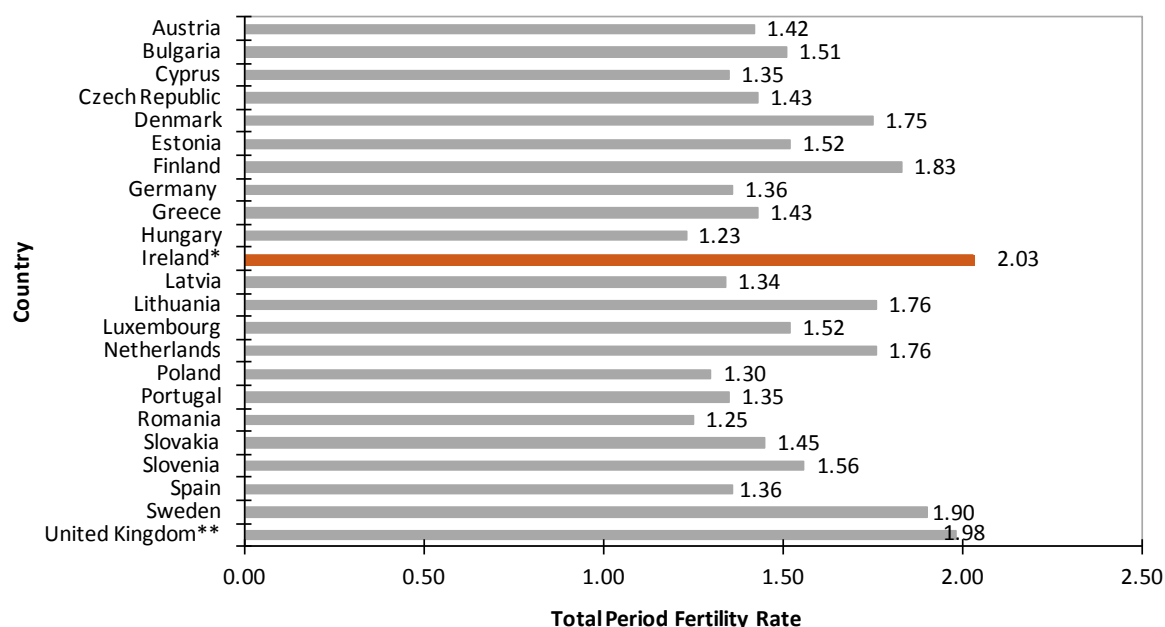
<sup>10</sup> See Appendix A, definitions for calculation of TPFR and ASFR.

<sup>11</sup> The CSO estimates the TPFR at 2.04 for 2011. See Vital Statistics, Fourth Quarter and Yearly Summary 2011, July 2012. CSO 2011 data are provisional and are based on the number of births registered within the year as opposed to births occurring in the year.

The TPFR for Ireland is based on population data for 2011<sup>12</sup>, and at 2.03 is below the level required for the long-term replacement of the population in the absence of any net inward migration (2.10). Figure 2.6 presents data on TPFRs for 2011 using data from Eurostat and the NPRS.

- Ireland had the highest TPFR in the 22 EU countries for which 2011 data were available.
- Sweden and Finland were just behind Ireland with a TPFR of 1.90 and 1.83 respectively, while Hungary (1.23) and Romania (1.25) recorded the lowest TPFR in 2011.

**FIGURE 2.6**  
Total Period Fertility Rates for Selected EU Countries, 2011



Sources: 'Population and Social Conditions', Eurostat, Data Navigation Tree, date consulted December 2012.  
<http://epp.eurostat.ec.europa.eu>

\* Data for Ireland are based on NPRS data on live births. Female population estimates for 2011 were obtained from *Census 2011*.  
CSO Statistical Databases, date consulted December 2012.

[www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0](http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0)

\*\* Total Period Fertility Rate for UK is based on 2010 data.

## SINGLETON AND MULTIPLE BIRTHS

Table 2.3 shows the numbers of singleton and multiple births each year for the period 2002 to 2011.

- There were 71,651 singleton births, 2,638 twin births, 84 triplet births and 4 quadruplet births in 2011.<sup>13</sup>
- The twinning rate was 18.1 per 1,000 maternities in 2011, this represents an increase of 25.7 per cent over the decade.

<sup>12</sup> *Census 2011*. Central Statistics Office, date consulted December 2012.  
[www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0](http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0)

<sup>13</sup> In accordance with the World Health Organization (WHO) guidelines, only births weighing 500 grams or more are included in any analysis of NPRS data. In 2011, there were 71,703 singleton births, 2,655 twin births, 87 triplets and 4 quadruplets reported to the NPRS; of these 72 births weighed less than 500 grams (including 52 singleton births and 20 multiple births) and so were excluded from the analysis.

**TABLE 2.3****Singleton and Multiple Births, 2002–2011**

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	% Change	
											2002-2011	2010-2011
Singleton births	59,071	60,164	60,499	59,902	63,839	69,692	72,916	73,603	73,046	71,651	21.3	-1.9
Twin births	1,728	1,747	1,849	1,833	1,916	2,185	2,575	2,377	2,480	2,638	52.7	6.4
Triplet births	54	78	54	47	51	83	92	39	74	84	55.6	13.5
Quadruplet births	12	0	4	4	4	3	4	4	0	4	-66.7	-
Twinning rate (per 1,000 maternities)	14.4	14.3	15.0	15.1	14.8	15.4	17.3	15.9	16.7	18.1	25.7	8.4

Notes: See Appendix A for details on calculation of twinning rate.  
This table includes live births and stillbirths.

The numbers and rates of stillbirths and early neonatal deaths for singleton and multiple births between 2002 and 2011 is presented in Table 2.4.

- Higher mortality rates were observed for multiple births when compared to singleton births.
- The stillbirth mortality rate for singleton births has decreased over the decade from 5.4 in 2002 to 4.4 in 2006, to the 2011 rate of 3.9 per 1,000 live births and stillbirths.
- The early neonatal mortality rate for singleton births decreased to 1.8 per 1,000 live births in 2011 compared to a rate of 2.5 per 1,000 live births in 2002.

**TABLE 2.4****Live Births, Stillbirths and Early Neonatal Deaths, Numbers and Rates, Singleton and Multiple Births, 2002–2011**

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	% Change	
	Number of Births and Perinatal Deaths										2002-2011	2010-2011
<b>Total Births</b>	<b>60,865</b>	<b>61,989</b>	<b>62,406</b>	<b>61,786</b>	<b>65,810</b>	<b>71,963</b>	<b>75,587</b>	<b>76,023</b>	<b>75,600</b>	<b>74,377</b>	<b>22.2</b>	<b>-1.6</b>
Singleton	59,071	60,164	60,499	59,902	63,839	69,692	72,916	73,603	73,046	71,651	21.3	-1.9
Multiple	1,794	1,825	1,907	1,884	1,971	2,271	2,671	2,420	2,554	2,726	52.0	6.7
<b>Live Births</b>	<b>60,522</b>	<b>61,632</b>	<b>62,067</b>	<b>61,480</b>	<b>65,502</b>	<b>71,570</b>	<b>75,229</b>	<b>75,651</b>	<b>75,245</b>	<b>74,080</b>	<b>22.4</b>	<b>-1.5</b>
Singleton	58,752	59,837	60,186	59,621	63,555	69,318	72,582	75,247	72,709	71,375	21.5	-1.8
Multiple	1,770	1,795	1,881	1,859	1,947	2,252	2,647	2,404	2,536	2,705	52.8	6.7
<b>Stillbirths</b>	<b>343</b>	<b>357</b>	<b>339</b>	<b>306</b>	<b>308</b>	<b>393</b>	<b>358</b>	<b>372</b>	<b>355</b>	<b>297</b>	<b>-13.4</b>	<b>-16.3</b>
Singleton	319	327	313	281	284	374	334	356	337	276	-13.5	-18.1
Multiple	24	30	26	25	24	19	24	16	18	21	-12.5	16.7
<b>Early Neonatal Deaths</b>	<b>170</b>	<b>177</b>	<b>168</b>	<b>139</b>	<b>152</b>	<b>132</b>	<b>159</b>	<b>155</b>	<b>161</b>	<b>153</b>	<b>-10.0</b>	<b>-5.0</b>
Singleton	149	156	140	109	129	118	138	142	135	126	-15.4	-6.7
Multiple	21	21	28	30	23	14	21	13	26	27	28.6	3.8
<b>Rates (per 1,000 births)*</b>												
<b>Stillbirths</b>	<b>5.6</b>	<b>5.8</b>	<b>5.4</b>	<b>5.0</b>	<b>4.7</b>	<b>5.5</b>	<b>4.7</b>	<b>4.9</b>	<b>4.7</b>	<b>4.0</b>	<b>-28.6</b>	<b>-14.9</b>
Singleton	5.4	5.4	5.2	4.7	4.4	5.4	4.6	4.8	4.6	3.9	-27.8	-15.2
Multiple	13.4	16.4	13.6	13.3	12.2	8.4	9.0	6.6	7.0	7.7	-42.5	10.0
<b>Early Neonatal Deaths</b>	<b>2.8</b>	<b>2.9</b>	<b>2.7</b>	<b>2.3</b>	<b>2.3</b>	<b>1.8</b>	<b>2.1</b>	<b>2.0</b>	<b>2.1</b>	<b>2.1</b>	<b>-25.0</b>	<b>0.0</b>
Singleton	2.5	2.6	2.3	1.8	2.0	1.7	1.9	1.9	1.9	1.8	-28.0	-5.3
Multiple	11.9	11.7	14.9	16.1	11.8	6.2	7.9	5.4	10.3	10.0	-16.0	-2.9

Note: \* For stillbirths, rates are calculated on total live births and stillbirths. For early neonatal deaths, rates are calculated on total live births.

## METHOD OF DELIVERY FOR PRIMIPAROUS<sup>14</sup> AND MULTIPAROUS<sup>15</sup> WOMEN

Table 2.5 outlines trends in the method of delivery for primiparous and multiparous women over the decade 2002 to 2011.

- Delivery by Caesarean section has increased for total maternities from 21.9 per cent in 2002 to 27.3 per cent in 2011.
- 28.6 per cent of primiparous women delivered by Caesarean section in 2011 compared to 23.8 per cent in 2002, with the rate of increase for Caesarean section delivery higher for multiparous women, increasing from 20.6 per cent in 2002 to 26.4 per cent in 2011 (see Figure 2.7).
- Spontaneous deliveries have fallen for total maternities from 63.0 per cent in 2002 to 56.6 per cent in 2011 with the rate of decrease higher for primiparous than multiparous women.

**TABLE 2.5**

Percentage Distribution of Maternities by Method of Delivery, Primiparous and Multiparous Women, 2002–2011

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	% Change	
											2002–2011	2010–2011
<b>Total Maternities</b>												
Spontaneous	63.0	61.9	60.2	59.7	59.4	58.0	57.4	57.0	57.2	56.6	-10.2	-1.0
Breech/forceps	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.0	-20.0
Forceps	3.2	2.9	2.5	2.8	3.0	3.7	3.7	4.1	4.0	4.1	28.1	2.5
Vacuum extraction	11.2	11.0	12.0	11.7	12.2	12.2	12.6	12.2	11.9	11.5	2.7	-3.4
Caesarean section	21.9	23.6	24.6	25.3	24.8	25.5	25.9	26.2	26.3	27.3	24.7	3.8
Other specified & combined	0.3	0.2	0.3	0.1	0.2	0.2	0.1	0.1	0.0	0.0	-100.0	0.0
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>		
<b>Primiparous</b>												
Spontaneous	49.6	47.8	45.4	45.0	45.6	44.1	43.5	42.7	42.7	41.2	-16.9	-3.5
Breech/forceps	0.5	0.6	0.5	0.6	0.6	0.6	0.5	0.5	0.7	0.6	20.0	-14.3
Forceps	6.2	5.7	5.1	5.6	5.8	7.2	7.2	8.2	8.0	8.6	38.7	7.5
Vacuum extraction	19.5	19.4	21.2	21.0	21.5	21.0	21.4	21.2	21.0	21.0	7.7	0.0
Caesarean section	23.8	26.3	27.7	27.7	26.3	27.1	27.3	27.3	27.6	28.6	20.2	3.6
Other specified & combined	0.2	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	-100.0	0.0
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>		
<b>Multiparous</b>												
Spontaneous	72.2	71.5	70.1	69.5	69.1	68.0	67.6	67.4	67.5	66.8	-7.5	-1.0
Breech/forceps	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.0	-25.0
Forceps	1.1	1.0	0.8	0.9	1.0	1.2	1.1	1.1	1.2	1.1	0.0	-8.3
Vacuum extraction	5.5	5.3	5.9	5.5	5.7	5.8	6.0	5.7	5.4	5.2	-5.5	-3.7
Caesarean section	20.6	21.7	22.5	23.7	23.7	24.4	24.8	25.4	25.4	26.4	28.2	3.9
Other specified & combined	0.3	0.2	0.4	0.1	0.2	0.2	0.1	0.1	0.1	0.1	-66.7	0.0
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>		

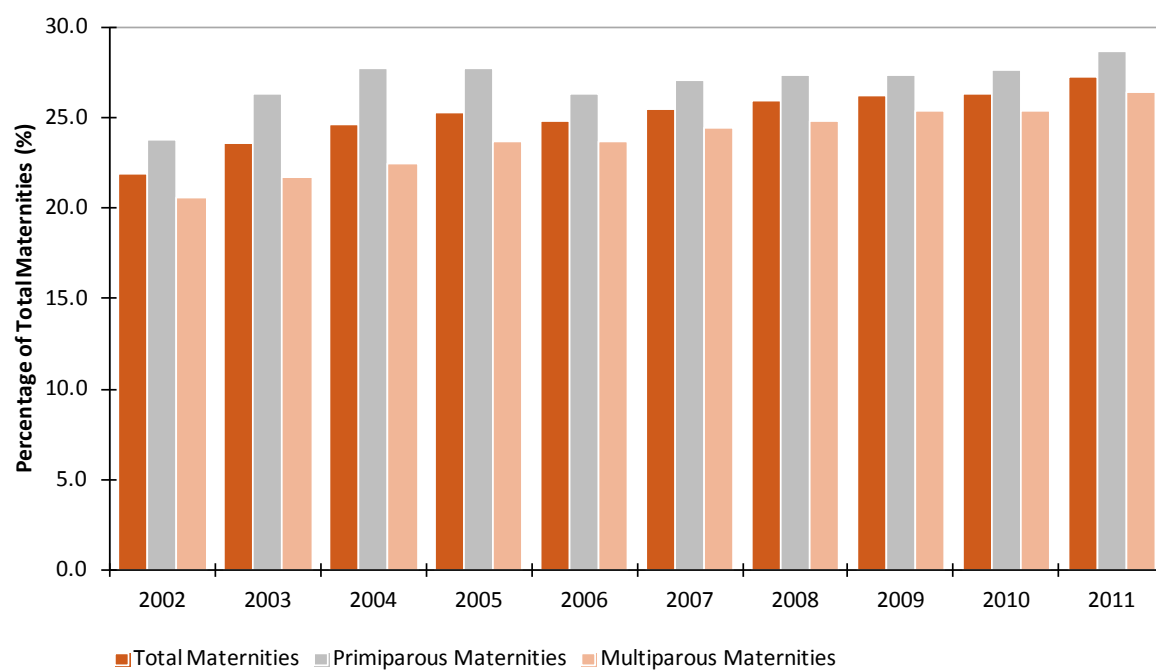
Note: Maternities with 'not stated' parity were excluded from the table.

<sup>14</sup> Women who have had no previous pregnancy resulting in a live birth or stillbirth.

<sup>15</sup> Women who have had at least one previous pregnancy resulting in a live birth or stillbirth.

**FIGURE 2.7**

Percentage Distribution of Maternities Delivering by Caesarean Section for Total, Primiparous and Multiparous Women, 2002–2011



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 2011 and some longitudinal comparisons.<sup>16</sup> Unless otherwise stated the data presented in tables and figures in Section Three are based on data reported to the NPRS for 2011.

Data for a selection of variables are presented including:

- mother's age, marital status, occupation, nationality, parity, number of previous stillbirths, and interval since last birth;
- father's occupation and nationality; and
- infant's 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.

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<sup>16</sup> Data for 2007–2011 will be presented in this section. Previous reports in this series can be downloaded from [www.esri.ie/health\\_information/latest\\_hipe\\_nprs\\_reports/](http://www.esri.ie/health_information/latest_hipe_nprs_reports/)

## MATERNAL AGE

Table 3.1 presents data on maternal age.<sup>17</sup>

- In 2011, over 36 per cent of total births were to mothers aged 30 to 34 years, representing just over one third of all mothers having either a singleton or multiple birth.

**TABLE 3.1**

Age of Mother: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
Under 15 Years	8	0.0	8	0	0.0	0	0.0	0.0	0.0	8
15-19 Years	1,692	2.3	1,684	8	4.7	5	3.0	7.7	5.3	1,681
20-24 Years	7,393	9.9	7,347	46	6.2	15	2.0	8.3	5.8	7,346
25-29 Years	16,747	22.5	16,690	57	3.4	32	1.9	5.3	3.9	16,522
30-34 Years	26,846	36.1	26,758	88	3.3	59	2.2	5.5	3.7	26,346
35-39 Years	17,795	23.9	17,725	70	3.9	25	1.4	5.3	3.7	17,352
40-44 Years	3,728	5.0	3,703	25	6.7	15	4.1	10.7	6.2	3,606
45 Years and Over	167	0.2	164	3	18.0	2	12.2	29.9	18.2	146
Not Stated	1	0.0	1	0	0.0	0	0.0	0.0	0.0	1
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>	<b>73,008</b>
<b>Singleton Births</b>										
Under 15 Years	8	0.0	8	0	0.0	0	0.0	0.0	0.0	8
15-19 Years	1,670	2.3	1,662	8	4.8	5	3.0	7.8	5.4	1,670
20-24 Years	7,296	10.2	7,251	45	6.2	14	1.9	8.1	5.6	7,296
25-29 Years	16,296	22.7	16,247	49	3.0	28	1.7	4.7	3.4	16,296
30-34 Years	25,850	36.1	25,765	85	3.3	43	1.7	5.0	3.4	25,850
35-39 Years	16,918	23.6	16,855	63	3.7	20	1.2	4.9	3.4	16,918
40-44 Years	3,486	4.9	3,463	23	6.6	15	4.3	10.9	6.3	3,486
45 Years and Over	126	0.2	123	3	23.8	1	8.1	31.7	16.1	126
Not Stated	1	0.0	1	0	0.0	0	0.0	0.0	0.0	1
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>71,375</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>	<b>71,651</b>
<b>Multiple Births</b>										
Under 15 Years	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0
15-19 Years	22	0.8	22	0	0.0	0	0.0	0.0	0.0	11
20-24 Years	97	3.6	96	1	10.3	1	10.4	20.6	20.6	50
25-29 Years	451	16.5	443	8	17.7	4	9.0	26.6	22.3	226
30-34 Years	996	36.5	993	3	3.0	16	16.1	19.1	10.1	496
35-39 Years	877	32.2	870	7	8.0	5	5.7	13.7	10.3	434
40-44 Years	242	8.9	240	2	8.3	0	0.0	8.3	4.1	120
45 Years and Over	41	1.5	41	0	0.0	1	24.4	24.4	24.4	20
Not Stated	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Note: \* Rate per 1,000 births. 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.

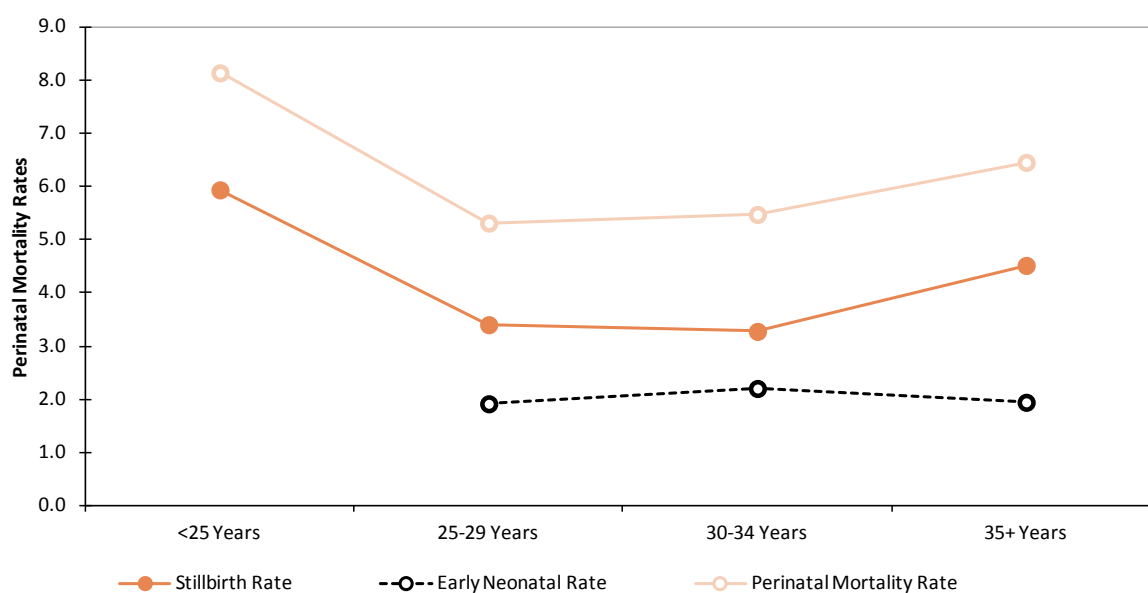
<sup>17</sup> Throughout this section, 'Not Stated' values are not included in the calculation of percentages for discussion.

Figure 3.1 presents perinatal mortality rates.

- The perinatal mortality rate is highest for mothers aged less than 25 years, with a rate of 8.1 per 1,000 live births and stillbirths, whilst the lowest perinatal mortality rate was recorded for the 25 to 29 year age group (5.3 per 1,000 live births and stillbirths).
- At 5.9 per 1,000 live births and stillbirths the highest stillbirth rate was recorded for mothers aged less than 25 years, whilst the lowest stillbirth rate was recorded for the 30 to 34 year age group (3.3 per 1,000 live births and stillbirths).
- At 2.2 per 1,000 live births the highest early neonatal rate was recorded for mothers aged 30 to 34 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 fewer observations are not included in this Figure.

## MOTHER'S MARITAL STATUS

Table 3.2 presents data on mother's marital status.

- Close to two-thirds of births were to married women, and under one-third to single women.<sup>18</sup>
- Approximately 72 per cent of multiple births were to married women.

**TABLE 3.2**

**Mother's Marital Status: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities**

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
Married	48,492	65.2	48,319	173	3.6	100	2.1	5.6	3.6	47,510
Single	24,667	33.2	24,553	114	4.6	51	2.1	6.7	5.0	24,306
Widowed	91	0.1	91	0	0.0	0	0.0	0.0	0.0	90
Separated	656	0.9	650	6	9.1	0	0.0	9.1	9.1	647
Divorced	407	0.5	403	4	9.8	0	0.0	9.8	7.4	396
Not Stated	64	0.1	64	0	0.0	2	31.3	31.3	0.0	59
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>	<b>73,008</b>
<b>Singleton Births</b>										
Married	46,538	65.0	46,379	159	3.4	78	1.7	5.1	3.3	46,538
Single	23,943	33.4	23,835	108	4.5	46	1.9	6.4	4.8	23,943
Widowed	89	0.1	89	0	0.0	0	0.0	0.0	0.0	89
Separated	641	0.9	635	6	9.4	0	0.0	9.4	9.4	641
Divorced	386	0.5	383	3	7.8	0	0.0	7.8	7.8	386
Not Stated	54	0.1	54	0	0.0	2	37.0	37.0	0.0	54
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>71,375</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>	<b>71,651</b>
<b>Multiple Births</b>										
Married	1,954	71.7	1,940	14	7.2	22	11.3	18.4	12.9	972
Single	724	26.6	718	6	8.3	5	7.0	15.2	11.1	363
Widowed	2	0.1	2	0	0.0	0	0.0	0.0	0.0	1
Separated	15	0.6	15	0	0.0	0	0.0	0.0	0.0	6
Divorced	21	0.8	20	1	47.6	0	0.0	47.6	0.0	10
Not Stated	10	0.4	10	0	0.0	0	0.0	0.0	0.0	5
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Note: \* Rate per 1,000 births. 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.

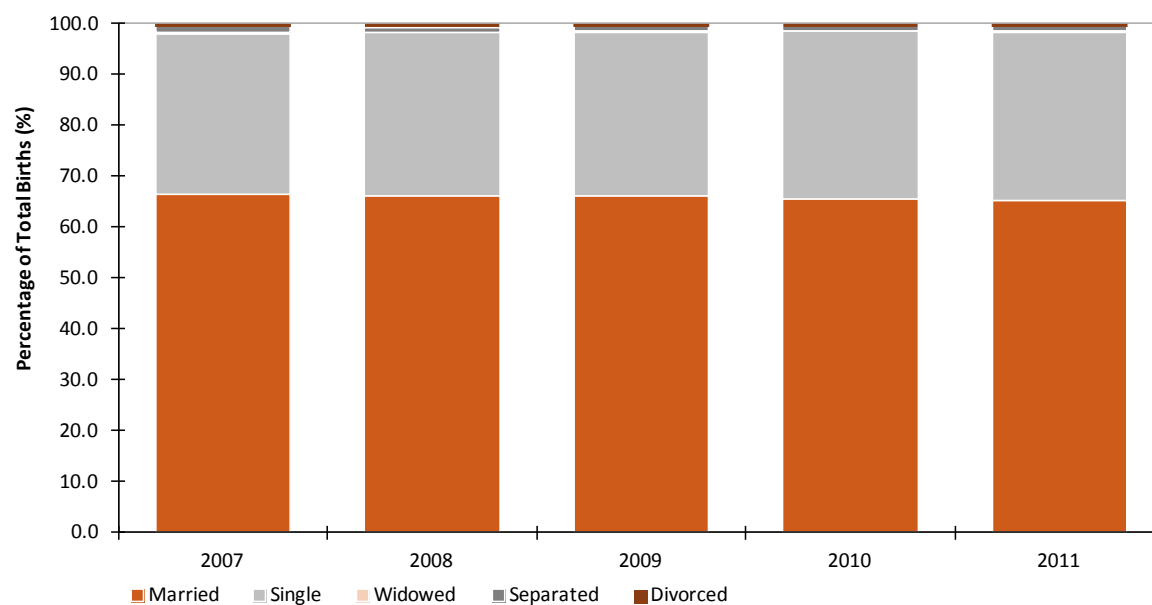
Figures 3.2 and 3.3 present data on mother's marital status.

- The distribution of total births by mother's marital status has remained fairly consistent between 2007 and 2011 (see Figure 3.2).
- Figure 3.3 presents the distribution of births to single mothers by county of residence. In Dublin City over 40.3 per cent of births were to single mothers, compared to 27.0 per cent in Mayo (See Appendix E for details of county of residence classification).

<sup>18</sup> Data recording marital status as 'never married' are classified as 'single' in discussion in this report.

**FIGURE 3.2**

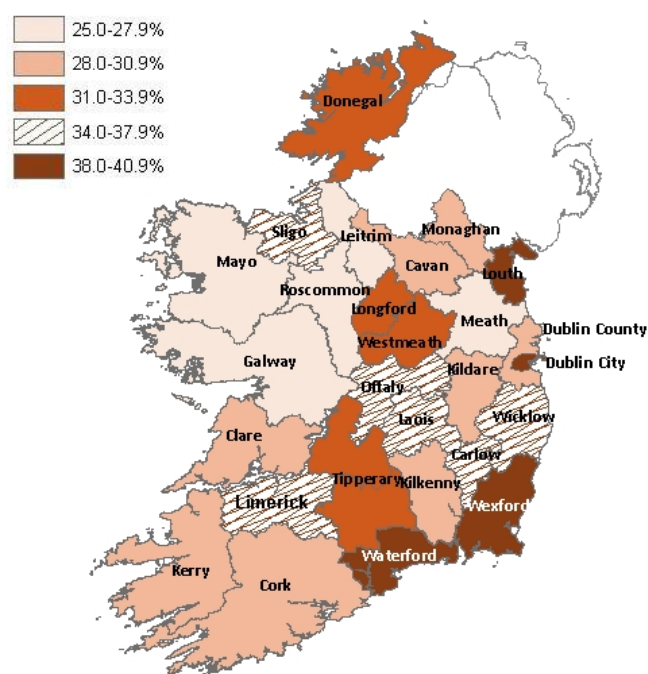
Percentage of Births by Mother's Marital Status, Total Births, 2007–2011



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, 36.0 per cent were to single mothers.

## OCCUPATION

### MOTHER'S OCCUPATION

Table 3.3 presents data on mother's occupation.

- The highest proportions of total births were to mothers whose occupation was recorded as either 'intermediate non-manual workers' (20.9 per cent) or 'home duties' (20.7 per cent).
- Mothers classified as 'lower professional' accounted for 16.3 per cent of total births, while mothers in the 'other non-manual workers' category accounted for a further 13.6 per cent of total births.
- Where rates are calculated on more than 20 observations, the highest perinatal mortality rate of 10.9 per 1,000 live births and stillbirths was reported for 'unemployed' mothers.
- The lowest perinatal mortality rate was recorded for mothers with an occupation in the 'intermediate non-manual workers' category (4.4 per 1,000 live births and stillbirths), while a perinatal mortality rate of 5.0 per 1,000 live births and stillbirths was recorded for mothers in the 'lower professional' category (see Figure 3.4).<sup>19</sup>

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<sup>19</sup> 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.

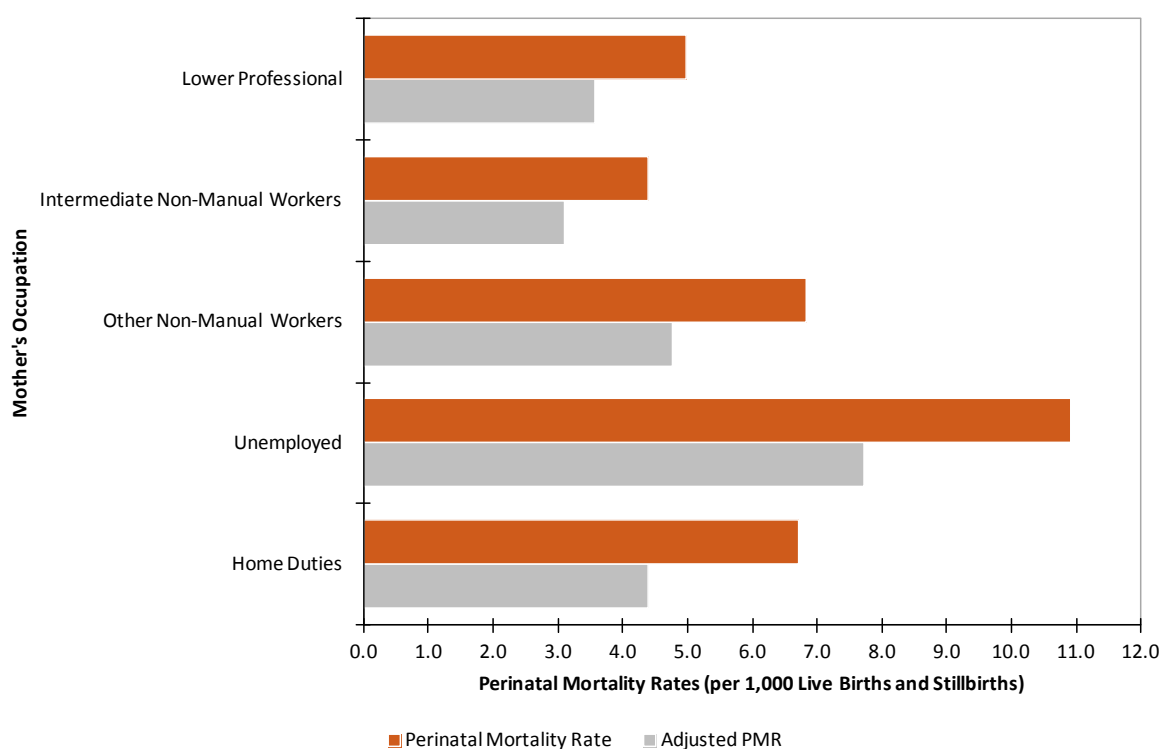
TABLE 3.3

Mother's Occupation: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
Farmers & Farm Managers	62	0.1	62	0	0.0	0	0.0	0.0	0.0	60
Other Agricultural Occupations & Fishermen	69	0.1	69	0	0.0	0	0.0	0.0	0.0	69
Higher Professional	5,018	6.7	5,000	18	3.6	10	2.0	5.6	3.2	4,900
Lower Professional	12,078	16.2	12,039	39	3.2	21	1.7	5.0	3.6	11,836
Employers & Managers	5,437	7.3	5,421	16	2.9	15	2.8	5.7	3.3	5,301
Salaried Employees	1,006	1.4	1,006	0	0.0	3	3.0	3.0	3.0	986
Intermediate Non-Manual Workers	15,481	20.8	15,435	46	3.0	22	1.4	4.4	3.1	15,182
Other Non-Manual Workers	10,107	13.6	10,056	51	5.0	18	1.8	6.8	4.8	9,952
Skilled Manual Workers	1,152	1.5	1,145	7	6.1	0	0.0	6.1	5.2	1,130
Semi-Skilled Manual Workers	2,318	3.1	2,309	9	3.9	5	2.2	6.0	4.3	2,278
Unskilled Manual Workers	9	0.0	9	0	0.0	0	0.0	0.0	0.0	9
Unemployed	3,118	4.2	3,089	29	9.3	5	1.6	10.9	7.7	3,082
Not Classifiable	2,890	3.9	2,870	20	6.9	8	2.8	9.7	7.3	2,854
Home Duties	15,316	20.6	15,258	58	3.8	45	2.9	6.7	4.4	15,056
Not Stated	316	0.4	312	4	12.7	1	3.2	15.8	12.7	313
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>	<b>73,008</b>
<b>Singleton Births</b>										
Farmers & Farm Managers	58	0.1	58	0	0.0	0	0.0	0.0	0.0	58
Other Agricultural Occupations & Fishermen	69	0.1	69	0	0.0	0	0.0	0.0	0.0	69
Higher Professional	4,784	6.7	4,769	15	3.1	7	1.5	4.6	2.7	4,784
Lower Professional	11,593	16.2	11,557	36	3.1	16	1.4	4.5	3.1	11,593
Employers & Managers	5,167	7.2	5,153	14	2.7	11	2.1	4.8	2.9	5,167
Salaried Employees	965	1.3	965	0	0.0	3	3.1	3.1	3.1	965
Intermediate Non-Manual Workers	14,892	20.8	14,852	40	2.7	18	1.2	3.9	2.8	14,892
Other Non-Manual Workers	9,796	13.7	9,748	48	4.9	16	1.6	6.5	4.8	9,796
Skilled Manual Workers	1,106	1.5	1,099	7	6.3	0	0.0	6.3	5.4	1,106
Semi-Skilled Manual Workers	2,237	3.1	2,228	9	4.0	4	1.8	5.8	4.0	2,237
Unskilled Manual Workers	9	0.0	9	0	0.0	0	0.0	0.0	0.0	9
Unemployed	3,047	4.3	3,020	27	8.9	5	1.7	10.5	7.2	3,047
Not Classifiable	2,817	3.9	2,797	20	7.1	8	2.9	9.9	7.5	2,817
Home Duties	14,801	20.7	14,745	56	3.8	37	2.5	6.3	3.9	14,801
Not Stated	310	0.4	306	4	12.9	1	3.3	16.1	12.9	310
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>71,375</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>	<b>71,651</b>
<b>Multiple Births</b>										
Farmers & Farm Managers	4	0.1	4	0	0.0	0	0.0	0.0	0.0	2
Other Agricultural Occupations & Fishermen	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0
Higher Professional	234	8.6	231	3	12.8	3	13.0	25.6	13.0	116
Lower Professional	485	17.8	482	3	6.2	5	10.4	16.5	14.5	243
Employers & Managers	270	9.9	268	2	7.4	4	14.9	22.2	11.2	134
Salaried Employees	41	1.5	41	0	0.0	0	0.0	0.0	0.0	21
Intermediate Non-Manual Workers	589	21.6	583	6	10.2	4	6.9	17.0	11.9	290
Other Non-Manual Workers	311	11.4	308	3	9.6	2	6.5	16.1	3.3	156
Skilled Manual Workers	46	1.7	46	0	0.0	0	0.0	0.0	0.0	24
Semi-Skilled Manual Workers	81	3.0	81	0	0.0	1	12.3	12.3	12.3	41
Unskilled Manual Workers	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0
Unemployed	71	2.6	69	2	28.2	0	0.0	28.2	28.2	35
Not Classifiable	73	2.7	73	0	0.0	0	0.0	0.0	0.0	37
Home Duties	515	18.9	513	2	3.9	8	15.6	19.4	17.5	255
Not Stated	6	0.2	6	0	0.0	0	0.0	0.0	0.0	3
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Notes: \* Rate per 1,000 births. 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 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 fewer observations are not included in this Figure.

### FATHER'S OCCUPATION

Father's details are only required for registration purposes where mother's marital status is recorded as 'married'. As a result, the proportion of records for which information is available is not complete and a category of 'not applicable' is required. This category is combined with 'not stated' for the purposes of presenting data on father's occupation in this report. With respect to availability and access to father's details, data quality measures are ongoing with hospital staff in an effort to improve completeness of returns for the details of all fathers.

Table 3.4 presents data on father's occupation.

- Excluding 'not stated/not applicable', over 25 per cent of all births were to fathers whose occupation was recorded as 'skilled manual workers'.
- Fathers recorded as 'other non-manual workers' accounted for 12.6 per cent of total births.
- Where rates are calculated on more than 20 observations, the occupations recording the highest perinatal mortality rates were 'unemployed' which recorded a perinatal mortality rate of 8.2 per 1,000 live births and stillbirths, and 'other non-manual workers' which recorded a perinatal mortality rate of 7.8 per 1,000 live births and stillbirths (see Figure 3.5).
- The lowest perinatal mortality rates were recorded for 'employers and managers' at 3.9 per 1,000 live births and stillbirths and 'higher professional' at 4.7 per 1,000 live births and stillbirths.

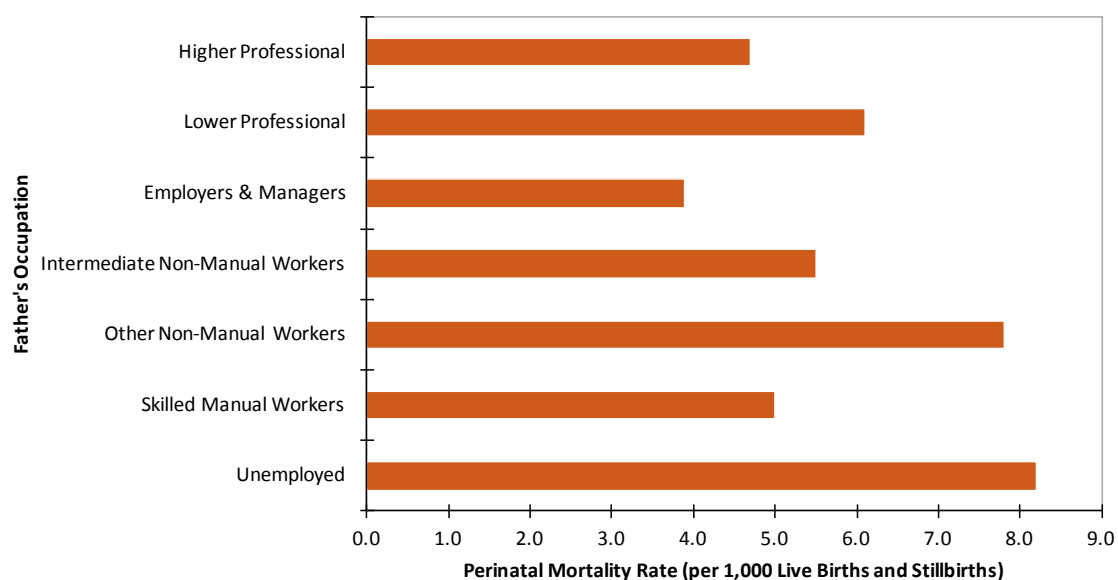
TABLE 3.4

Father's Occupation: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
Farmers & Farm Managers	2,130	2.9	2,121	9	4.2	6	2.8	7.0	2.8	2,081
Other Agricultural Occupations & Fishermen	616	0.8	614	2	3.2	1	1.6	4.9	4.9	605
Higher Professional	5,288	7.1	5,270	18	3.4	7	1.3	4.7	3.2	5,165
Lower Professional	4,266	5.7	4,252	14	3.3	12	2.8	6.1	4.2	4,189
Employers & Managers	5,412	7.3	5,401	11	2.0	10	1.9	3.9	2.8	5,290
Salaried Employees	1,300	1.7	1,297	3	2.3	5	3.9	6.2	3.9	1,278
Intermediate Non-Manual Workers	6,354	8.5	6,330	24	3.8	11	1.7	5.5	3.2	6,219
Other Non-Manual Workers	7,168	9.6	7,133	35	4.9	21	2.9	7.8	5.6	7,038
Skilled Manual Workers	14,464	19.4	14,421	43	3.0	30	2.1	5.0	3.5	14,214
Semi-Skilled Manual Workers	3,507	4.7	3,497	10	2.9	3	0.9	3.7	2.9	3,463
Unskilled Manual Workers	434	0.6	433	1	2.3	1	2.3	4.6	2.3	430
Unemployed	3,801	5.1	3,776	25	6.6	6	1.6	8.2	4.5	3,737
Not Classifiable	1,843	2.5	1,834	9	4.9	2	1.1	6.0	4.9	1,803
Home Duties	126	0.2	126	0	0.0	0	0.0	0.0	0.0	125
Not Stated/Not Applicable	17,668	23.8	17,575	93	5.3	38	2.2	7.4	5.4	17,371
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>	<b>73,008</b>
<b>Singleton Births</b>										
Farmers & Farm Managers	2,032	2.8	2,023	9	4.4	4	2.0	6.4	3.0	2,032
Other Agricultural Occupations & Fishermen	592	0.8	590	2	3.4	0	0.0	3.4	3.4	592
Higher Professional	5,043	7.0	5,029	14	2.8	7	1.4	4.2	3.2	5,043
Lower Professional	4,113	5.7	4,099	14	3.4	7	1.7	5.1	3.4	4,113
Employers & Managers	5,172	7.2	5,163	9	1.7	9	1.7	3.5	2.5	5,172
Salaried Employees	1,256	1.8	1,253	3	2.4	3	2.4	4.8	2.4	1,256
Intermediate Non-Manual Workers	6,089	8.5	6,068	21	3.4	11	1.8	5.3	3.0	6,089
Other Non-Manual Workers	6,911	9.6	6,881	30	4.3	19	2.8	7.1	4.9	6,911
Skilled Manual Workers	13,960	19.5	13,918	42	3.0	23	1.7	4.7	3.3	13,960
Semi-Skilled Manual Workers	3,419	4.8	3,409	10	2.9	2	0.6	3.5	2.6	3,419
Unskilled Manual Workers	426	0.6	425	1	2.3	0	0.0	2.3	2.3	426
Unemployed	3,674	5.1	3,650	24	6.5	6	1.6	8.2	4.4	3,674
Not Classifiable	1,763	2.5	1,754	9	5.1	2	1.1	6.2	5.1	1,763
Home Duties	124	0.2	124	0	0.0	0	0.0	0.0	0.0	124
Not Stated/Not Applicable	17,077	23.8	16,989	88	5.2	33	1.9	7.1	5.2	17,077
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>71,375</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>	<b>71,651</b>
<b>Multiple Births</b>										
Farmers & Farm Managers	98	3.6	98	0	0.0	2	20.4	20.4	0.0	49
Other Agricultural Occupations & Fishermen	24	0.9	24	0	0.0	1	41.7	41.7	41.7	13
Higher Professional	245	9.0	241	4	16.3	0	0.0	16.3	4.1	122
Lower Professional	153	5.6	153	0	0.0	5	32.7	32.7	26.3	76
Employers & Managers	240	8.8	238	2	8.3	1	4.2	12.5	8.4	118
Salaried Employees	44	1.6	44	0	0.0	2	45.5	45.5	45.5	22
Intermediate Non-Manual Workers	265	9.7	262	3	11.3	0	0.0	11.3	7.6	130
Other Non-Manual Workers	257	9.4	252	5	19.5	2	7.9	27.2	23.4	127
Skilled Manual Workers	504	18.5	503	1	2.0	7	13.9	15.9	10.0	254
Semi-Skilled Manual Workers	88	3.2	88	0	0.0	1	11.4	11.4	11.4	44
Unskilled Manual Workers	8	0.3	8	0	0.0	1	125.0	125.0	0.0	4
Unemployed	127	4.7	126	1	7.9	0	0.0	7.9	7.9	63
Not Classifiable	80	2.9	80	0	0.0	0	0.0	0.0	0.0	40
Home Duties	2	0.1	2	0	0.0	0	0.0	0.0	0.0	1
Not Stated/Not Applicable	591	21.7	586	5	8.5	5	8.5	16.9	13.6	294
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Notes: \* Rate per 1,000 births. 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 C for a description of the classification system for occupation.  
 From 2010 the categories 'Not Stated' and 'Not Applicable' have been combined into the category 'Not Stated/ Not Applicable'.  
 In previous Perinatal Statistics Reports these were reported as individual categories.

**FIGURE 3.5**  
Perinatal Mortality Rate by Father's Occupation, Total Births



Notes: See Table 3.4 for data. Rates based on 20 or fewer observations are not included in this Figure.  
Adjusted Perinatal Mortality Rates are not presented due to small numbers associated with the majority of categories.

## NATIONALITY

### MOTHER'S NATIONALITY

Mother's nationality relates to 'place of birth' of the mother. Table 3.5 presents data on mother's nationality.

- After births to mothers from Ireland, the next highest proportion of total births were to mothers from the EU15 to EU27 at 11.6 per cent, followed by mothers from Asia at 4.0 per cent.
- Where rates are calculated on more than 20 observations, the highest perinatal mortality rate was recorded for babies born to mothers from Africa (13.9 per 1,000 live births and stillbirths) and the lowest perinatal mortality rates were reported for babies born to mothers from EU15 to EU27 at 4.9 per 1,000 live births and stillbirths.

Over the period 2007 to 2011 the proportion of births to Irish mothers fell from 79.3 per cent to 76.2 per cent. Figure 3.6 presents the distribution of births by nationality for non-Irish born mothers between 2007 and 2011.

- The proportion of total births to mothers from Africa decreased from 3.6 per cent in 2007 to 2.6 per cent in 2011.

Figure 3.7 presents the average age of mother by mother's nationality for 2011.

- The average age of all mothers giving birth was 31.7 years and the average age of mothers from Ireland was slightly higher at 32.1 years.
- Mothers giving birth from the EU15 to EU27 were on average younger at 29.1 years, whilst mothers from Australia and the EU15 (excluding Ireland and United Kingdom) recorded the highest average maternal age at 34.3 years and 33.3 years respectively.

TABLE 3.5

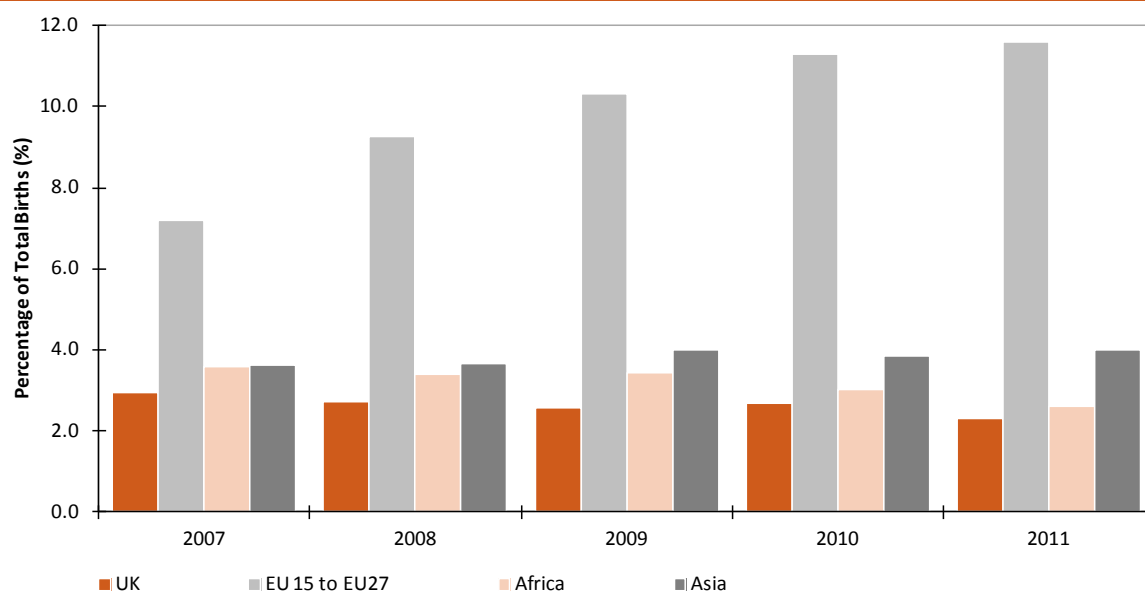
Mother's Nationality: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
Ireland	56,605	76.1	56,377	228	4.0	118	2.1	6.1	4.1	55,515
UK	1,695	2.3	1,689	6	3.5	5	3.0	6.5	5.3	1,665
EU15 (excluding Ireland & UK)	1,078	1.4	1,077	1	0.9	0	0.0	0.9	0.9	1,060
EU15 to EU27	8,609	11.6	8,578	31	3.6	11	1.3	4.9	3.4	8,483
Rest of Europe	603	0.8	603	0	0.0	0	0.0	0.0	0.0	590
Africa	1,938	2.6	1,921	17	8.8	10	5.2	13.9	10.4	1,895
Asia	2,956	4.0	2,947	9	3.0	5	1.7	4.7	3.7	2,925
America	617	0.8	616	1	1.6	3	4.9	6.5	6.5	604
Australia	105	0.1	104	1	9.5	0	0.0	9.5	9.5	104
New Zealand and Other Oceania	43	0.1	43	0	0.0	0	0.0	0.0	0.0	43
Multi Nationality	2	0.0	2	0	0.0	0	0.0	0.0	0.0	1
Other Nationality	2	0.0	2	0	0.0	0	0.0	0.0	0.0	2
Not Stated	124	0.2	121	3	24.2	1	8.3	32.3	24.4	121
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>	<b>73,008</b>
<b>Singleton Births</b>										
Ireland	54,438	76.0	54,226	212	3.9	95	1.8	5.6	3.8	54,438
UK	1,634	2.3	1,628	6	3.7	5	3.1	6.7	5.5	1,634
EU15 (excluding Ireland & UK)	1,042	1.5	1,042	0	0.0	0	0.0	0.0	0.0	1,042
EU15 to EU27	8,356	11.7	8,327	29	3.5	8	1.0	4.4	3.0	8,356
Rest of Europe	577	0.8	577	0	0.0	0	0.0	0.0	0.0	577
Africa	1,855	2.6	1,838	17	9.2	9	4.9	14.0	10.3	1,855
Asia	2,892	4.0	2,885	7	2.4	5	1.7	4.1	3.1	2,892
America	591	0.8	590	1	1.7	3	5.1	6.8	6.8	591
Australia	103	0.1	102	1	9.7	0	0.0	9.7	9.7	103
New Zealand and Other Oceania	43	0.1	43	0	0.0	0	0.0	0.0	0.0	43
Multi Nationality	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0
Other Nationality	2	0.0	2	0	0.0	0	0.0	0.0	0.0	2
Not Stated	118	0.2	115	3	25.4	1	8.7	33.9	25.6	118
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>71,375</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>	<b>71,651</b>
<b>Multiple Births</b>										
Ireland	2,167	79.5	2,151	16	7.4	23	10.7	18.0	11.6	1,077
UK	61	2.2	61	0	0.0	0	0.0	0.0	0.0	31
EU15 (excluding Ireland & UK)	36	1.3	35	1	27.8	0	0.0	27.8	27.8	18
EU15 to EU27	253	9.3	251	2	7.9	3	12.0	19.8	15.9	127
Rest of Europe	26	1.0	26	0	0.0	0	0.0	0.0	0.0	13
Africa	83	3.0	83	0	0.0	1	12.0	12.0	12.0	40
Asia	64	2.3	62	2	31.3	0	0.0	31.3	31.3	33
America	26	1.0	26	0	0.0	0	0.0	0.0	0.0	13
Australia	2	0.1	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	0.0	0
Multi Nationality	2	0.1	2	0	0.0	0	0.0	0.0	0.0	1
Other Nationality	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0
Not Stated	6	0.2	6	0	0.0	0	0.0	0.0	0.0	3
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Notes: \* Rate per 1,000 births. 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 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, 2007–2011\*



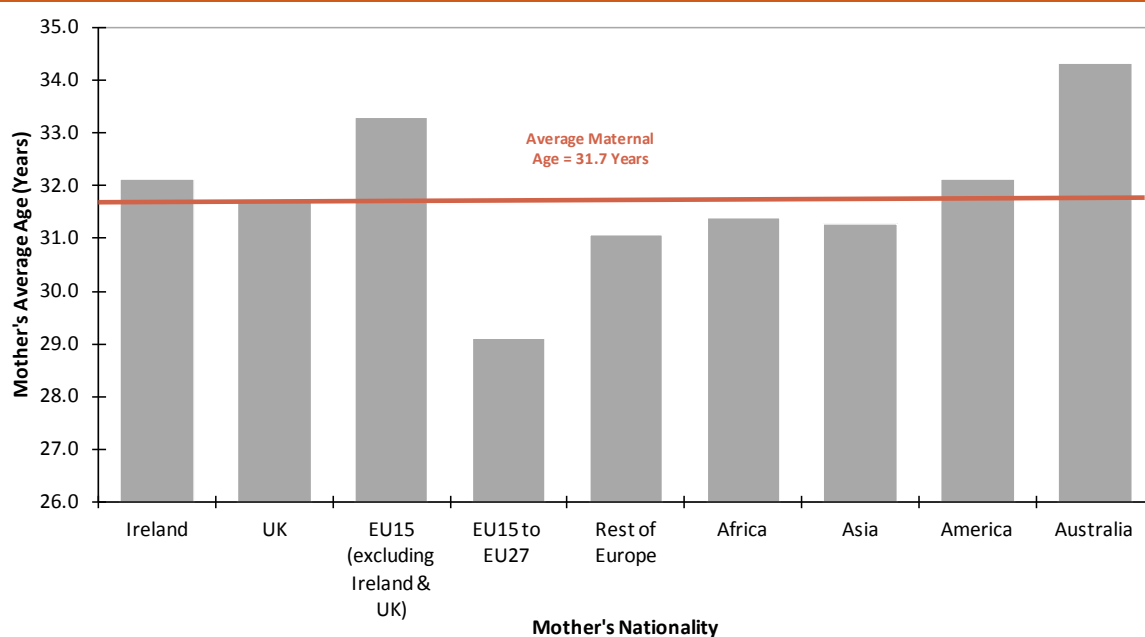
Notes: See Appendix G, Table G3 for data. 'Not Stated' values are not included in the calculation of percentages.

Percentages calculated for the four most frequent nationalities for Non-Irish born mothers in 2011.

\*Mothers from the United Kingdom, EU 15-27, Africa, and Asia accounted for 20.5 per cent of total births in 2011.

**FIGURE 3.7**

Average Age of Mother by Mother's Nationality, Total Maternities



Notes: See Appendix G, Table G4 for data.

Average ages calculated for nationalities with greater than 100 births.

### FATHER'S NATIONALITY

Father's nationality relates to 'place of birth' of the father. Father's details are only required for registration purposes where mother's marital status is recorded as 'married'. As a result, the proportion of records for which information is available is not complete and a category of 'not applicable' is required. This category is combined with 'not stated' for the purposes of presenting data on father's nationality in this report.

Table 3.6 presents information on father's nationality

- Births are excluded where father's details are not available and are, therefore, classified as 'not stated/not applicable'. Irish fathers accounted for 77.0 per cent of total births.
- Births to fathers from the EU15 to EU27 accounted for 10.1 per cent of total births.

Between 2007 and 2011

- The proportion of total births to fathers from Asia was 4.2 per cent in 2011 compared to 3.7 per cent in 2007.
- Births to fathers from Africa were 2.7 per cent of total births in 2011 compared to 3.9 per cent of total births in 2007.

TABLE 3.6

Father's Nationality: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
Ireland	44,181	59.4	44,019	162	3.7	90	2.0	5.7	3.7	43,301
UK	1,647	2.2	1,639	8	4.9	1	0.6	5.5	4.3	1,616
EU15 (excluding Ireland & UK)	698	0.9	694	4	5.7	1	1.4	7.2	7.2	692
EU15 to EU27	5,818	7.8	5,799	19	3.3	6	1.0	4.3	2.8	5,745
Rest of Europe	476	0.6	476	0	0.0	1	2.1	2.1	0.0	463
Africa	1,549	2.1	1,543	6	3.9	6	3.9	7.7	5.8	1,517
Asia	2,420	3.3	2,412	8	3.3	4	1.7	5.0	4.1	2,395
America	399	0.5	398	1	2.5	1	2.5	5.0	5.0	393
Australia	107	0.1	107	0	0.0	0	0.0	0.0	0.0	106
New Zealand and Other Oceania	69	0.1	69	0	0.0	0	0.0	0.0	0.0	69
Other Nationality	2	0.0	2	0	0.0	0	0.0	0.0	0.0	2
Not Stated/ Not Applicable	17,011	22.9	16,922	89	5.2	43	2.5	7.8	5.8	16,709
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>	<b>73,008</b>
<b>Singleton Births</b>										
Ireland	42,433	59.2	42,286	147	3.5	71	1.7	5.1	3.3	42,433
UK	1,584	2.2	1,576	8	5.1	1	0.6	5.7	4.4	1,584
EU15 (excluding Ireland & UK)	685	1.0	681	4	5.8	1	1.5	7.3	7.3	685
EU15 to EU27	5,670	7.9	5,652	18	3.2	5	0.9	4.1	2.6	5,670
Rest of Europe	451	0.6	451	0	0.0	1	2.2	2.2	0.0	451
Africa	1,485	2.1	1,479	6	4.0	6	4.1	8.1	6.1	1,485
Asia	2,368	3.3	2,362	6	2.5	4	1.7	4.2	3.4	2,368
America	387	0.5	386	1	2.6	1	2.6	5.2	5.2	387
Australia	105	0.1	105	0	0.0	0	0.0	0.0	0.0	105
New Zealand and Other Oceania	69	0.1	69	0	0.0	0	0.0	0.0	0.0	69
Other Nationality	2	0.0	2	0	0.0	0	0.0	0.0	0.0	2
Not Stated/ Not Applicable	16,412	22.9	16,326	86	5.2	36	2.2	7.4	5.5	16,412
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>71,375</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>	<b>71,651</b>
<b>Multiple Births</b>										
Ireland	1,748	64.1	1,733	15	8.6	19	11.0	19.5	12.7	868
UK	63	2.3	63	0	0.0	0	0.0	0.0	0.0	32
EU15 (excluding Ireland & UK)	13	0.5	13	0	0.0	0	0.0	0.0	0.0	7
EU15 to EU27	148	5.4	147	1	6.8	1	6.8	13.5	6.8	75
Rest of Europe	25	0.9	25	0	0.0	0	0.0	0.0	0.0	12
Africa	64	2.3	64	0	0.0	0	0.0	0.0	0.0	32
Asia	52	1.9	50	2	38.5	0	0.0	38.5	38.5	27
America	12	0.4	12	0	0.0	0	0.0	0.0	0.0	6
Australia	2	0.1	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	0.0	0
Other Nationality	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0
Not Stated/ Not Applicable	599	22.0	596	3	5.0	7	11.7	16.7	13.4	297
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Notes: \* Rate per 1,000 births. 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 F for a description of the classification system for nationality.  
 From 2010 the categories 'Not Stated' and 'Not Applicable' have been combined into the category 'Not Stated/ Not Applicable'. In previous Perinatal Statistics Reports these were reported as individual categories.

## MATERNAL PARITY

Maternal parity is a mother's total number of previous live births and stillbirths. Table 3.7 presents data on maternal parity.

- Primiparous mothers accounted for 39.9 per cent of all maternities, with 60.1 per cent of maternities having one or more previous live births or stillbirths.
- Of mothers aged less than 20 years, 89.2 per cent gave birth for the first time, with only 9.6 per cent delivering for the second time and 1.2 per cent delivering a third time or more (see Figure 3.8).
- For women aged 30 to 34 years, 38.4 per cent gave birth for the first time and 37.2 per cent delivered for the second time.

**TABLE 3.7**

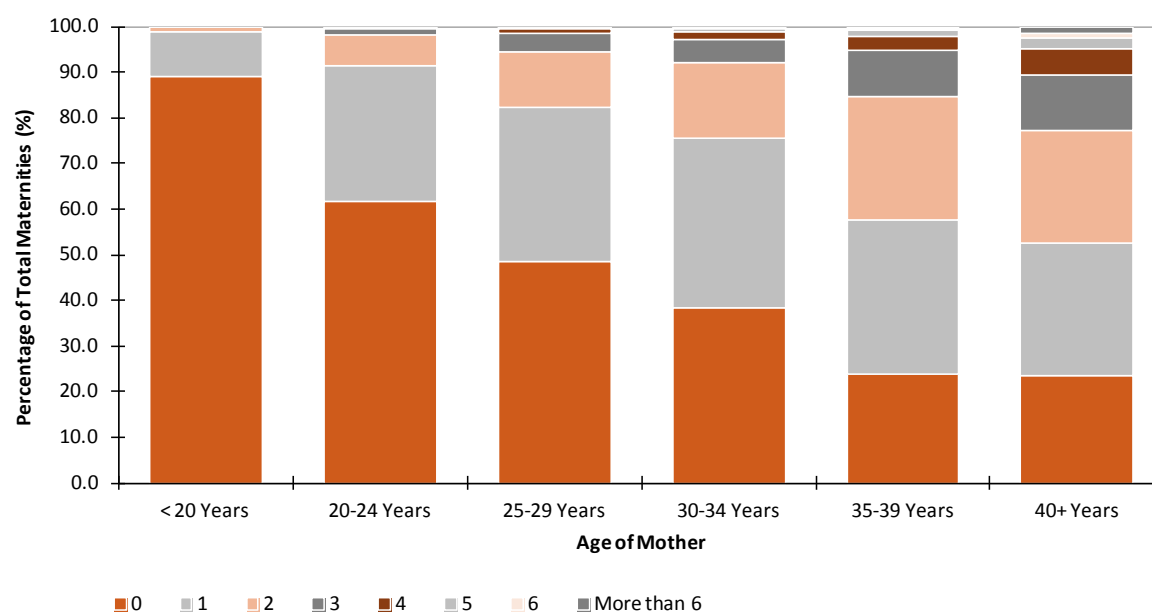
Maternal Parity: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
0	29,774	40.0	29,632	142	4.8	64	2.2	6.9	5.1	29,135
1	25,174	33.8	25,103	71	2.8	45	1.8	4.6	3.1	24,745
2	12,636	17.0	12,591	45	3.6	27	2.1	5.7	3.3	12,446
3	4,411	5.9	4,384	27	6.1	14	3.2	9.3	5.7	4,345
4	1,446	1.9	1,441	5	3.5	1	0.7	4.1	4.1	1,419
5	534	0.7	532	2	3.7	0	0.0	3.7	3.7	525
6	199	0.3	196	3	15.1	0	0.0	15.1	15.1	191
More than 6	199	0.3	198	1	5.0	1	5.1	10.1	0.0	198
Not Stated	4	0.0	3	1	250.0	1	333.3	500.0	333.3	4
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>	<b>73,008</b>
<b>Singleton Births</b>										
0	28,501	39.8	28,371	130	4.6	45	1.6	6.1	4.6	28,501
1	24,319	33.9	24,252	67	2.8	40	1.6	4.4	3.0	24,319
2	12,255	17.1	12,215	40	3.3	26	2.1	5.4	2.9	12,255
3	4,281	6.0	4,254	27	6.3	12	2.8	9.1	5.6	4,281
4	1,394	1.9	1,389	5	3.6	1	0.7	4.3	4.3	1,394
5	516	0.7	514	2	3.9	0	0.0	3.9	3.9	516
6	184	0.3	181	3	16.3	0	0.0	16.3	16.3	184
More than 6	197	0.3	196	1	5.1	1	5.1	10.2	0.0	197
Not Stated	4	0.0	3	1	250.0	1	333.3	500.0	333.3	4
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>71,375</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>	<b>71,651</b>
<b>Multiple Births</b>										
0	1,273	46.7	1,261	12	9.4	19	15.1	24.4	16.6	634
1	855	31.4	851	4	4.7	5	5.9	10.5	5.9	426
2	381	14.0	376	5	13.1	1	2.7	15.7	15.7	191
3	130	4.8	130	0	0.0	2	15.4	15.4	7.8	64
4	52	1.9	52	0	0.0	0	0.0	0.0	0.0	25
5	18	0.7	18	0	0.0	0	0.0	0.0	0.0	9
6	15	0.6	15	0	0.0	0	0.0	0.0	0.0	7
More than 6	2	0.1	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	0.0	0
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Note: \* Rate per 1,000 births. 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.

**FIGURE 3.8**

Parity by Age of Mother, Total Maternities



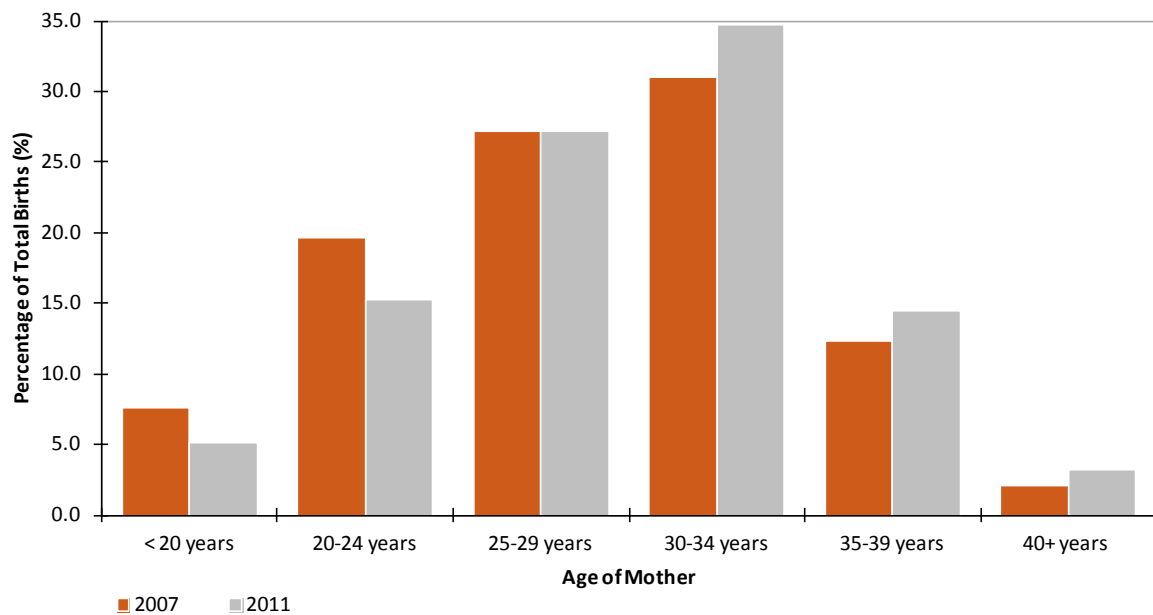
Note: See Appendix G, Table G5 for data. 'Not Stated' values are not included in the calculation of percentages.

Figures 3.9 to 3.10 present data on maternal parity for 2007 and 2011.

- The proportion of mothers giving birth for the first time and aged less than 25 years fell between 2007 and 2011; births to primiparous women aged less than 20 years accounted for 7.6 per cent of births in 2007 compared to 5.1 per cent in 2011. Births to primiparous women aged 20 to 24 years accounted for 19.7 per cent of births in 2007 and 15.3 per cent of births in 2011.
- The proportion of mothers giving birth for a second time or more fell for all mothers aged between 20 and 29 years, with a slight increase recorded for mothers aged 30 years or more.

**FIGURE 3.9**

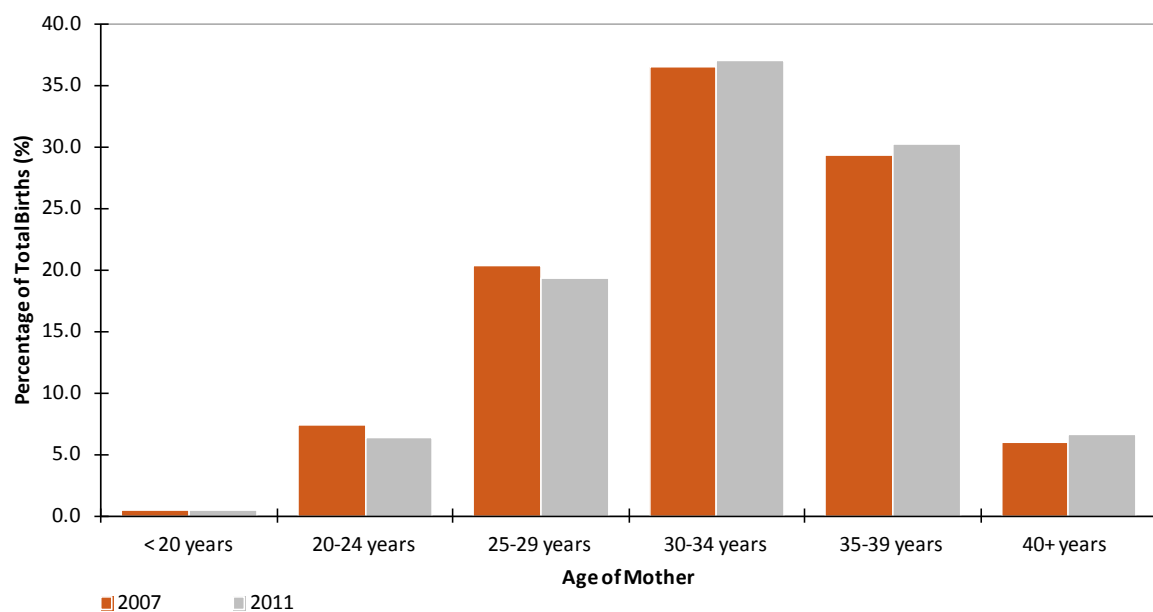
Total Births to Primiparous Women by Mother's Age Group, 2007 and 2011



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

**FIGURE 3.10**

Total Births to Multiparous Women by Mother's Age Group, 2007 and 2011



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

## NUMBER OF PREVIOUS STILLBIRTHS

In 2011, 98.2 per cent of multiparous women giving birth recorded no previous stillbirths while 1.8 per cent recorded 1 or more previous stillbirths (see Table 3.8).

**TABLE 3.8**

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

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
0	43,802	98.2	43,654	148	3.4	86	2.0	5.3	3.4	43,094
1	728	1.6	722	6	8.2	2	2.8	11.0	8.3	706
2	52	0.1	52	0	0.0	0	0.0	0.0	0.0	52
3 and over	17	0.0	17	0	0.0	0	0.0	0.0	0.0	17
<b>Total</b>	<b>44,599</b>	<b>100.0</b>	<b>44,445</b>	<b>154</b>	<b>3.5</b>	<b>88</b>	<b>2.0</b>	<b>5.4</b>	<b>3.5</b>	<b>43,869</b>
<b>Singleton Births</b>										
0	42,393	98.3	42,254	139	3.3	78	1.8	5.1	3.2	42,393
1	684	1.6	678	6	8.8	2	2.9	11.7	8.8	684
2	52	0.1	52	0	0.0	0	0.0	0.0	0.0	52
3 and over	17	0.0	17	0	0.0	0	0.0	0.0	0.0	17
<b>Total</b>	<b>43,146</b>	<b>100.0</b>	<b>43,001</b>	<b>145</b>	<b>3.4</b>	<b>80</b>	<b>1.9</b>	<b>5.2</b>	<b>3.3</b>	<b>43,146</b>
<b>Multiple Births</b>										
0	1,409	97.0	1,400	9	6.4	8	5.7	12.1	8.5	701
1	44	3.0	44	0	0.0	0	0.0	0.0	0.0	22
2	0	0.0	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	0.0	0
<b>Total</b>	<b>1,453</b>	<b>100.0</b>	<b>1,444</b>	<b>9</b>	<b>6.2</b>	<b>8</b>	<b>5.5</b>	<b>11.7</b>	<b>8.3</b>	<b>723</b>

Notes: \* Rate per 1,000 births. 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.

This table only includes women having second and subsequent births. Primiparous women (i.e. women who have had no previous pregnancy resulting in a live birth or stillbirth) are not included in this table.

There were 4 maternities with unknown parity; these were excluded from this table.

## INTERVAL SINCE LAST BIRTH

Table 3.9 shows the interval since the last birth for multiparous women.

- Almost 53 per cent of all multiparous mothers had their previous birth within the last three years.
- Approximately 16 per cent had their previous birth more than six years earlier.

**TABLE 3.9**

Interval in Years since Last Birth: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
1 year or less	575	1.3	573	2	3.5	5	8.7	12.2	7.0	556
>1 year to 2 years	11,099	24.9	11,057	42	3.8	22	2.0	5.8	3.9	10,935
>2 years to 3 years	11,718	26.3	11,692	26	2.2	21	1.8	4.0	2.1	11,538
>3 years to 4 years	7,136	16.0	7,117	19	2.7	13	1.8	4.5	2.7	7,022
>4 years to 5 years	4,196	9.4	4,177	19	4.5	9	2.2	6.7	4.3	4,127
>5 years to 6 years	2,607	5.8	2,600	7	2.7	3	1.2	3.8	1.9	2,564
More than 6 years	6,903	15.5	6,869	34	4.9	12	1.7	6.7	5.1	6,770
Not Stated	365	0.8	360	5	13.7	3	8.3	21.9	19.2	357
<b>Total</b>	<b>44,599</b>	<b>100.0</b>	<b>44,445</b>	<b>154</b>	<b>3.5</b>	<b>88</b>	<b>2.0</b>	<b>5.4</b>	<b>3.5</b>	<b>43,869</b>
<b>Singleton Births</b>										
1 year or less	536	1.2	534	2	3.7	3	5.6	9.3	5.6	536
>1 year to 2 years	10,772	25.0	10,732	40	3.7	21	2.0	5.7	3.9	10,772
>2 years to 3 years	11,357	26.3	11,332	25	2.2	19	1.7	3.9	2.0	11,357
>3 years to 4 years	6,911	16.0	6,896	15	2.2	12	1.7	3.9	2.0	6,911
>4 years to 5 years	4,061	9.4	4,044	17	4.2	9	2.2	6.4	3.9	4,061
>5 years to 6 years	2,521	5.8	2,514	7	2.8	3	1.2	4.0	2.0	2,521
More than 6 years	6,639	15.4	6,605	34	5.1	12	1.8	6.9	5.3	6,639
Not Stated	349	0.8	344	5	14.3	1	2.9	17.2	14.4	349
<b>Total</b>	<b>43,146</b>	<b>100.0</b>	<b>43,001</b>	<b>145</b>	<b>3.4</b>	<b>80</b>	<b>1.9</b>	<b>5.2</b>	<b>3.3</b>	<b>43,146</b>
<b>Multiple Births</b>										
1 year or less	39	2.7	39	0	0.0	2	51.3	51.3	26.3	20
>1 year to 2 years	327	22.5	325	2	6.1	1	3.1	9.2	3.1	163
>2 years to 3 years	361	24.8	360	1	2.8	2	5.6	8.3	2.8	181
>3 years to 4 years	225	15.5	221	4	17.8	1	4.5	22.2	22.2	111
>4 years to 5 years	135	9.3	133	2	14.8	0	0.0	14.8	14.8	66
>5 years to 6 years	86	5.9	86	0	0.0	0	0.0	0.0	0.0	43
More than 6 years	264	18.2	264	0	0.0	0	0.0	0.0	0.0	131
Not Stated	16	1.1	16	0	0.0	2	125.0	125.0	125.0	8
<b>Total</b>	<b>1,453</b>	<b>100.0</b>	<b>1,444</b>	<b>9</b>	<b>6.2</b>	<b>8</b>	<b>5.5</b>	<b>11.7</b>	<b>8.3</b>	<b>723</b>

Notes: \* Rate per 1,000 births. 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.  
This table only includes women having second and subsequent births. Primiparous women (i.e. women who have had no previous pregnancy resulting in a live birth or stillbirth) are not included in this table.  
There were 4 maternities with unknown parity; these were excluded from this 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.<sup>20</sup>

- The average birthweight for live births was 3,505.0 grams for singletons, 2,464.6 grams for multiples and 3,467.0 grams for total live births.
- The average birthweight of live births was 3,525.6 grams for males compared to 3,405.3 grams for females.
- 70.4 per cent of stillbirths were classified as low birthweight, with the average birthweight for total stillbirths at 1,872.3 grams.

Table 3.10 presents data on baby birthweight.

- The percentage of total live births classified as low birthweight was 5.2 per cent (3.6 per cent of singletons and 46.0 per cent of multiples).
- There was considerable variation in very low birthweight rates between singleton and multiple births with 0.6 per cent of singleton live births weighing less than 1,500 grams compared to 7.0 per cent for multiple births (see Figure 3.11).
- 92.2 per cent of total live births were in the healthy birthweight category weighing between 2,500 and 4,499 grams (see Figure 3.12).
- A marginally smaller proportion of male live births were low birthweight (4.8 per cent) compared with female live births (5.6 per cent) (see Figure 3.13).

<sup>20</sup> EURO-PERISTAT Project, with SCPE, EUROCAT, EURONEOSTAT. European Perinatal Health Report, 2008. [www.euoperistat.com](http://www.euoperistat.com)

TABLE 3.10

Birthweight (grams): Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

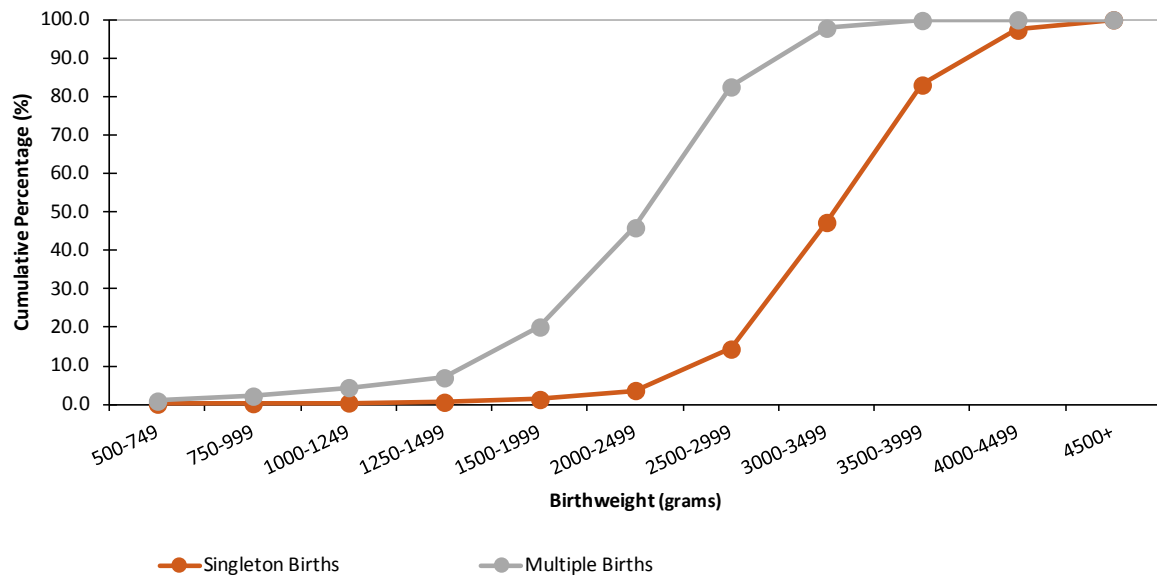
	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
500-749	148	0.2	98	50	337.8	43	438.8	628.4	601.4	135
750-999	163	0.2	135	28	171.8	19	140.7	288.3	226.7	144
1000-1249	210	0.3	181	29	138.1	10	55.2	185.7	118.6	176
1250-1499	219	0.3	194	25	114.2	6	30.9	141.6	91.8	181
1500-1999	913	1.2	870	43	47.1	15	17.2	63.5	31.7	716
2000-2499	2,398	3.2	2,364	34	14.2	16	6.8	20.9	12.6	2,043
2500-2999	8,709	11.7	8,675	34	3.9	10	1.2	5.1	3.6	8,220
3000-3499	23,931	32.2	23,904	27	1.1	16	0.7	1.8	1.2	23,737
3500-3999	25,569	34.4	25,551	18	0.7	15	0.6	1.3	0.8	25,541
4000-4499	10,197	13.7	10,188	9	0.9	2	0.2	1.1	1.0	10,195
4500 and Over	1,919	2.6	1,919	0	0.0	0	0.0	0.0	0.0	1,919
Not Stated	1	0.0	1	0	0.0	1	1000.0	1000.0	1000.0	1
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>	<b>73,008</b>
<b>Singleton Births</b>										
500-749	119	0.2	74	45	378.2	33	445.9	655.5	627.3	119
750-999	125	0.2	100	25	200.0	13	130.0	304.0	230.1	125
1000-1249	146	0.2	121	25	171.2	6	49.6	212.3	154.4	146
1250-1499	146	0.2	125	21	143.8	5	40.0	178.1	111.1	146
1500-1999	551	0.8	513	38	69.0	14	27.3	94.4	45.9	551
2000-2499	1,700	2.4	1,666	34	20.0	15	9.0	28.8	17.8	1,700
2500-2999	7,719	10.8	7,685	34	4.4	9	1.2	5.6	4.0	7,719
3000-3499	23,518	32.8	23,491	27	1.1	15	0.6	1.8	1.2	23,518
3500-3999	25,515	35.6	25,497	18	0.7	13	0.5	1.2	0.8	25,515
4000-4499	10,192	14.2	10,183	9	0.9	2	0.2	1.1	1.0	10,192
4500 and Over	1,919	2.7	1,919	0	0.0	0	0.0	0.0	0.0	1,919
Not Stated	1	0.0	1	0	0.0	1	1000.0	1000.0	1000.0	1
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>71,375</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>	<b>71,651</b>
<b>Multiple Births</b>										
500-749	29	1.1	24	5	172.4	10	416.7	517.2	500.0	16
750-999	38	1.4	35	3	78.9	6	171.4	236.8	216.2	19
1000-1249	64	2.3	60	4	62.5	4	66.7	125.0	34.5	30
1250-1499	73	2.7	69	4	54.8	1	14.5	68.5	55.6	35
1500-1999	362	13.3	357	5	13.8	1	2.8	16.6	11.1	165
2000-2499	698	25.6	698	0	0.0	1	1.4	1.4	0.0	343
2500-2999	990	36.3	990	0	0.0	1	1.0	1.0	0.0	501
3000-3499	413	15.2	413	0	0.0	1	2.4	2.4	2.4	219
3500-3999	54	2.0	54	0	0.0	2	37.0	37.0	0.0	26
4000-4499	5	0.2	5	0	0.0	0	0.0	0.0	0.0	3
4500 and Over	0	0.0	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	0.0	0
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Notes: \* Rate per 1,000 births. 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.

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

**FIGURE 3.11**

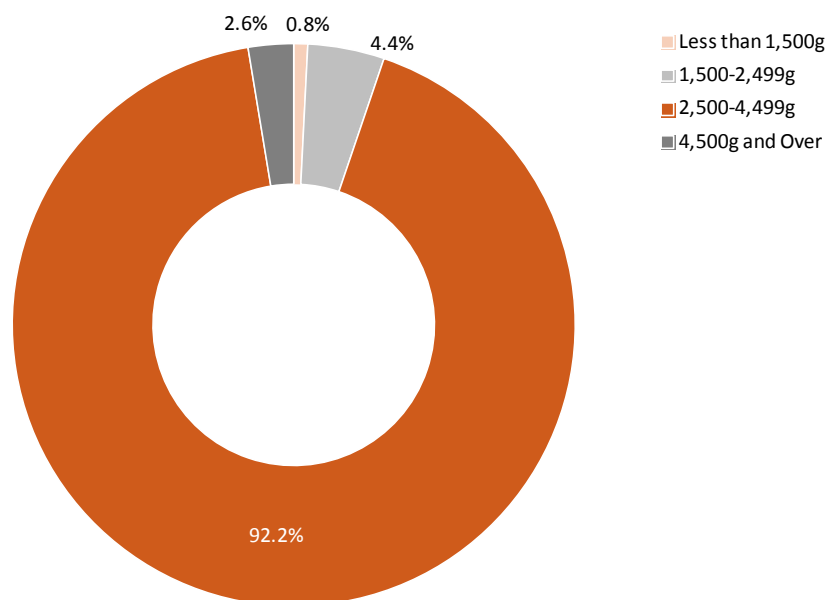
Birthweight: Cumulative Percentages of Total Live Births



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

**FIGURE 3.12**

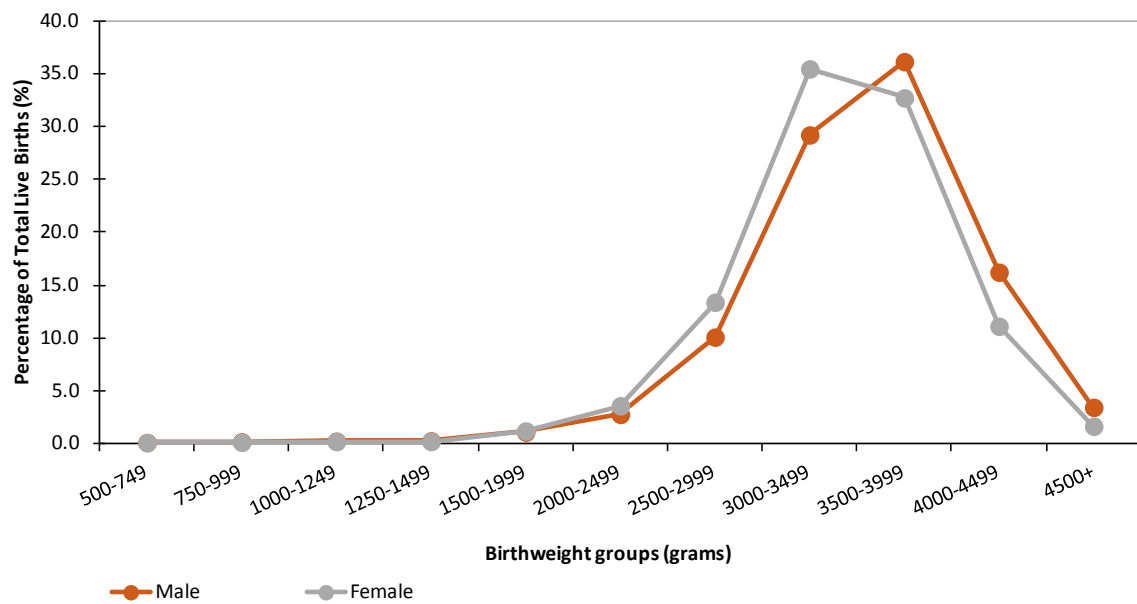
Percentage of Births by Birthweight Groups, Total Live Births



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

**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

Based on maternities, the average gestational age for total births was 39.3 weeks. Live births reported an average gestational age of 39.4 weeks and stillbirths reported an average gestational age of 32.9 weeks. The average gestational age for singleton live births was 39.4 weeks compared with 35.9 weeks for live twin births and 31.7 weeks for higher-order multiple live births.

Table 3.11 presents data on mother's gestational age.

- 90.8 per cent of all babies were born at term (37 to 41 weeks).
- Preterm birth (born before 37 weeks) occurred in 66.7 per cent of stillbirths and 5.8 per cent of live births.
- Preterm births were associated with higher risk of perinatal death and comprised 6.1 per cent of total births (see also Figure 3.14).

**TABLE 3.11**

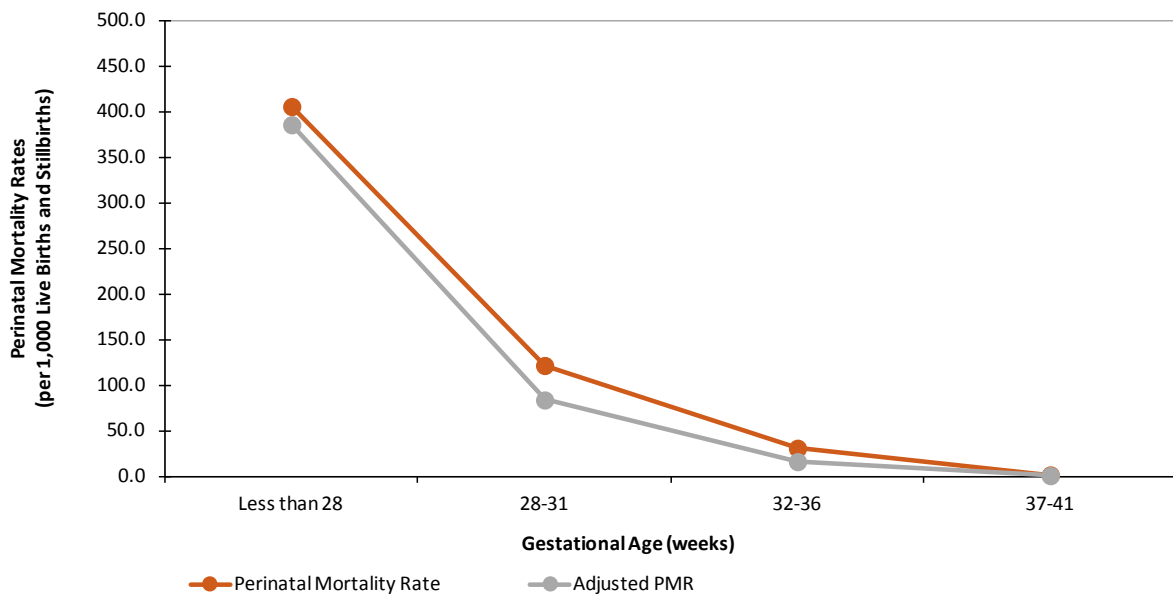
Gestational Age (weeks) at Delivery: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
Less than 28	308	0.4	242	66	214.3	59	243.8	405.8	385.9	276
28-31	533	0.7	481	52	97.6	13	27.0	122.0	84.1	443
32-36	3,680	4.9	3,602	78	21.2	37	10.3	31.3	16.6	3,141
37-41	67,524	90.8	67,430	94	1.4	39	0.6	2.0	1.2	66,816
42 and Over	2,324	3.1	2,320	4	1.7	5	2.2	3.9	2.6	2,324
Not Stated	8	0.0	5	3	375.0	0	0.0	375.0	375.0	8
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>	<b>73,008</b>
<b>Singleton Births</b>										
Less than 28	238	0.3	179	59	247.9	45	251.4	437.0	412.3	238
28-31	363	0.5	318	45	124.0	9	28.3	148.8	112.1	363
32-36	2,611	3.6	2,539	72	27.6	31	12.2	39.4	20.7	2,611
37-41	66,107	92.3	66,014	93	1.4	36	0.5	2.0	1.2	66,107
42 and Over	2,324	3.2	2,320	4	1.7	5	2.2	3.9	2.6	2,324
Not Stated	8	0.0	5	3	375.0	0	0.0	375.0	375.0	8
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>71,375</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>	<b>71,651</b>
<b>Multiple Births</b>										
Less than 28	70	2.6	63	7	100.0	14	222.2	300.0	300.0	38
28-31	170	6.2	163	7	41.2	4	24.5	64.7	24.5	80
32-36	1,069	39.2	1,063	6	5.6	6	5.6	11.2	6.6	530
37-41	1,417	52.0	1,416	1	0.7	3	2.1	2.8	0.7	709
42 and Over	0	0.0	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	0.0	0
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Notes: \* Rate per 1,000 births. 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.  
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 (weeks) at Delivery, Total Births



Note: See Table 3.11 for data.

## MONTH OF BIRTH

Table 3.12 presents data on the month of birth.

- 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 (8.7 per cent).
- The highest number of singleton births occurred in July (8.7 per cent) and the highest number of multiple births in October (9.4 per cent) (see Figure 3.15).

**TABLE 3.12**

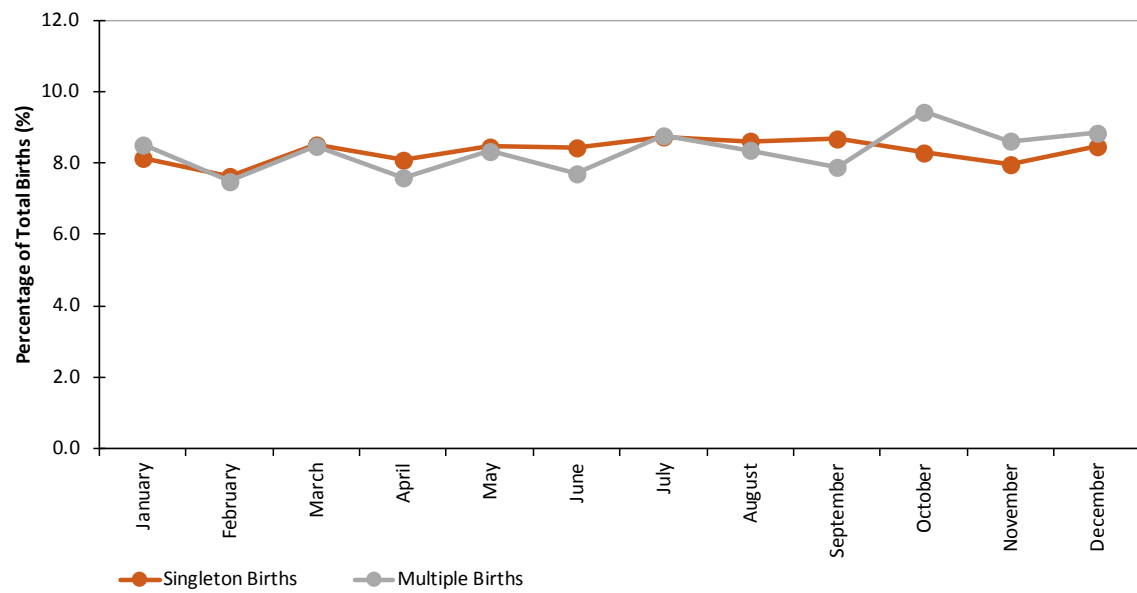
Month of Birth: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
January	6,063	8.2	6,040	23	3.8	8	1.3	5.1	2.5	5,947
February	5,672	7.6	5,651	21	3.7	13	2.3	6.0	4.4	5,571
March	6,330	8.5	6,301	29	4.6	16	2.5	7.1	4.4	6,214
April	6,000	8.1	5,977	23	3.8	11	1.8	5.7	3.5	5,895
May	6,284	8.4	6,258	26	4.1	9	1.4	5.6	3.7	6,168
June	6,252	8.4	6,229	23	3.7	13	2.1	5.8	4.0	6,147
July	6,498	8.7	6,471	27	4.2	11	1.7	5.8	4.2	6,380
August	6,404	8.6	6,381	23	3.6	21	3.3	6.9	5.2	6,290
September	6,434	8.7	6,415	19	3.0	18	2.8	5.8	4.2	6,324
October	6,195	8.3	6,179	16	2.6	13	2.1	4.7	3.2	6,066
November	5,939	8.0	5,910	29	4.9	10	1.7	6.6	5.2	5,821
December	6,306	8.5	6,268	38	6.0	10	1.6	7.6	5.2	6,185
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>	<b>73,008</b>
<b>Singleton Births</b>										
January	5,831	8.1	5,811	20	3.4	8	1.4	4.8	2.4	5,831
February	5,468	7.6	5,448	20	3.7	11	2.0	5.7	4.2	5,468
March	6,099	8.5	6,074	25	4.1	16	2.6	6.7	3.9	6,099
April	5,793	8.1	5,770	23	4.0	11	1.9	5.9	3.6	5,793
May	6,057	8.5	6,035	22	3.6	8	1.3	5.0	3.1	6,057
June	6,042	8.4	6,019	23	3.8	9	1.5	5.3	3.8	6,042
July	6,259	8.7	6,236	23	3.7	10	1.6	5.3	3.7	6,259
August	6,176	8.6	6,155	21	3.4	14	2.3	5.7	3.9	6,176
September	6,219	8.7	6,201	18	2.9	12	1.9	4.8	4.0	6,219
October	5,938	8.3	5,922	16	2.7	11	1.9	4.5	3.2	5,938
November	5,704	8.0	5,675	29	5.1	8	1.4	6.5	5.1	5,704
December	6,065	8.5	6,029	36	5.9	8	1.3	7.3	5.1	6,065
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>71,375</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>	<b>71,651</b>
<b>Multiple Births</b>										
January	232	8.5	229	3	12.9	0	0.0	12.9	4.3	116
February	204	7.5	203	1	4.9	2	9.9	14.7	9.9	103
March	231	8.5	227	4	17.3	0	0.0	17.3	17.3	115
April	207	7.6	207	0	0.0	0	0.0	0.0	0.0	102
May	227	8.3	223	4	17.6	1	4.5	22.0	17.7	111
June	210	7.7	210	0	0.0	4	19.0	19.0	9.6	105
July	239	8.8	235	4	16.7	1	4.3	20.9	16.8	121
August	228	8.4	226	2	8.8	7	31.0	39.5	39.5	114
September	215	7.9	214	1	4.7	6	28.0	32.6	9.5	105
October	257	9.4	257	0	0.0	2	7.8	7.8	3.9	128
November	235	8.6	235	0	0.0	2	8.5	8.5	8.5	117
December	241	8.8	239	2	8.3	2	8.4	16.6	8.4	120
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Note: \* Rate per 1,000 births. 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.

**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. 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
- type of feeding.

## TYPE OF ANTENATAL CARE

Table 4.1 presents type of antenatal care.

- The preferred choice was combined hospital and G.P. which accounted for 77.3 per cent of total maternities.<sup>21</sup>
- Hospital/Obstetrician care was higher for maternities delivering multiple births (36.3 per cent) than those delivering singleton births (22.0 per cent).

**TABLE 4.1**

Type of Antenatal Care: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
Hospital/Obstetrician	16,780	22.6	16,710	70	4.2	68	4.1	8.2	5.1	16,279
General Practitioner only	175	0.2	174	1	5.7	1	5.7	11.4	5.7	174
Hospital & G.P. combined	57,298	77.0	57,088	210	3.7	81	1.4	5.1	3.5	56,437
None	114	0.2	101	13	114.0	3	29.7	140.4	140.4	109
Not Stated	10	0.0	7	3	300.0	0	0.0	300.0	300.0	9
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>	<b>73,008</b>
<b>Singleton Births</b>										
Hospital/Obstetrician	15,787	22.0	15,723	64	4.1	56	3.6	7.6	4.8	15,787
General Practitioner only	173	0.2	172	1	5.8	1	5.8	11.6	5.8	173
Hospital & G.P. combined	55,579	77.6	55,380	199	3.6	69	1.2	4.8	3.4	55,579
None	104	0.1	93	11	105.8	0	0.0	105.8	105.8	104
Not Stated	8	0.0	7	1	125.0	0	0.0	125.0	125.0	8
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>71,375</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>	<b>71,651</b>
<b>Multiple Births</b>										
Hospital/Obstetrician	993	36.4	987	6	6.0	12	12.2	18.1	9.1	492
General Practitioner only	2	0.1	2	0	0.0	0	0.0	0.0	0.0	1
Hospital & G.P. combined	1,719	63.1	1,708	11	6.4	12	7.0	13.4	9.9	858
None	10	0.4	8	2	200.0	3	375.0	500.0	500.0	5
Not Stated	2	0.1	0	2	1000.0	0	0.0	1000.0	1000.0	1
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Notes: \* Rate per 1,000 births. 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.  
Deliveries under hospital schemes (including domino, early transfer home, planned community midwives, and midwifery-led units) and domiciliary births were included in hospital and G.P. combined care.

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

## DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT

Table 4.2 presents the time of first antenatal visit.

- Two thirds of total maternities recorded their first antenatal visit within the first 12 weeks of pregnancy.

**TABLE 4.2**

Time of First Visit (weeks) to Doctor or Hospital during Pregnancy: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
0-12	48,912	65.8	48,741	171	3.5	78	1.6	5.1	3.5	47,974
13-19	19,688	26.5	19,609	79	4.0	40	2.0	6.0	4.0	19,371
20 and over	4,874	6.6	4,839	35	7.2	27	5.6	12.7	8.7	4,783
Not Stated	903	1.2	891	12	13.3	8	9.0	22.1	18.9	880
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>	<b>73,008</b>
<b>Singleton Births</b>										
0-12	47,047	65.7	46,882	165	3.5	63	1.3	4.8	3.4	47,047
13-19	19,056	26.6	18,986	70	3.7	34	1.8	5.5	3.6	19,056
20 and over	4,690	6.5	4,658	32	6.8	23	4.9	11.7	7.7	4,690
Not Stated	858	1.2	849	9	10.5	6	7.1	17.5	14.0	858
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>71,375</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>	<b>71,651</b>
<b>Multiple Births</b>										
0-12	1,865	68.4	1,859	6	3.2	15	8.1	11.3	5.9	927
13-19	632	23.2	623	9	14.2	6	9.6	23.7	17.5	315
20 and over	184	6.7	181	3	16.3	4	22.1	38.0	32.8	93
Not Stated	45	1.7	42	3	66.7	2	47.6	111.1	111.1	22
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Notes: \* Rate per 1,000 births. 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. Although 77.0 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 33.9 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.

## ADVANCE HOSPITAL BOOKINGS

- Over 99 per cent of total births 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

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
Booked	73,705	99.3	73,438	267	3.6	142	1.9	5.5	3.7	72,353
Not Booked	500	0.7	470	30	60.0	11	23.4	82.0	76.5	483
Not Stated	4	0.0	4	0	0.0	0	0.0	0.0	0.0	4
<b>Total</b>	<b>74,209</b>	<b>100</b>	<b>73,912</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.2</b>	<b>72,840</b>
<b>Singleton Births</b>										
Booked	71,017	99.3	70,766	251	3.5	120	1.7	5.2	3.5	71,017
Not Booked	462	0.6	437	25	54.1	6	13.7	67.1	61.0	462
Not Stated	4	0.0	4	0	0.0	0	0.0	0.0	0.0	4
<b>Total</b>	<b>71,483</b>	<b>100</b>	<b>71,207</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.9</b>	<b>71,483</b>
<b>Multiple Births</b>										
Booked	2,688	98.6	2,672	16	6.0	22	8.2	14.1	8.6	1,336
Not Booked	38	1.4	33	5	131.6	5	151.5	263.2	263.2	21
Not Stated	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Notes: \* Rate per 1,000 births. 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. Domiciliary births, of which there were 168, are excluded from this table. See Appendix H for detailed analysis.

## MOTHER'S ANTENATAL LENGTH OF STAY

The average antenatal length of stay was less than one day (0.7 days) for singleton births and 2.2 days for multiple births.

Table 4.4 presents data on mother's antenatal length of stay.

- Just over 90 per cent of singleton births and 76.8 per cent of multiple births were delivered within a day of mother's admission to hospital.
- For total births, 1.8 per cent were delivered more than 5 days after mother's admission to hospital.

**TABLE 4.4**

Mother's Antenatal Length of Stay: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
0-1 Days	66,493	89.6	66,261	232	3.5	127	1.9	5.4	3.7	65,446
2 Days	4,296	5.8	4,269	27	6.3	8	1.9	8.1	6.3	4,214
3-5 Days	2,006	2.7	1,976	30	15.0	6	3.0	17.9	11.5	1,904
6-8 Days	537	0.7	534	3	5.6	4	7.5	13.0	7.5	493
9-11 Days	226	0.3	224	2	8.8	0	0.0	8.8	8.8	206
12-14 Days	167	0.2	166	1	6.0	1	6.0	12.0	12.0	150
More than 2 Weeks	419	0.6	418	1	2.4	7	16.7	19.1	12.0	362
Not Stated	65	0.1	64	1	15.4	0	0.0	15.4	15.4	65
<b>Total</b>	<b>74,209</b>	<b>100</b>	<b>73,912</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.2</b>	<b>72,840</b>
<b>Singleton Births</b>										
0-1 Days	64,399	90.1	64,183	216	3.4	105	1.6	5.0	3.4	64,399
2 Days	4,136	5.8	4,110	26	6.3	7	1.7	8.0	6.3	4,136
3-5 Days	1,803	2.5	1,776	27	15.0	5	2.8	17.7	11.2	1,803
6-8 Days	452	0.6	450	2	4.4	3	6.7	11.1	6.7	452
9-11 Days	186	0.3	184	2	10.8	0	0.0	10.8	10.8	186
12-14 Days	134	0.2	133	1	7.5	1	7.5	14.9	14.9	134
More than 2 Weeks	308	0.4	307	1	3.2	5	16.3	19.5	16.3	308
Not Stated	65	0.1	64	1	15.4	0	0.0	15.4	15.4	65
<b>Total</b>	<b>71,483</b>	<b>100</b>	<b>71,207</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.9</b>	<b>71,483</b>
<b>Multiple Births</b>										
0-1 Days	2,094	76.8	2,078	16	7.6	22	10.6	18.1	13.4	1,047
2 Days	160	5.9	159	1	6.3	1	6.3	12.5	6.3	78
3-5 Days	203	7.4	200	3	14.8	1	5.0	19.7	14.9	101
6-8 Days	85	3.1	84	1	11.8	1	11.9	23.5	11.9	41
9-11 Days	40	1.5	40	0	0.0	0	0.0	0.0	0.0	20
12-14 Days	33	1.2	33	0	0.0	0	0.0	0.0	0.0	16
More than 2 Weeks	111	4.1	111	0	0.0	2	18.0	18.0	0.0	54
Not Stated	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Notes: \* Rate per 1,000 births. 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. Domiciliary births, of which there were 168, are excluded from this table. See Appendix H 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. Average maternal postnatal lengths of stay for singleton and multiple births were 2.5 and 4.1 days respectively.

Table 4.5 presents data on mother's postnatal length of stay.

- Over 55 per cent of maternities delivering singleton births remained in hospital for up to 2 days following delivery, compared to 13.1 per cent of maternities delivering multiple births.
- For total maternities 42.8 per cent of singleton births and 74.4 per cent of multiple births were discharged 3 to 5 days post delivery.
- For singleton births, 97.9 per cent of mothers were discharged home within 5 days of delivery compared to 87.5 per cent of multiple births.

**TABLE 4.5**

**Mother's Postnatal Length of Stay: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities**

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
0-1 Days	16,920	22.8	16,754	166	9.8	60	3.6	13.4	9.1	16,882
2 Days	22,822	30.8	22,753	69	3.0	33	1.5	4.5	3.2	22,684
3-5 Days	32,639	44.0	32,590	49	1.5	52	1.6	3.1	2.0	31,622
6-8 Days	1,516	2.0	1,507	9	5.9	7	4.6	10.6	7.9	1,368
9-11 Days	208	0.3	208	0	0.0	0	0.0	0.0	0.0	185
12-14 Days	54	0.1	54	0	0.0	0	0.0	0.0	0.0	51
More than 2 Weeks	35	0.0	33	2	57.1	1	30.3	85.7	85.7	34
Not Stated	15	0.0	13	2	133.3	0	0.0	133.3	133.3	14
<b>Total</b>	<b>74,209</b>	<b>100</b>	<b>73,912</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.2</b>	<b>72,840</b>
<b>Singleton Births</b>										
0-1 Days	16,842	23.6	16,682	160	9.5	53	3.2	12.6	8.4	16,842
2 Days	22,547	31.5	22,480	67	3.0	29	1.3	4.3	3.1	22,547
3-5 Days	30,613	42.8	30,572	41	1.3	39	1.3	2.6	1.8	30,613
6-8 Days	1,224	1.7	1,218	6	4.9	4	3.3	8.2	6.5	1,224
9-11 Days	163	0.2	163	0	0.0	0	0.0	0.0	0.0	163
12-14 Days	48	0.1	48	0	0.0	0	0.0	0.0	0.0	48
More than 2 Weeks	33	0.0	31	2	60.6	1	32.3	90.9	90.9	33
Not Stated	13	0.0	13	0	0.0	0	0.0	0.0	0.0	13
<b>Total</b>	<b>71,483</b>	<b>100</b>	<b>71,207</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.9</b>	<b>71,483</b>
<b>Multiple Births</b>										
0-1 Days	78	2.9	72	6	76.9	7	97.2	166.7	155.8	40
2 Days	275	10.1	273	2	7.3	4	14.7	21.8	14.7	137
3-5 Days	2,026	74.3	2,018	8	3.9	13	6.4	10.4	5.5	1,009
6-8 Days	292	10.7	289	3	10.3	3	10.4	20.5	13.8	144
9-11 Days	45	1.7	45	0	0.0	0	0.0	0.0	0.0	22
12-14 Days	6	0.2	6	0	0.0	0	0.0	0.0	0.0	3
More than 2 Weeks	2	0.1	2	0	0.0	0	0.0	0.0	0.0	1
Not Stated	2	0.1	0	2	1000.0	0	0.0	1000.0	1000.0	1
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

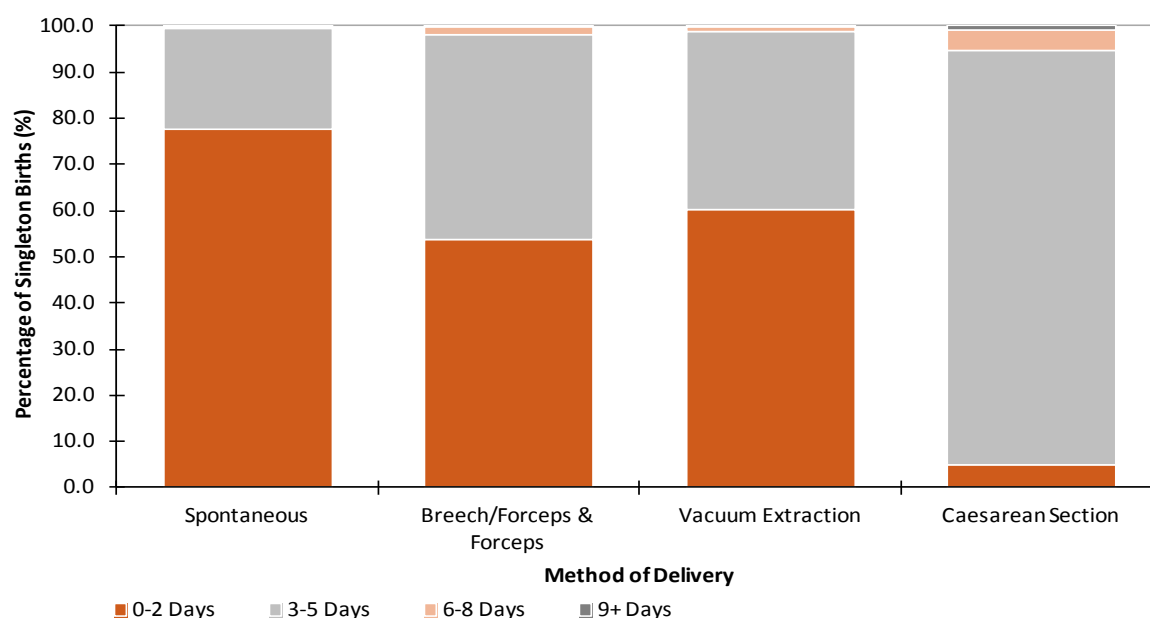
Notes: \* Rate per 1,000 births. For stillbirths, perinatal deaths and adjusted perinatal deaths, rates are calculated on total live births and stillbirths. For early neonatal deaths, rates are calculated on total live births. Domiciliary births, of which there were 168, are excluded from this table. See Appendix H for detailed analysis.

Figures 4.1 and 4.2 present data on mother's postnatal length of stay for singleton and multiple births.

- The postnatal length of stay for mothers differed by method of delivery and plurality.
- Mother's postnatal length of stay was 2 days or less for over 77 per cent of singleton spontaneous deliveries compared to 37.3 per cent of multiple spontaneous deliveries.
- For Caesarean section deliveries, mother's postnatal length of stay was 3 to 5 days for 89.8 per cent of singleton deliveries compared to 81.3 per cent for multiple deliveries.

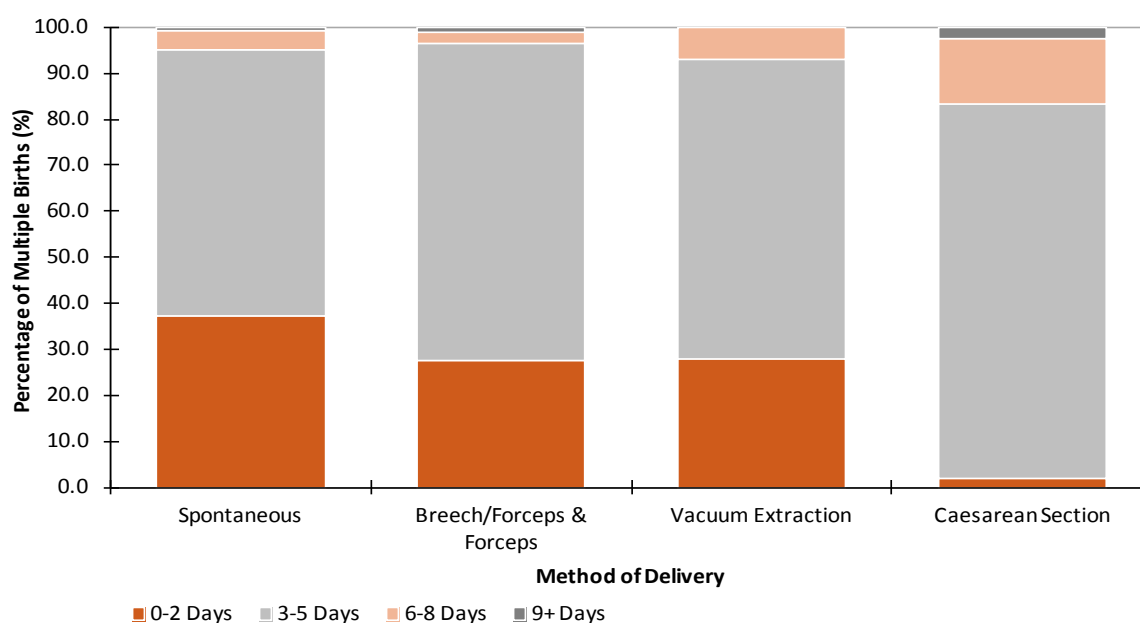
**FIGURE 4.1**

Mother's Postnatal Length of Stay by Method of Delivery, Singleton Births



**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: IMMUNE STATUS OF MOTHER

The rubella immune status of the mother is presented in Table 4.6. Of total maternities, over 94 per cent were rubella immune.

**TABLE 4.6**

Rubella: Immune Status of Mother, Numbers and Percentages

Rubella Immunity	Number of Maternities	Per Cent
<b>Total Births</b>		
Immune	68,868	94.3
Not Immune	2,729	3.7
Not known	1,411	1.9
<b>Total</b>	<b>73,008</b>	<b>100</b>
<b>Singleton Births</b>		
Immune	67,580	94.3
Not Immune	2,684	3.7
Not known	1,387	1.9
<b>Total</b>	<b>71,651</b>	<b>100</b>
<b>Multiple Births</b>		
Immune	1,288	94.9
Not Immune	45	3.3
Not known	24	1.8
<b>Total</b>	<b>1,357</b>	<b>100</b>

## METHOD OF DELIVERY<sup>22</sup>

### METHOD OF DELIVERY BY MATERNITIES AND PARITY

Table 4.7a presents data on method of delivery for total maternities by parity.

- 56.6 per cent delivered spontaneously (41.2 per cent of primiparous and 66.8 per cent of multiparous women).
- When method of delivery is analysed by plurality, almost two thirds of mothers (64.2 per cent) having a multiple birth delivered by Caesarean section, compared with just over one quarter (26.6 per cent) of maternities delivering singleton births.
- As well as recording a higher proportion of Caesarean sections (28.6 per cent), primiparous women also recorded a higher proportion of births by instrumental delivery (either breech/forceps, forceps or vacuum extraction) at 30.2 per cent compared to multiparous women (6.6 per cent) (see Figure 4.3).

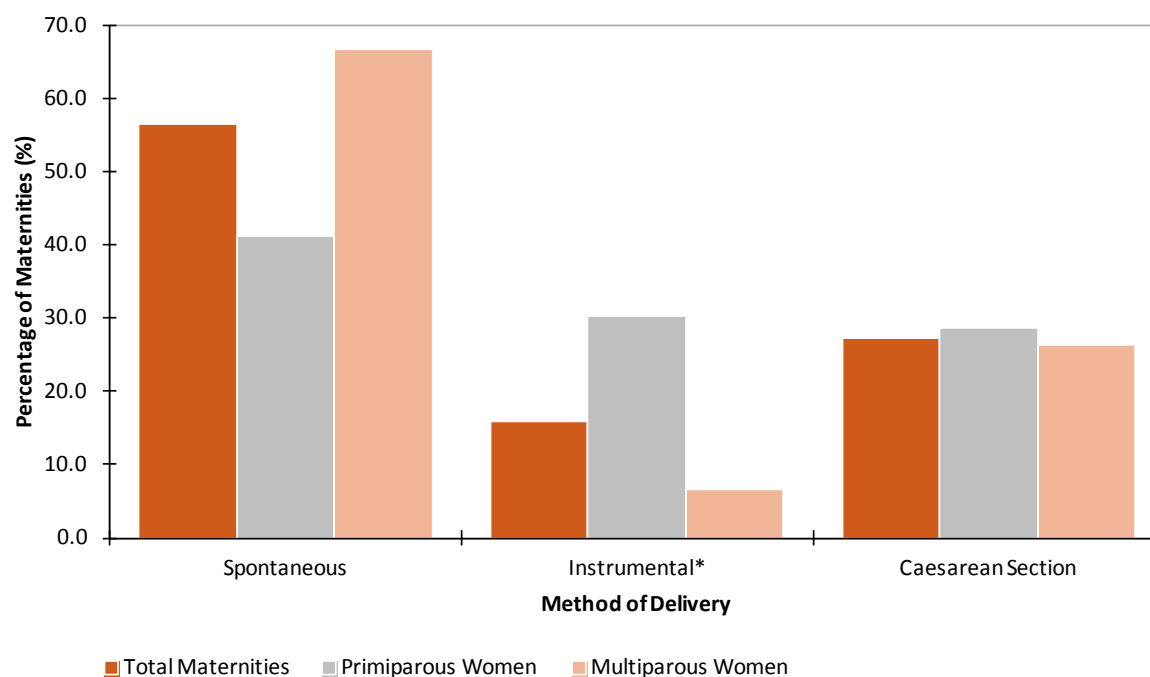
<sup>22</sup> Throughout this section, method of delivery recorded as 'other specified & combined' are not included in figures presenting data on method of delivery

**TABLE 4.7a**  
Method of Delivery for Total Maternities by Parity

	Total Maternities		Maternities - Primiparous Women		Maternities - Multiparous Women	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
<b>Total Births</b>						
Spontaneous	41,330	56.6	12,005	41.2	29,325	66.8
Breech/Forceps	326	0.4	173	0.6	153	0.3
Forceps	3,006	4.1	2,505	8.6	501	1.1
Vacuum extraction	8,400	11.5	6,108	21.0	2,292	5.2
Caesarean section	19,917	27.3	8,344	28.6	11,573	26.4
Other specified & combined	25	0.0	0	0.0	25	0.1
<b>Total</b>	<b>73,004</b>	<b>100</b>	<b>29,135</b>	<b>100</b>	<b>43,869</b>	<b>100</b>
<b>Singleton Births</b>						
Spontaneous	40,978	57.2	11,922	41.8	29,056	67.3
Breech/Forceps	310	0.4	162	0.6	148	0.3
Forceps	2,964	4.1	2,473	8.7	491	1.1
Vacuum extraction	8,324	11.6	6,053	21.2	2,271	5.3
Caesarean section	19,046	26.6	7,891	27.7	11,155	25.9
Other specified & combined	25	0.0	0	0.0	25	0.1
<b>Total</b>	<b>71,647</b>	<b>100</b>	<b>28,501</b>	<b>100</b>	<b>43,146</b>	<b>100</b>
<b>Multiple Births</b>						
Spontaneous	352	25.9	83	13.1	269	37.2
Breech/Forceps	16	1.2	11	1.7	5	0.7
Forceps	42	3.1	32	5.0	10	1.4
Vacuum extraction	76	5.6	55	8.7	21	2.9
Caesarean section	871	64.2	453	71.5	418	57.8
Other specified & combined	0	0.0	0	0.0	0	0.0
<b>Total</b>	<b>1,357</b>	<b>100</b>	<b>634</b>	<b>100</b>	<b>723</b>	<b>100</b>

Note: There were 4 Maternities with parity unknown; these were excluded from this table.

**FIGURE 4.3**  
Percentage Distribution of Maternities by Method of Delivery



Notes: See Table 4.7a for data. There were 4 Maternities with parity unknown; these were excluded from this figure.  
\*Instrumental delivery includes breech/forceps, forceps or vacuum extraction.

## METHOD OF DELIVERY BY BIRTHS AND PARITY

Table 4.7b presents births by method of delivery and parity.

- Spontaneous births accounted for the majority of births to both primiparous and multiparous women at 40.6 per cent and 66.1 percent respectively.

**TABLE 4.7b**

Method of Delivery by Parity: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, and Mortality Rates

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*
<b>Total Births</b>									
Spontaneous	41,568	55.9	41,369	199	4.8	62	1.5	6.3	4.7
Breech/Forceps	425	0.6	380	45	105.9	16	42.1	143.5	90.0
Forceps	3,026	4.1	3,020	6	2.0	5	1.7	3.6	2.3
Vacuum extraction	8,492	11.4	8,488	4	0.5	10	1.2	1.6	0.9
Caesarean section	20,837	28.0	20,795	42	2.0	58	2.8	4.8	2.9
Other specified & combined	25	0.0	25	0	0.0	1	40.0	40.0	40.0
<b>Total</b>	<b>74,373</b>	<b>100</b>	<b>74,077</b>	<b>296</b>	<b>4.0</b>	<b>152</b>	<b>2.1</b>	<b>6.0</b>	<b>4.1</b>
<b>Births to Primiparous Women</b>									
Spontaneous	12,078	40.6	11,979	99	8.2	29	2.4	10.6	8.5
Breech/Forceps	210	0.7	191	19	90.5	7	36.6	123.8	93.6
Forceps	2,517	8.5	2,513	4	1.6	4	1.6	3.2	2.0
Vacuum extraction	6,157	20.7	6,154	3	0.5	6	1.0	1.5	1.0
Caesarean section	8,812	29.6	8,795	17	1.9	18	2.0	4.0	2.3
Other specified & combined	0	0.0	0	0	0.0	0	0.0	0.0	0.0
<b>Total</b>	<b>29,774</b>	<b>100</b>	<b>29,632</b>	<b>142</b>	<b>4.8</b>	<b>64</b>	<b>2.2</b>	<b>6.9</b>	<b>5.1</b>
<b>Births to Multiparous Women</b>									
Spontaneous	29,490	66.1	29,390	100	3.4	33	1.1	4.5	3.1
Breech/Forceps	215	0.5	189	26	120.9	9	47.6	162.8	86.3
Forceps	509	1.1	507	2	3.9	1	2.0	5.9	3.9
Vacuum extraction	2,335	5.2	2,334	1	0.4	4	1.7	2.1	0.9
Caesarean section	12,025	27.0	12,000	25	2.1	40	3.3	5.4	3.4
Other specified & combined	25	0.1	25	0	0.0	1	40.0	40.0	40.0
<b>Total</b>	<b>44,599</b>	<b>100</b>	<b>44,445</b>	<b>154</b>	<b>3.5</b>	<b>88</b>	<b>2.0</b>	<b>5.4</b>	<b>3.5</b>

Notes: \* Rate per 1,000 births. 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.

There were 4 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 Total, Singleton and Multiple Births.

## METHOD OF DELIVERY BY BIRTHS AND PLURALITY

Table 4.8a presents data on method of delivery for total births.

- There were 20,796 live births delivered by Caesarean section, representing 28.1 per cent of total live births, 26.6 per cent of live singleton births and 65.8 per cent of live multiple births.
- Almost 56 per cent of total live births delivered spontaneously (57.1 per cent of live singleton births and 21.5 per cent of live multiple births) (see Figure 4.4).
- Just over 16 per cent of total live births were born by instrumental delivery (either breech/forceps, forceps or vacuum extraction) with higher percentages for live singleton births (16.2 per cent) compared with live multiple births (12.7 per cent).

TABLE 4.8a

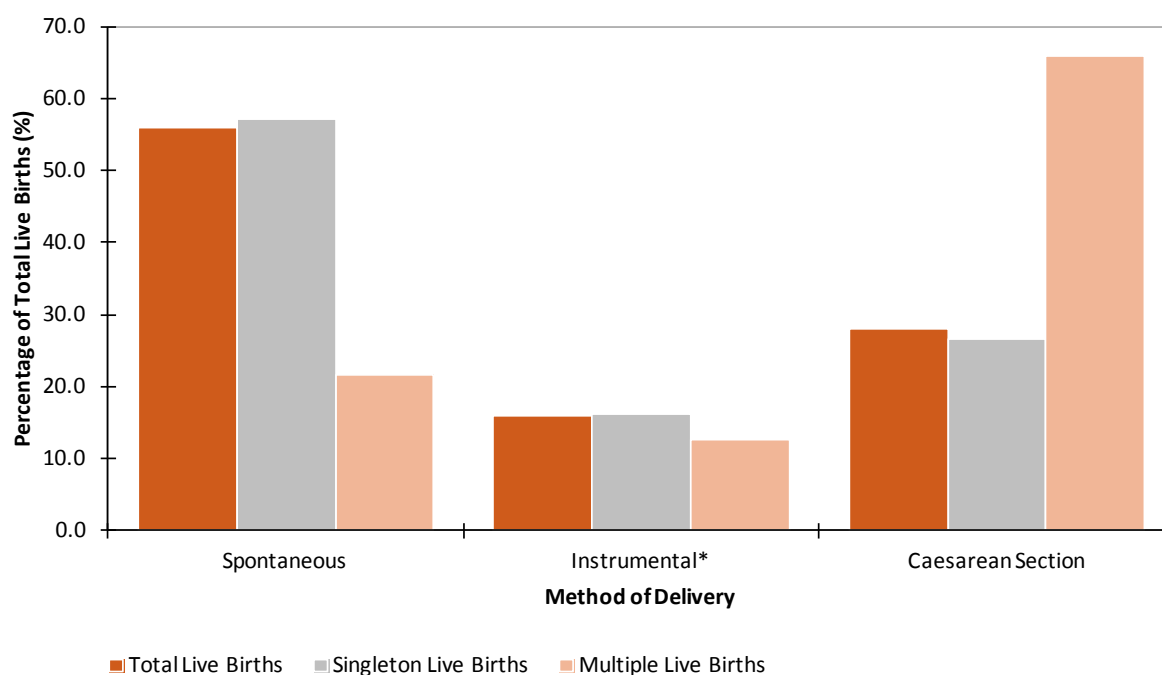
Method of Delivery: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
Spontaneous	41,570	55.9	41,371	199	4.8	63	1.5	6.3	4.7	41,332
Breech / Forceps	426	0.6	380	46	108.0	16	42.1	145.5	92.3	327
Forceps	3,026	4.1	3,020	6	2.0	5	1.7	3.6	2.3	3,006
Vacuum extraction	8,492	11.4	8,488	4	0.5	10	1.2	1.6	0.9	8,400
Caesarean section	20,838	28.0	20,796	42	2.0	58	2.8	4.8	2.9	19,918
Other specified & combined	25	0.0	25	0	0.0	1	40.0	40.0	40.0	25
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>74,080</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>	<b>73,008</b>
<b>Singleton Births</b>										
Spontaneous	40,980	57.2	40,789	191	4.7	52	1.3	5.9	4.4	40,980
Breech / Forceps	311	0.4	267	44	141.5	12	44.9	180.1	111.5	311
Forceps	2,964	4.1	2,958	6	2.0	3	1.0	3.0	2.0	2,964
Vacuum extraction	8,324	11.6	8,320	4	0.5	10	1.2	1.7	1.0	8,324
Caesarean section	19,047	26.6	19,016	31	1.6	48	2.5	4.1	2.6	19,047
Other specified & combined	25	0.0	25	0	0.0	1	40.0	40.0	40.0	25
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>71,375</b>	<b>276</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>	<b>71,651</b>
<b>Multiple Births</b>										
Spontaneous	590	21.6	582	8	13.6	11	18.9	32.2	25.6	352
Breech / Forceps	115	4.2	113	2	17.4	4	35.4	52.2	43.9	16
Forceps	62	2.3	62	0	0.0	2	32.3	32.3	16.4	42
Vacuum extraction	168	6.2	168	0	0.0	0	0.0	0.0	0.0	76
Caesarean section	1,791	65.7	1,780	11	6.1	10	5.6	11.7	6.7	871
Other specified & combined	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>2,705</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>	<b>1,357</b>

Note: \* Rate per 1,000 births. 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.

**FIGURE 4.4**

Percentage Distribution of Total Live Births by Method of Delivery



Notes: See Table 4.8a for data.

\*Instrumental delivery includes breech/forceps, forceps or vacuum extraction.

**METHOD OF DELIVERY BY MATERNAL AGE**

Table 4.8b presents method of delivery by maternal age.

- Caesarean section rates ranged from 15.1 per cent for mothers aged less than 20 years to 43.6 per cent for mothers aged 40 years and over.
- The percentage of babies delivered by spontaneous delivery declined with age and was reported at 65.5 per cent for mothers aged less than 20 years compared to 45.9 per cent to mothers aged 40 years and older (see Figure 4.5).

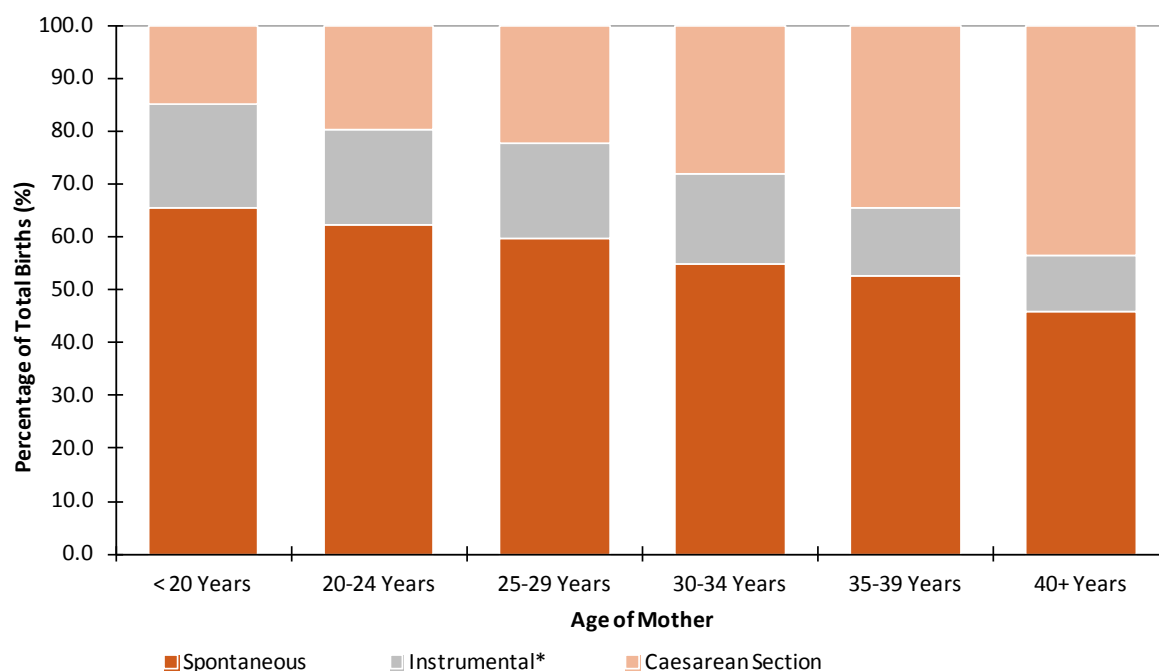
**TABLE 4.8b**

Method of Delivery by Maternal Age

Frequency Col. Per Cent	Age of Mother							Total
	Under 20 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40 Years and Over	Not Stated	
Spontaneous	1,114 65.5	4,607 62.3	9,996 59.7	14,700 54.8	9,364 52.6	1,789 45.9	0 0.0	41,570 55.9
Breech/Forceps	7 0.4	49 0.7	105 0.6	144 0.5	101 0.6	20 0.5	0 0.0	426 0.6
Forceps	76 4.5	315 4.3	779 4.7	1,222 4.6	536 3.0	98 2.5	0 0.0	3,026 4.1
Vacuum extraction	247 14.5	968 13.1	2,139 12.8	3,203 11.9	1,644 9.2	290 7.4	1 100.0	8,492 11.4
Caesarean section	256 15.1	1,452 19.6	3,721 22.2	7,565 28.2	6,147 34.5	1,697 43.6	0 0.0	20,838 28.0
Other specified & combined	0 0.0	2 0.0	7 0.0	12 0.0	3 0.0	1 0.0	0 0.0	25 0.0
<b>Total</b>	<b>1,700 100</b>	<b>7,393 100</b>	<b>16,747 100</b>	<b>26,846 100</b>	<b>17,795 100</b>	<b>3,895 100</b>	<b>1 100</b>	<b>74,377 100</b>

**FIGURE 4.5**

Percentage of Total Births by Method of Delivery and Age of Mother



Notes: See Table 4.8b for data.

\* Instrumental delivery includes breech/forceps, forceps or vacuum extraction.

**DISTRIBUTION OF BIRTHS BY SIZE OF MATERNITY UNIT**

Analysis of births by size of maternity unit is based on births registered by either maternity hospitals or hospitals with dedicated maternity units. Table 4.9 presents data on the size of maternity units.

- Just over 44 per cent of total births took place in 15 maternity units accommodating between 1,000 and 3,999 births each annually.
- Four maternity units each accommodated 8,000 or more births accounting for almost 49 per cent of total births (see Figure 4.6).

**TABLE 4.9**

Size of Maternity Unit (Number of Live Births and Stillbirths Annually) by Number of Units: Total Births, Live Births, Stillbirths, Early Neonatal Deaths and Mortality Rates

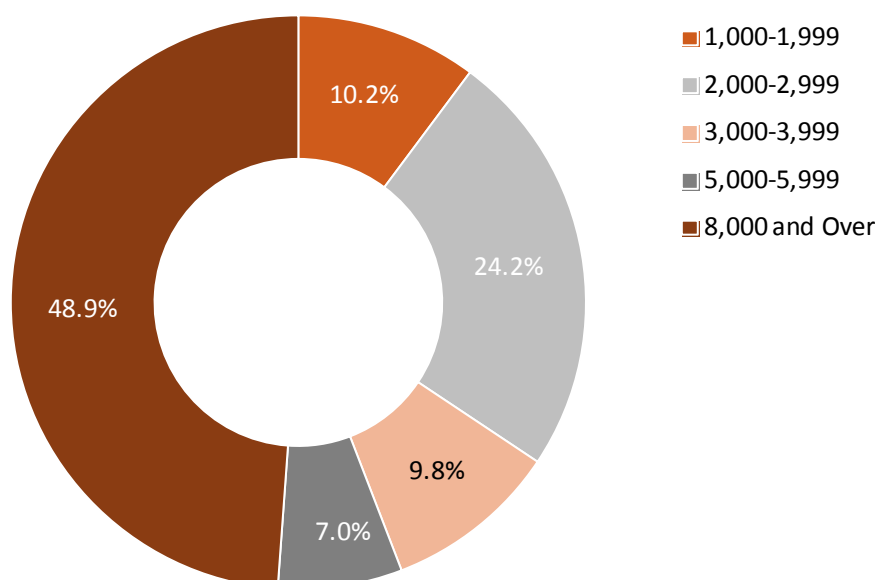
	Number of Units	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*
1000-1999	5	7,586	10.2	7,556	30	4.0	14	1.9	5.8	4.1
2000-2999	8	17,956	24.2	17,880	76	4.2	22	1.2	5.5	3.9
3000-3999	2	7,238	9.8	7,213	25	3.5	17	2.4	5.8	4.3
5000-5999	1	5,164	7.0	5,133	31	6.0	15	2.9	8.9	5.8
8000 and Over	4	36,265	48.9	36,130	135	3.7	85	2.4	6.1	4.0
<b>Total</b>	<b>20</b>	<b>74,209</b>	<b>100</b>	<b>73,912</b>	<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.2</b>

Notes: \* Rate per 1,000 births. 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.

There were 20 maternity units in Ireland in 2011, each of which delivered over 1,000 births per annum. No unit delivered between 4,000 and 4,999 or 6,000 and 7,999 births.

**FIGURE 4.6**

Percentage Distribution of Births by Size of Maternity Unit, Total Births



Notes: See Table 4.9 for data. Percentages are subject to rounding.  
The size of the unit refers to the number of live births and stillbirths occurring in 2011..

## INTER-HOSPITAL TRANSFER OF INFANTS

Table 4.10 presents data on inter-hospital transfer of infants.

- Over 99 per cent of infants remained in the hospital in which they were born, just under 1 per cent of live births were transferred to another hospital for medical reasons.
- Less than 1 per cent of singleton births were transferred compared to 2.6 per cent of multiple births being transferred for medical reasons.

**TABLE 4.10**

Inter-Hospital Transfer of Infants

	Live Births	Per Cent Live Births	Early Neonatal Deaths	Early Neonatal Mortality Rate*
<b>Total Births</b>				
Transferred	499	0.7	26	52.1
Not Transferred	73,408	99.3	127	1.7
Not Stated	5	0.0	0	0.0
<b>Total</b>	<b>73,912</b>	<b>100</b>	<b>153</b>	<b>2.1</b>
<b>Singleton Births</b>				
Transferred	428	0.6	24	56.1
Not Transferred	70,774	99.4	102	1.4
Not Stated	5	0.0	0	0.0
<b>Total</b>	<b>71,207</b>	<b>100</b>	<b>126</b>	<b>1.8</b>
<b>Multiple Births</b>				
Transferred	71	2.6	2	28.2
Not Transferred	2,634	97.4	25	9.5
Not Stated	0	0.0	0	0.0
<b>Total</b>	<b>2,705</b>	<b>100</b>	<b>27</b>	<b>10.0</b>

Notes: \* Rate per 1,000 births. For early neonatal deaths, rates are calculated on total live births.  
Domiciliary births, of which there were 168 live births, are excluded from this table. See Appendix H for detailed analysis.

## INFANT'S LENGTH OF STAY

Table 4.11 presents data relating to infant's length of stay in hospital.

- Over 54 per cent of singleton live births were discharged from hospital within 2 days, compared to just 9.9 per cent of multiple births (see Figure 4.7).
- Over 95 per cent of singleton live births were discharged from hospital within 5 days of birth, compared to 66.3 per cent of multiple live births.
- 5.3 per cent of total live births had a length of stay of 6 or more days.

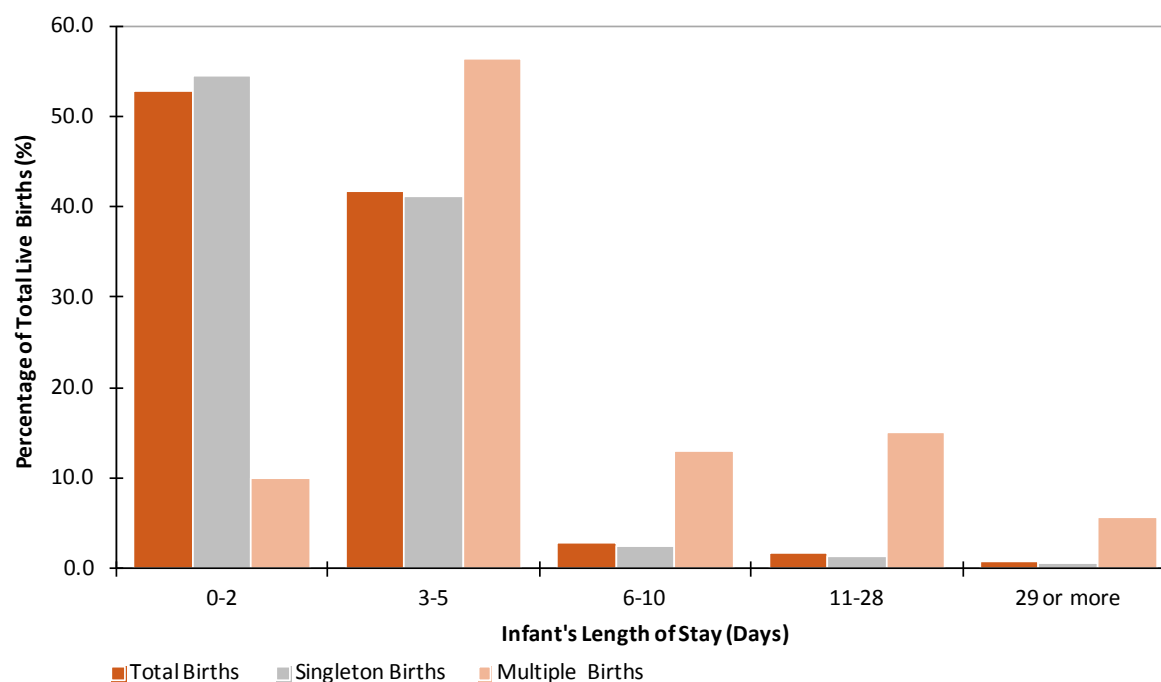
**TABLE 4.11**

Infant's Length of Stay (days) in Hospital, Live Births

	Live Births	Per Cent Live Births
<b>Total Births</b>		
0-2	38,940	52.8
3-5	30,800	41.8
6-10	2,144	2.9
11-28	1,282	1.7
29 or more	509	0.7
Not Stated	84	0.1
<b>Total</b>	<b>73,759</b>	<b>100</b>
<b>Singleton Births</b>		
0-2	38,677	54.4
3-5	29,305	41.2
6-10	1,802	2.5
11-28	881	1.2
29 or more	359	0.5
Not Stated	57	0.1
<b>Total</b>	<b>71,081</b>	<b>100</b>
<b>Multiple Births</b>		
0-2	263	9.8
3-5	1,495	55.8
6-10	342	12.8
11-28	401	15.0
29 or more	150	5.6
Not Stated	27	1.0
<b>Total</b>	<b>2,678</b>	<b>100</b>

*Note:* This table does not include domiciliary births and early neonatal deaths.

**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 or by midwife attending a domiciliary birth. The presentation of type of feeding in this report is based on live births only and excludes early neonatal deaths.

Table 4.12 presents type of feeding by age of mother.

- At 46.6 per cent, a slightly higher proportion of total births were breastfed<sup>23</sup> compared to 44.8 per cent reporting artificial feeding.
- Artificial feeding is more common for multiple births (52.6 per cent for multiple births compared to 44.6 per cent for singleton births) while breastfeeding is more common for singleton births (47.3 per cent for singleton births compared to 27.4 per cent for multiple births).
- Breastfeeding was more common than artificial feeding amongst mothers aged between 25 years or more, with the highest proportion in the 30–34 year age group for whom 50.2 percent reported breastfeeding (see Figure 4.8).
- One-fifth (20.6 per cent) of infants born to mothers under 20 were exclusively breastfed.

<sup>23</sup> Throughout this section, discussion of breastfeeding refers to exclusive breastfeeding only.

TABLE 4.12

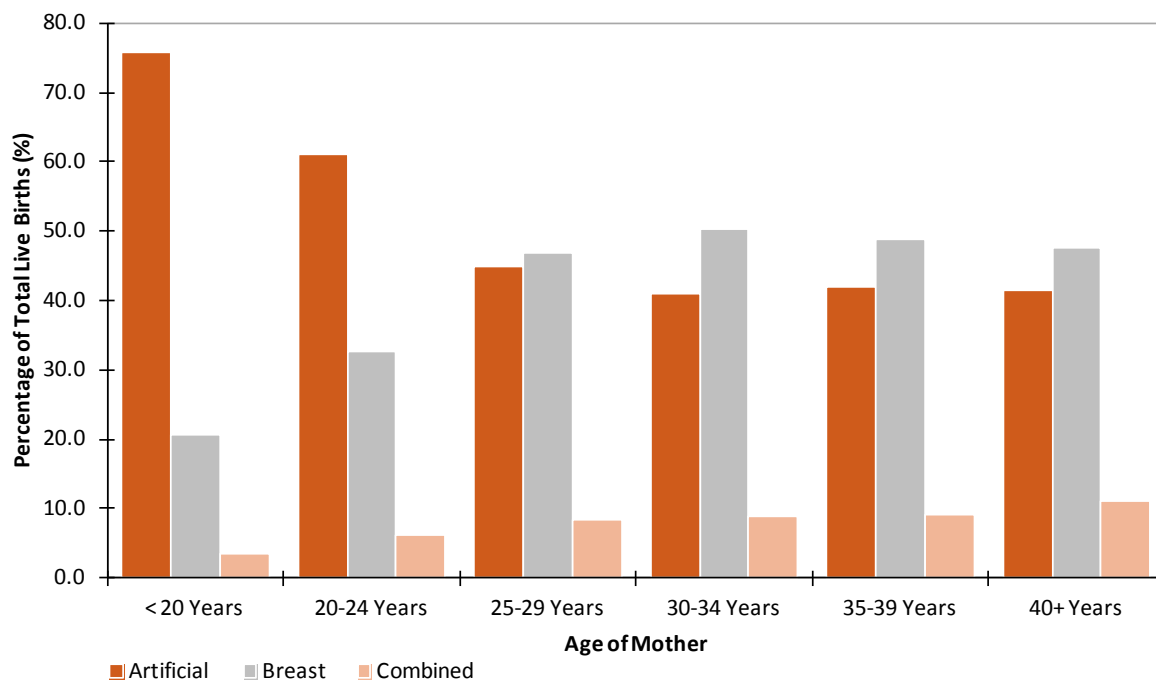
Age of Mother by Infant's Type of Feeding, Numbers and Percentages, Total Live Births

	Type of Feeding														
	Total Births					Singleton Births					Multiple Births				
Frequency Row Per Cent Col. Per Cent	Artificial	Breast	Combined	Not Stated	Total	Artificial	Breast	Combined	Not Stated	Total	Artificial	Breast	Combined	Not Stated	Total
Under 15 Years	4 50.0 0.0	4 50.0 0.0	0 0.0 0.0	0 0.0 0.0	8 100.0 0.0	4 50.0 0.0	4 50.0 0.0	0 0.0 0.0	0 0.0 0.0	8 100.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0
15-19 Years	1,276 76.0 3.8	344 20.5 1.0	59 3.5 0.9	0 0.0 0.0	1,679 100.0 2.3	1,256 75.8 4.0	342 20.6 1.0	59 3.6 1.0	0 0.0 0.0	1,657 100.0 2.3	20 90.9 1.4	2 9.1 0.3	0 0.0 0.0	0 0.0 0.0	22 100 0.8
20-24 Years	4,486 61.2 13.5	2,386 32.5 6.9	459 6.3 7.2	1 0.0 33.3	7,332 100.0 9.9	4,433 61.3 14.0	2,361 32.6 7.0	442 6.1 7.6	1 0.0 33.3	7,237 100.0 10.2	53 55.8 3.8	25 26.3 3.4	17 17.9 3.2	0 0.0 0.0	95 100 3.5
25-29 Years	7,463 44.8 22.5	7,820 46.9 22.7	1,375 8.3 21.7	0 0.0 0.0	16,658 100.0 22.5	7,235 44.6 22.8	7,689 47.4 22.8	1,295 8.0 22.3	0 0.0 0.0	16,219 100.0 22.8	228 51.9 16.2	131 29.8 17.8	80 18.2 15.0	0 0.0 0.0	439 100 16.4
30-34 Years	10,915 40.9 32.9	13,394 50.2 38.9	2,389 8.9 37.7	1 0.0 33.3	26,699 100.0 36.1	10,415 40.5 32.8	13,117 51.0 38.9	2,189 8.5 37.7	1 0.0 33.3	25,722 100.0 36.1	500 51.2 35.5	277 28.4 37.7	200 20.5 37.4	0 0.0 0.0	977 100 36.5
35-39 Years	7,413 41.9 22.4	8,658 48.9 25.1	1,629 9.2 25.7	0 0.0 0.0	17,700 100.0 23.9	6,955 41.3 21.9	8,426 50.1 25.0	1,454 8.6 25.1	0 0.0 0.0	16,835 100.0 23.6	458 52.9 32.5	232 26.8 31.6	175 20.2 32.7	0 0.0 0.0	865 100 32.3
40-44 Years	1,532 41.5 4.6	1,754 47.6 5.1	401 10.9 6.3	1 0.0 33.3	3,688 100.0 5.0	1,408 40.8 4.4	1,694 49.1 5.0	345 10.0 5.9	1 0.0 33.3	3,448 100.0 4.8	124 51.7 8.8	60 25.0 8.2	56 23.3 10.5	0 0.0 0.0	240 100 9.0
45 Years and Over	60 37.0 0.2	80 49.4 0.2	22 13.6 0.3	0 0.0 0.0	162 100.0 0.2	35 28.7 0.1	72 59.0 0.2	15 12.3 0.3	0 0.0 0.0	122 100.0 0.2	25 62.5 1.8	8 20.0 1.1	7 17.5 1.3	0 0.0 0.0	40 100 1.5
Not Stated	1 100.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	1 100.0 0.0	1 100.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	1 100.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0
Total	33,150 44.8 100	34,440 46.6 100	6,334 8.6 100	3 0.0 100	73,927 100.0 100	31,742 44.6 100	33,705 47.3 100	5,799 8.1 100	3 0.0 100	71,249 100.0 100	1,408 52.6 100	735 27.4 100	535 20.0 100	0 0.0 0.0	2,678 100 100

Note: This table excludes Early Neonatal Deaths.

**FIGURE 4.8**

Percentage Distribution of Infant's Type of Feeding by Age of Mother, Total Live Births



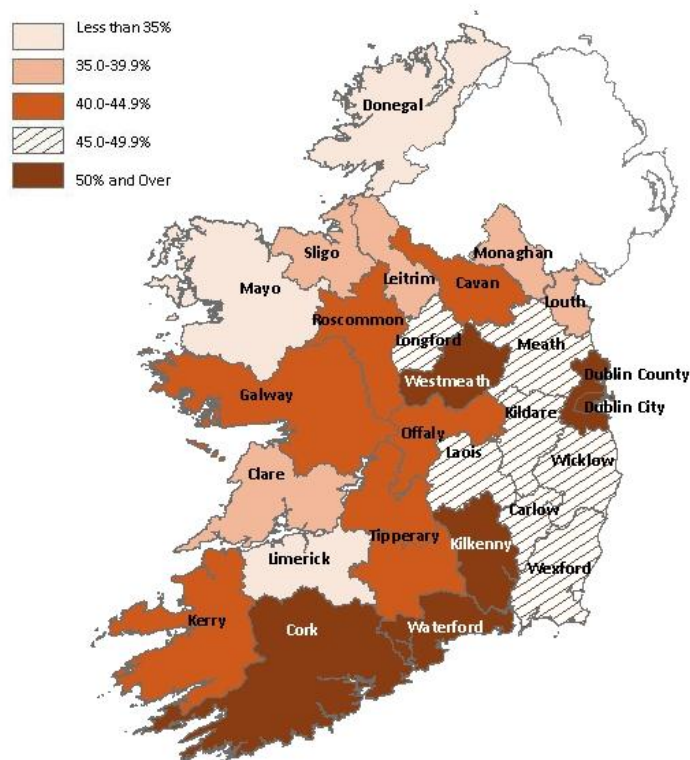
Note: See Table 4.12 for data. 'Not Stated' values are not included in the calculation of percentages.

Figure 4.9 presents the prevalence of exclusive breastfeeding by geographic location.

- Infants born to mothers resident in Waterford recorded the highest rate of breastfeeding at 56.3 per cent, closely followed by Dublin County and Cork (53.9 per cent and 52.9 per cent respectively).
- Other counties reporting exclusive breastfeeding rates of over 50 per cent include Kilkenny, Westmeath and Dublin City.
- Eastern and South-Eastern counties recorded exclusive breastfeeding rates in line with or above the national breastfeeding rate of 46.6 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 Dublin City 50.3 per cent were breastfed.

Table 4.13 presents data on type of feeding by mother's occupation.

- Breastfeeding was most common among mothers in 'higher professional' occupations (63.0 per cent) and least common among 'unemployed' mothers (27.8 per cent).
- Artificial feeding was most common amongst the 'unemployed' mothers with a rate of 64.3 per cent and those whose occupation was recorded as 'home duties' (53.9 per cent).
- Lower rates of artificial feeding were found amongst 'higher professionals' (27.4 per cent) and 'lower professionals' (29.3 per cent) (see Figure 4.10).

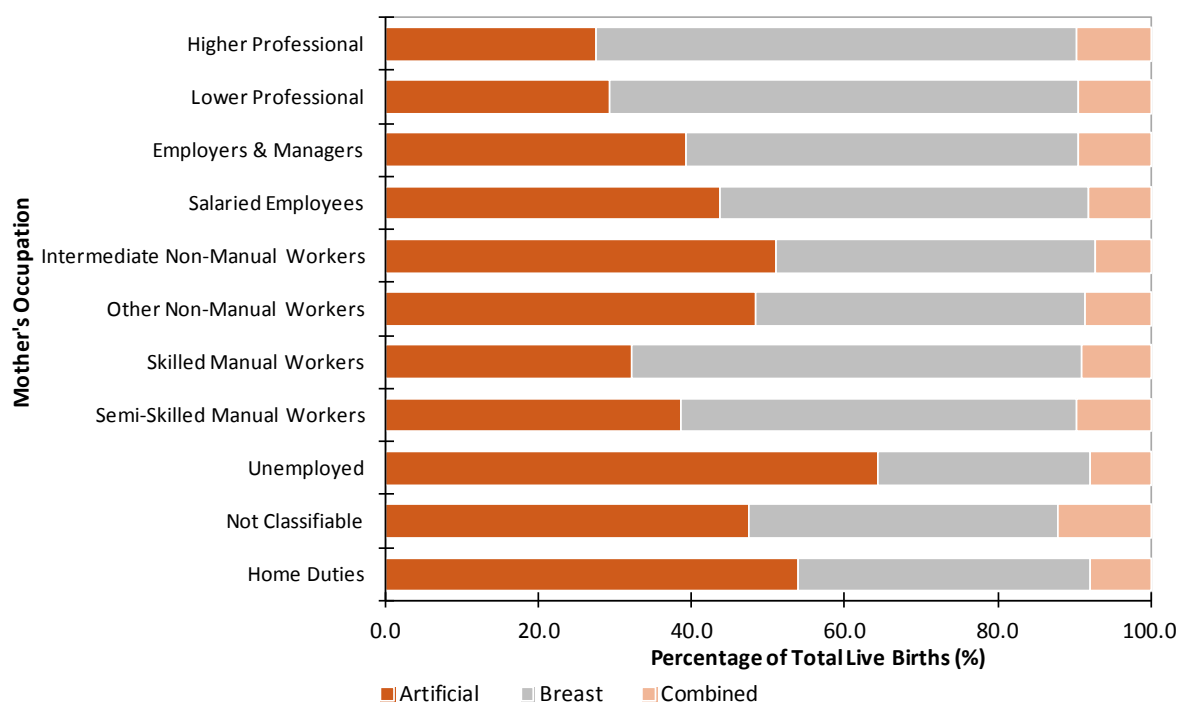
**TABLE 4.13**  
Mother's Occupation by Infant's Type of Feeding, Total Live Births

Frequency Row Per Cent Col. Per Cent	Type of Feeding				
	Artificial	Breast	Combined	Not Stated	Total
Farmers & Farm Managers	25	31	6	0	62
	40.3	50.0	9.7	0.0	100
	0.1	0.1	0.1	0.0	0.1
Other Agricultural Occupations & Fishermen	14	46	9	0	69
	20.3	66.7	13.0	0.0	100
	0.0	0.1	0.1	0.0	0.1
Higher Professional	1,368	3,143	479	0	4,990
	27.4	63.0	9.6	0.0	100
	4.1	9.1	7.6	0.0	6.7
Lower Professional	3,525	7,366	1,127	0	12,018
	29.3	61.3	9.4	0.0	100
	10.6	21.4	17.8	0.0	16.3
Employers & Managers	2,117	2,779	510	0	5,406
	39.2	51.4	9.4	0.0	100
	6.4	8.1	8.1	0.0	7.3
Salaried Employees	439	482	82	0	1,003
	43.8	48.1	8.2	0.0	100
	1.3	1.4	1.3	0.0	1.4
Intermediate Non-Manual Workers	7,872	6,424	1,117	0	15,413
	51.1	41.7	7.2	0.0	100
	23.7	18.7	17.6	0.0	20.8
Other Non-Manual Workers	4,848	4,340	849	1	10,038
	48.3	43.2	8.5	0.0	100
	14.6	12.6	13.4	33.3	13.6
Skilled Manual Workers	368	674	103	0	1,145
	32.1	58.9	9.0	0.0	100
	1.1	2.0	1.6	0.0	1.5
Semi-Skilled Manual Workers	889	1,193	222	0	2,304
	38.6	51.8	9.6	0.0	100
	2.7	3.5	3.5	0.0	3.1
Unskilled Manual Workers	3	6	0	0	9
	33.3	66.7	0.0	0.0	100
	0.0	0.0	0.0	0.0	0.0
Unemployed	1,982	858	243	1	3,084
	64.3	27.8	7.9	0.0	100
	6.0	2.5	3.8	33.3	4.2
Not Classifiable	1,358	1,155	348	1	2,862
	47.4	40.4	12.2	0.0	100
	4.1	3.4	5.5	33.3	3.9
Home Duties	8,204	5,816	1,193	0	15,213
	53.9	38.2	7.8	0.0	100
	24.7	16.9	18.8	0.0	20.6
Not Stated	138	127	46	0	311
	44.4	40.8	14.8	0.0	100
	0.4	0.4	0.7	0.0	0.4
<b>Total</b>	<b>33,150</b>	<b>34,440</b>	<b>6,334</b>	<b>3</b>	<b>73,927</b>
	<b>44.8</b>	<b>46.6</b>	<b>8.6</b>	<b>0.0</b>	<b>100</b>
	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Notes: See Appendix C for a description of the classification system for occupation.  
This table excludes Early Neonatal Deaths.

**FIGURE 4.10**

Percentage Distribution of Infant's Type of Feeding by Mother's Occupation, Total Live Births



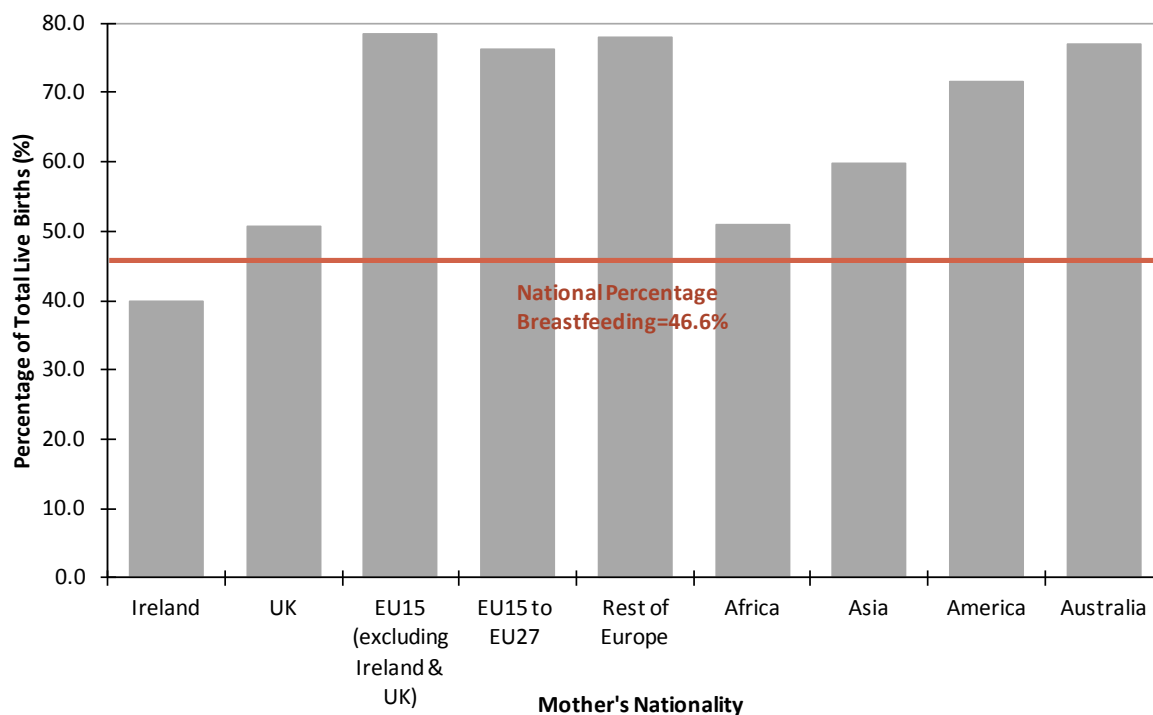
Notes: See Table 4.13 for data. 'Not Stated' values are not included in the calculation of percentages.  
Categories where percentages would be based on <100 births are not included.

Figure 4.11 presents the prevalence of exclusive breastfeeding by mother's nationality.

- At 39.8 per cent, births to mothers from Ireland record the lowest proportion of breastfeeding, whilst births to mothers from the EU15 (excluding Ireland & UK) report the highest proportion of breastfeeding at 78.4 per cent.
- Births to mothers from the Rest of Europe, Australia and the EU15 to EU27 each record breastfeeding percentages of over 75 per cent.
- Similar breastfeeding rates are reported for mothers from Africa and the UK at just over 50 per cent.

**FIGURE 4.11**

Percentage Distribution of Breastfed Infants by Mother's Nationality, Total Live Births



Notes: See Appendix G, Table G17 for data. 'Not Stated' values are not included in the calculation of percentages. Categories where percentages would be based on <100 live births are not included.



# **SECTION FIVE**

## **PERINATAL OUTCOMES**

## INTRODUCTION

This section presents a detailed review of aspects of perinatal outcomes for the infant. Cause of death is examined according to the guidelines set out by the WHO in the International Classification of Diseases (ICD-10).<sup>24</sup> A detailed description of cause of death classification and coding rules applied is available in Appendix D.

Of the 74,377 births recorded by the NPRS in 2011, 297 were stillbirths and 153 were early neonatal deaths, giving a total of 450 perinatal deaths and a perinatal mortality rate of 6.1 per 1,000 live births and stillbirths.

The number of perinatal deaths are broken down by type of death (antepartum and intrapartum stillbirths and early neonatal deaths), with tables presenting data in relation to

- birthweight distribution by parity and cause of death
- gestational age at delivery and cause of death
- cause of death categorised by ICD-10 codes
- age at death for early neonatal deaths
- post-mortem examinations.

## MORTALITY BY BIRTHWEIGHT AND PARITY

Table 5.1 presents mortality rates by birthweight and parity.<sup>25,26</sup>

- Approximately 71 per cent of total perinatal deaths weighed less than 2,500 grams (72.3 per cent for primiparous women and 69.7 per cent for multiparous women) (see Figure 5.1).
- The perinatal mortality rate for low birthweight babies (weighing less than 2,500 grams) was 78.3 per 1,000 live births and stillbirths (71.3 per 1,000 for primiparous women and 85.7 per 1,000 for multiparous women).
- For births weighing 2,500 grams or more the perinatal mortality rate was 1.8 per 1,000 live births and stillbirths (2.1 for primiparous women and 1.7 for multiparous women).
- The highest perinatal mortality rate for all births was recorded for births weighing between 500–749 grams at 628.4 per 1,000 live births (see Figure 5.2).

<sup>24</sup> World Health Organisation, 2005, *International Statistical Classification of Diseases and Related Health Problems*, 10<sup>th</sup> Revision, Vols. 1-3. Geneva: World Health Organisation

<sup>25</sup> Throughout this section, 'Not Stated' values are not included in the calculation of percentages for discussion.

<sup>26</sup> For details of birthweight by plurality for total births, antepartum and intrapartum stillbirths, early neonatal deaths and associated rates see Appendix G, Table G18

TABLE 5.1

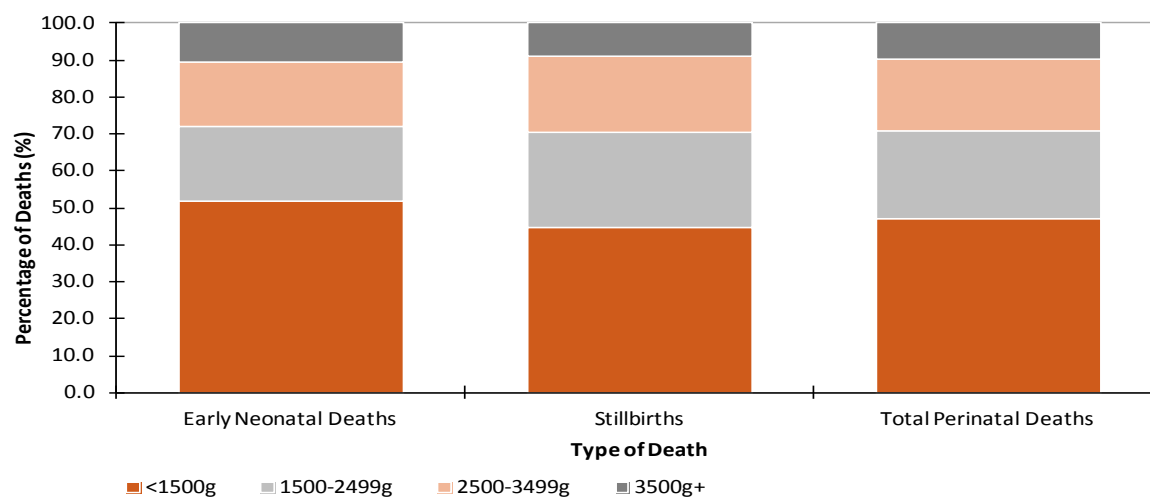
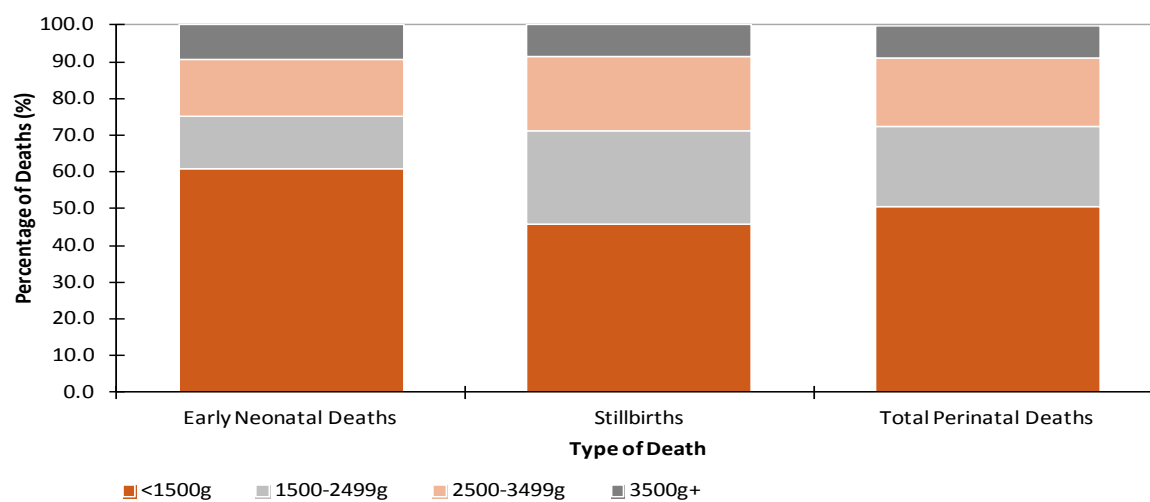
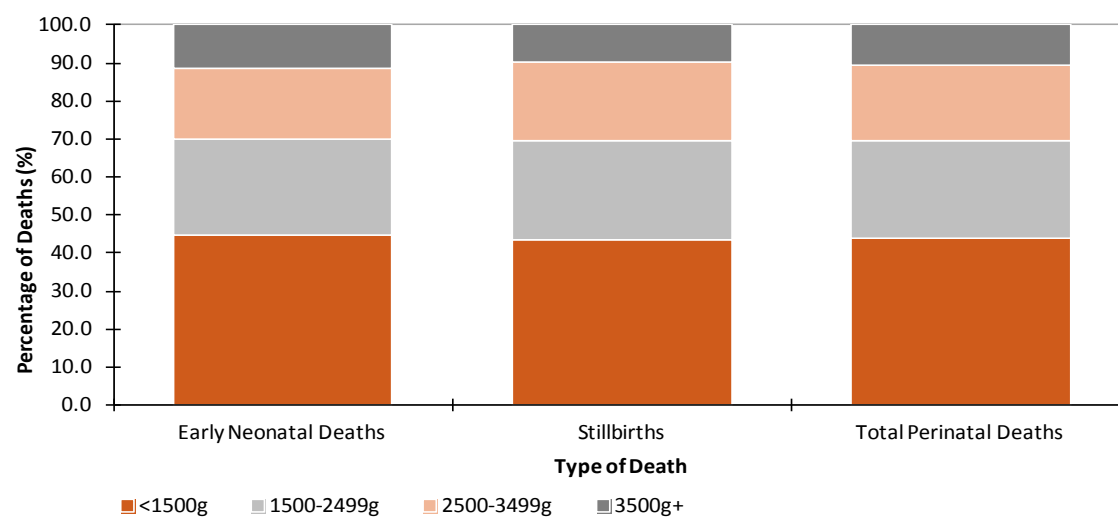
Birthweight (grams): Total Births, Antepartum and Intrapartum Stillbirths, Early Neonatal Deaths, and Mortality Rates

	Total Births	Total Births %	Ante-partum Stillbirths	Intra-Partum Stillbirths	Not Stated	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*
<b>Total Births</b>										
500-749	148	0.2	38	9	3	337.8	43	438.8	628.4	601.4
750-999	163	0.2	25	3	0	171.8	19	140.7	288.3	226.7
1000-1249	210	0.3	24	4	1	138.1	10	55.2	185.7	118.6
1250-1499	219	0.3	21	3	1	114.2	6	30.9	141.6	91.8
1500-1999	912	1.2	38	4	0	46.1	15	17.2	62.5	30.6
2000-2499	2,398	3.2	28	6	0	14.2	16	6.8	20.9	12.6
2500-2999	8,709	11.7	31	2	1	3.9	10	1.2	5.1	3.6
3000-3499	23,930	32.2	24	2	1	1.1	16	0.7	1.8	1.2
3500-3999	25,567	34.4	15	3	0	0.7	14	0.5	1.3	0.7
4000-4499	10,197	13.7	8	0	1	0.9	2	0.2	1.1	1.0
4500 and Over	1,919	2.6	0	0	0	0.0	0	0.0	0.0	0.0
Not Stated	1	0	0	0	0	0.0	1	1000.0	1000.0	1000.0
<b>Total</b>	<b>74,373</b>	<b>100</b>	<b>252</b>	<b>36</b>	<b>8</b>	<b>4.0</b>	<b>152</b>	<b>2.1</b>	<b>6.0</b>	<b>4.1</b>
<b>Births to Primiparous Women</b>										
500-749	86	0.3	21	5	1	314.0	25	423.7	604.7	580.2
750-999	93	0.3	12	1	0	139.8	7	87.5	215.1	188.9
1000-1249	123	0.4	14	0	0	113.8	5	45.9	154.5	95.7
1250-1499	120	0.4	8	2	1	91.7	2	18.3	108.3	69.6
1500-1999	458	1.5	13	2	0	32.8	5	11.3	43.7	22.3
2000-2499	1,209	4.1	18	3	0	17.4	4	3.4	20.7	15.0
2500-2999	4,087	13.7	14	1	0	3.7	5	1.2	4.9	3.7
3000-3499	10,296	34.6	14	0	0	1.4	5	0.5	1.8	1.3
3500-3999	9,564	32.1	7	2	0	0.9	5	0.5	1.5	1.0
4000-4499	3,179	10.7	2	0	1	0.9	1	0.3	1.3	0.9
4500 and Over	559	1.9	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	0.0
<b>Total</b>	<b>29,774</b>	<b>100</b>	<b>123</b>	<b>16</b>	<b>3</b>	<b>4.8</b>	<b>64</b>	<b>2.2</b>	<b>6.9</b>	<b>5.1</b>
<b>Births to Multiparous Women</b>										
500-749	62	0.1	17	4	2	371.0	18	461.5	661.3	631.6
750-999	70	0.2	13	2	0	214.3	12	218.2	385.7	283.3
1000-1249	87	0.2	10	4	1	172.4	5	69.4	229.9	151.9
1250-1499	99	0.2	13	1	0	141.4	4	47.1	181.8	119.6
1500-1999	454	1	25	2	0	59.5	10	23.4	81.5	39.2
2000-2499	1,189	2.7	10	3	0	10.9	12	10.2	21.0	10.2
2500-2999	4,622	10.4	17	1	1	4.1	5	1.1	5.2	3.5
3000-3499	13,634	30.6	10	2	1	1.0	11	0.8	1.8	1.2
3500-3999	16,003	35.9	8	1	0	0.6	9	0.6	1.1	0.6
4000-4499	7,018	15.7	6	0	0	0.9	1	0.1	1.0	1.0
4500 and Over	1,360	3	0	0	0	0.0	0	0.0	0.0	0.0
Not Stated	1	0	0	0	0	0.0	1	1000.0	1000.0	1000.0
<b>Total</b>	<b>44,599</b>	<b>100</b>	<b>129</b>	<b>20</b>	<b>5</b>	<b>3.5</b>	<b>88</b>	<b>2.0</b>	<b>5.4</b>	<b>3.5</b>

Notes: \* Rate per 1,000 births. 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.  
There were 4 maternities for which parity was unknown; these were excluded from the table.

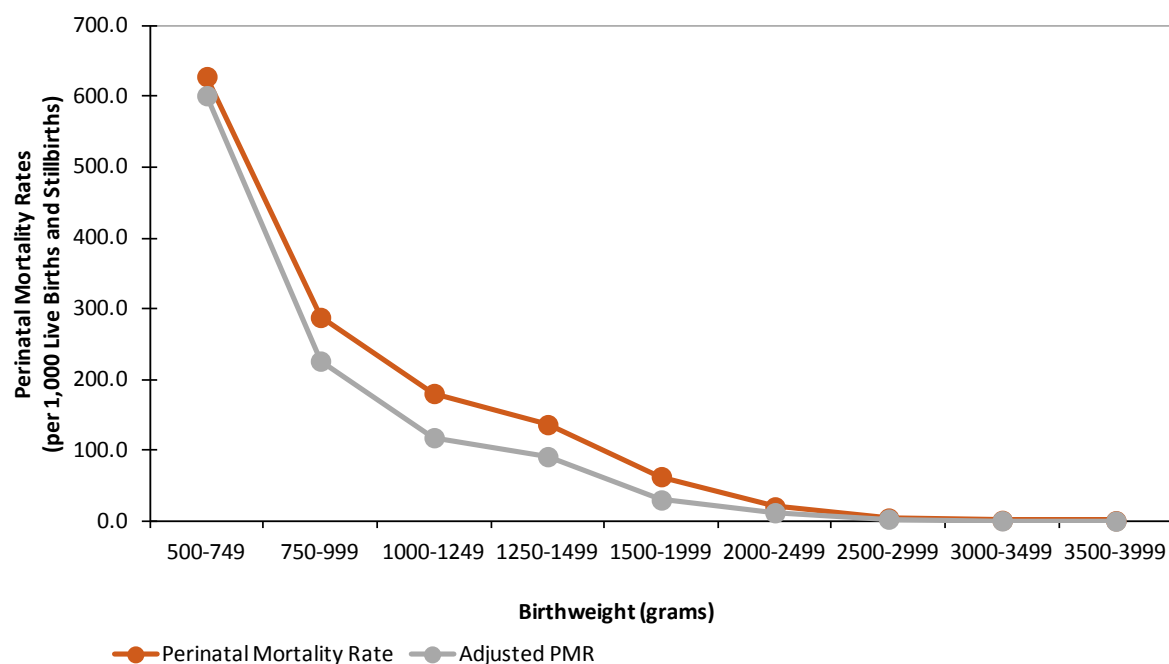
**FIGURE 5.1**

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, Total Births



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

### CAUSE OF DEATH BY BIRTHWEIGHT

Cause of death data are recorded using the WHO ICD-10 classification.<sup>27</sup> Under this system, the main cause of death is defined as the pathological condition of the infant or foetus which, in the opinion of the certifier, made the greatest contribution towards the death.<sup>28</sup>

Table 5.2 presents cause of death by birthweight for total, singleton and multiple births.

- Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04) accounted for the largest proportion of total perinatal deaths (21.6 per cent).
- Over 70 per cent of total perinatal deaths weighed <2,500 grams, and of these 31.8 per cent were due to congenital malformations (Q00-Q99), followed by immaturity (P05-P08) and maternal factors (P00-P04), each accounting for almost 20 per cent (see Figure 5.3).
- Almost three in ten perinatal deaths weighed  $\geq 2,500$  grams, and of these 31.3 per cent recorded cause of death due to congenital malformations (Q00-Q99), and 26.7 per cent were due to maternal factors (P00-P04) (see Figure 5.4).

<sup>27</sup> World Health Organisation, *op. cit.*

<sup>28</sup> See Appendix D for more detail.

TABLE 5.2

Total Births: Cause of Death by ICD-10 Chapter by Birthweight, Numbers and Perinatal Mortality Rate

Number Rate per 1,000 Live Births and Stillbirths	ICD-10 Code	Birthweight (grams)												Not Stated	Total
		500 - 749	750 - 999	1000 - 1249	1250 - 1499	1500 - 1999	2000 - 2499	2500 - 2999	3000 - 3499	3500 - 3999	4000 - 4499	4500 and Over			
Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery	P00-P04	16	8	8	9	9	12	12	13	8	2	0	0	97	
		108.1	49.1	38.1	41.1	9.9	5.0	1.4	0.5	0.3	0.2	0.0	0.0	1.3	
Disorders related to length of gestation and foetal growth	P05-P08	40	9	5	3	3	3	2	0	0	0	0	1	66	
		270.3	55.2	23.8	13.7	3.3	1.3	0.2	0.0	0.0	0.0	0.0	1000.0	0.9	
Respiratory and cardiovascular disorders specific to the perinatal period	P20-P29	6	7	4	2	5	6	4	7	6	0	0	0	47	
		40.5	42.9	19.0	9.1	5.5	2.5	0.5	0.3	0.2	0.0	0.0	0.0	0.6	
Infections specific to the perinatal period	P35-P39	2	2	1	1	0	1	0	0	1	1	0	0	9	
		13.5	12.3	4.8	4.6	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0	0.1	
Haemorrhagic and haematological disorders of foetus and newborn	P50-P61	3	0	0	1	1	0	4	0	0	0	0	0	9	
		20.3	0.0	0.0	4.6	1.1	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.1	
Transitory endocrine and metabolic disorders specific to foetus and newborn	P70-P74	1	1	0	0	0	0	0	0	1	2	0	0	5	
		6.8	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	
Digestive system disorders of foetus and newborn	P75-P78	1	0	0	0	0	0	0	0	0	0	0	0	1	
		6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Conditions involving the integument and temperature regulation of foetus and newborn	P80-P83	2	3	0	0	2	0	0	1	0	1	0	0	9	
		13.5	18.4	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	
Other disorders originating in the perinatal period	P90.0-P94.9, P96.0-P96.8	0	0	0	0	0	0	1	1	0	1	0	0	3	
		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	
Foetal death of unspecified cause, Condition originating in the perinatal period, unspecified	P95, P96.9	12	4	5	3	8	8	8	7	4	3	0	0	62	
		81.1	24.5	23.8	13.7	8.8	3.3	0.9	0.3	0.2	0.3	0.0	0.0	0.8	
Congenital malformations of the nervous system	Q00-Q07	2	3	6	2	2	5	4	2	4	0	0	0	30	
		13.5	18.4	28.6	9.1	2.2	2.1	0.5	0.1	0.2	0.0	0.0	0.0	0.4	
Congenital malformations of the circulatory system	Q20-Q28	1	0	0	0	6	3	0	7	1	0	0	0	18	
		6.8	0.0	0.0	0.0	6.6	1.3	0.0	0.3	0.0	0.0	0.0	0.0	0.2	
Congenital malformations of the respiratory system	Q30-Q34	0	0	1	0	0	2	0	0	0	0	0	0	3	
		0.0	0.0	4.8	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Cleft lip and cleft palate	Q35-Q37	0	0	0	0	0	1	0	0	0	0	0	0	1	
		0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Other congenital malformations of the digestive system	Q38-Q45	0	1	0	2	1	0	1	0	1	0	0	0	6	
		0.0	6.1	0.0	9.1	1.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	
Congenital malformations of genital organs	Q50-Q56	1	0	1	0	0	0	0	0	0	0	0	0	2	
		6.8	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Congenital malformations of the urinary system	Q60-Q64	0	0	0	0	1	2	3	1	1	0	0	0	8	
		0.0	0.0	0.0	0.0	1.1	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.1	
Congenital malformations and deformations of the musculoskeletal system	Q65-Q79	1	1	2	0	1	0	1	1	1	0	0	0	8	
		6.8	6.1	9.5	0.0	1.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	
Other congenital malformations	Q80-Q89	3	2	1	2	5	1	1	0	3	1	0	0	19	
		20.3	12.3	4.8	9.1	5.5	0.4	0.1	0.0	0.1	0.1	0.0	0.0	0.3	
Chromosomal abnormalities, not elsewhere classified	Q90-Q99	2	6	5	6	14	6	3	3	2	0	0	0	47	
		13.5	36.8	23.8	27.4	15.3	2.5	0.3	0.1	0.1	0.0	0.0	0.0	0.6	
Total		93	47	39	31	58	50	44	43	33	11	0	1	450	
		628.4	288.3	185.7	141.6	63.5	20.9	5.1	1.8	1.3	1.1	0.0	1000.0	6.1	

TABLE 5.2

Singleton Births: Cause of Death by ICD-10 Chapter by Birthweight, Numbers and Perinatal Mortality Rate

Number Rate per 1,000 Live Births and Stillbirths	ICD-10 Code	Birthweight (grams)												Not Stated	Total
		500 - 749	750 - 999	1000 - 1249	1250 - 1499	1500 - 1999	2000 - 2499	2500 - 2999	3000 - 3499	3500 - 3999	4000 - 4499	4500 and Over			
Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery	P00-P04	14	7	8	8	5	12	12	13	8	2	0	0	89	
		117.6	56.0	54.8	54.8	9.1	7.1	1.6	0.6	0.3	0.2	0.0	0.0	1.2	
Disorders related to length of gestation and foetal growth	P05-P08	32	6	4	2	3	3	2	0	0	0	0	1	53	
		268.9	48.0	27.4	13.7	5.4	1.8	0.3	0.0	0.0	0.0	0.0	1000.0	0.7	
Respiratory and cardiovascular disorders specific to the perinatal period	P20-P29	5	5	3	2	5	6	4	7	6	0	0	0	43	
		42.0	40.0	20.5	13.7	9.1	3.5	0.5	0.3	0.2	0.0	0.0	0.0	0.6	
Infections specific to the perinatal period	P35-P39	2	2	1	0	0	1	0	0	1	1	0	0	8	
		16.8	16.0	6.8	0.0	0.0	0.6	0.0	0.0	0.0	0.1	0.0	0.0	0.1	
Haemorrhagic and haematological disorders of foetus and newborn	P50-P61	3	0	0	0	1	0	4	0	0	0	0	0	8	
		25.2	0.0	0.0	0.0	1.8	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.1	
Transitory endocrine and metabolic disorders specific to foetus and newborn	P70-P74	1	1	0	0	0	0	0	0	1	2	0	0	5	
		8.4	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	
Digestive system disorders of foetus and newborn	P75-P78	1	0	0	0	0	0	0	0	0	0	0	0	1	
		8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Conditions involving the integument and temperature regulation of foetus and newborn	P80-P83	2	3	0	0	2	0	0	1	0	1	0	0	9	
		16.8	24.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	
Other disorders originating in the perinatal period	P90.0-P94.9, P96.0-P96.8	0	0	0	0	0	0	1	0	0	1	0	0	2	
		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	
Foetal death of unspecified cause, Condition originating in the perinatal period, unspecified	P95, P96.9	9	2	5	3	8	8	8	7	4	3	0	0	57	
		75.6	16.0	34.2	20.5	14.5	4.7	1.0	0.3	0.2	0.3	0.0	0.0	0.8	
Congenital malformations of the nervous system	Q00-Q07	2	2	3	2	2	5	3	2	4	0	0	0	25	
		16.8	16.0	20.5	13.7	3.6	2.9	0.4	0.1	0.2	0.0	0.0	0.0	0.3	
Congenital malformations of the circulatory system	Q20-Q28	1	0	0	0	5	2	0	7	1	0	0	0	16	
		8.4	0.0	0.0	0.0	9.1	1.2	0.0	0.3	0.0	0.0	0.0	0.0	0.2	
Congenital malformations of the respiratory system	Q30-Q34	0	0	1	0	0	2	0	0	0	0	0	0	3	
		0.0	0.0	6.8	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Cleft lip and cleft palate	Q35-Q37	0	0	0	0	0	1	0	0	0	0	0	0	1	
		0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Other congenital malformations of the digestive system	Q38-Q45	0	1	0	1	1	0	1	0	1	0	0	0	5	
		0.0	8.0	0.0	6.8	1.8	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	
Congenital malformations of genital organs	Q50-Q56	1	0	0	0	0	0	0	0	0	0	0	0	1	
		8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Congenital malformations of the urinary system	Q60-Q64	0	0	0	0	1	2	3	1	1	0	0	0	8	
		0.0	0.0	0.0	0.0	1.8	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.1	
Congenital malformations and deformations of the musculoskeletal system	Q65-Q79	1	1	2	0	1	0	1	1	1	0	0	0	8	
		8.4	8.0	13.7	0.0	1.8	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	
Other congenital malformations	Q80-Q89	2	2	0	2	4	1	1	0	1	1	0	0	14	
		16.8	16.0	0.0	13.7	7.3	0.6	0.1	0.0	0.0	0.1	0.0	0.0	0.2	
Chromosomal abnormalities, not elsewhere classified	Q90-Q99	2	6	4	6	14	6	3	3	2	0	0	0	46	
		16.8	48.0	27.4	41.1	25.4	3.5	0.4	0.1	0.1	0.0	0.0	0.0	0.6	
Total		78	38	31	26	52	49	43	42	31	11	0	1	402	
		655.5	304.0	212.3	178.1	94.4	28.8	5.6	1.8	1.2	1.1	0.0	1000.0	5.6	

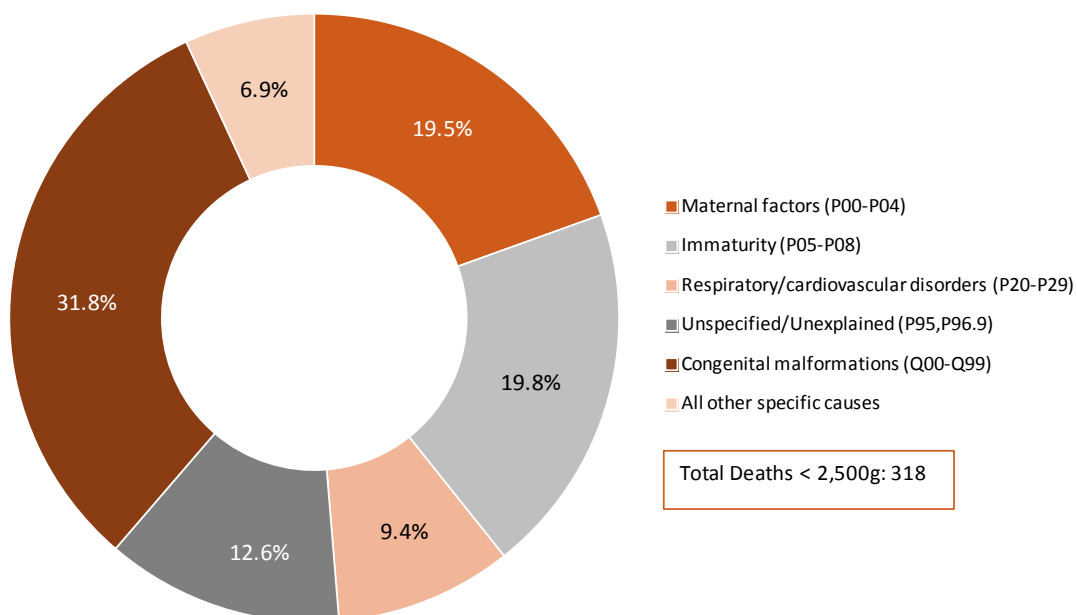
TABLE 5.2

Multiple Births: Cause of Death by ICD-10 Chapter by Birthweight, Numbers and Perinatal Mortality Rate

Number Rate per 1,000 Live Births and Stillbirths	ICD-10 Code	Birthweight (grams)												Total
		500 - 749	750 - 999	1000 - 1249	1250 - 1499	1500 - 1999	2000 - 2499	2500 - 2999	3000 - 3499	3500 - 3999	4000 - 4499	4500 and Over	Not Stated	
Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery	P00-P04	2	1	0	1	4	0	0	0	0	0	0	0	8
		69.0	26.3	0.0	13.7	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9
Disorders related to length of gestation and foetal growth	P05-P08	8	3	1	1	0	0	0	0	0	0	0	0	13
		275.9	78.9	15.6	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Respiratory and cardiovascular disorders specific to the perinatal period	P20-P29	1	2	1	0	0	0	0	0	0	0	0	0	4
		34.5	52.6	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Infections specific to the perinatal period	P35-P39	0	0	0	1	0	0	0	0	0	0	0	0	1
		0.0	0.0	0.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Haemorrhagic and haematological disorders of foetus and newborn	P50-P61	0	0	0	1	0	0	0	0	0	0	0	0	1
		0.0	0.0	0.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Other disorders originating in the perinatal period	P90.0-P94.9, P96.0-P96.8	0	0	0	0	0	0	0	1	0	0	0	0	1
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.4
Foetal death of unspecified cause, Condition originating in the perinatal period, unspecified	P95, P96.9	3	2	0	0	0	0	0	0	0	0	0	0	5
		103.4	52.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
Congenital malformations of the nervous system	Q00-Q07	0	1	3	0	0	0	1	0	0	0	0	0	5
		0.0	26.3	46.9	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.8
Congenital malformations of the circulatory system	Q20-Q28	0	0	0	0	1	1	0	0	0	0	0	0	2
		0.0	0.0	0.0	0.0	2.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Other congenital malformations of the digestive system	Q38-Q45	0	0	0	1	0	0	0	0	0	0	0	0	1
		0.0	0.0	0.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Congenital malformations of genital organs	Q50-Q56	0	0	1	0	0	0	0	0	0	0	0	0	1
		0.0	0.0	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Other congenital malformations	Q80-Q89	1	0	1	0	1	0	0	0	2	0	0	0	5
		34.5	0.0	15.6	0.0	2.8	0.0	0.0	0.0	37.0	0.0	0.0	0.0	1.8
Chromosomal abnormalities, not elsewhere classified	Q90-Q99	0	0	1	0	0	0	0	0	0	0	0	0	1
		0.0	0.0	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Total		15	9	8	5	6	1	1	1	2	0	0	0	48
		517.2	236.8	125.0	68.5	16.6	1.4	1.0	2.4	37.0	0.0	0.0	0.0	17.6

**FIGURE 5.3**

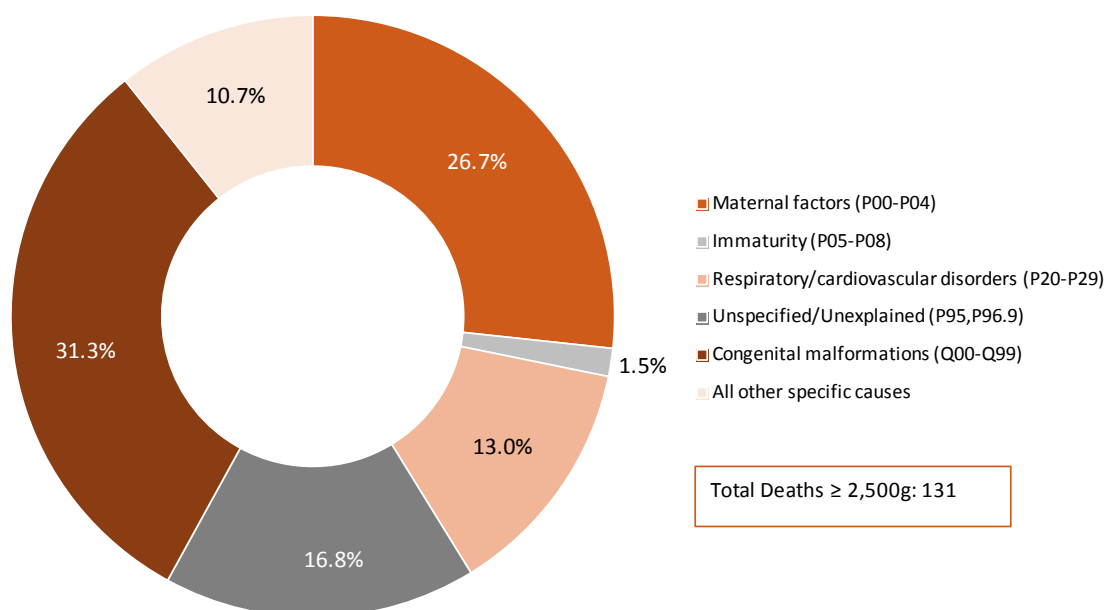
Total Deaths with Birthweight &lt; 2,500 grams by Cause of Death



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 5.3.

## MORTALITY BY GESTATIONAL AGE

Table 5.3 presents data on mortality by gestational age.

- Prematurity<sup>29</sup> has a significant impact on stillbirth and early neonatal mortality rates with just over two-thirds of total perinatal deaths born preterm.<sup>30</sup>
- 65.4 per cent of singleton perinatal deaths and 91.7 per cent of multiple perinatal deaths were preterm (see Figure 5.5).
- The perinatal mortality rate for babies born before 37 completed weeks of gestation was 67.5 per 1,000 live births and stillbirths (81.3 per 1,000 singleton births and 33.6 per 1,000 multiple births).
- For babies born at 37 or more completed weeks of gestation, perinatal mortality rate was 2.0 per 1,000 live births and stillbirths (2.0 for singleton births and 2.8 per 1,000 multiple births).

**TABLE 5.3**

Gestational Age (weeks): Total Births, Antepartum and Intrapartum Stillbirths, Early Neonatal Deaths, and Mortality Rates

	Total Births	Total Births %	Ante-Partum Stillbirths	Intra-Partum Stillbirths	Not Stated	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*
<b>Total Births</b>										
Less than 28	308	0.4	51	12	3	214.3	59	243.8	405.8	385.9
28-31	533	0.7	47	3	2	97.6	13	27.0	122.0	84.1
32-36	3,680	4.9	68	10	0	21.2	37	10.3	31.3	16.6
37-41	67,524	90.8	83	9	2	1.4	39	0.6	2.0	1.2
42 and Over	2,324	3.1	2	1	1	1.7	5	2.2	3.9	2.6
Not Stated	8	0	2	1	0	375.0	0	0.0	375.0	375.0
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>253</b>	<b>36</b>	<b>8</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>
<b>Singleton Births</b>										
Less than 28	238	0.3	45	11	3	247.9	45	251.4	437.0	412.3
28-31	363	0.5	40	3	2	124.0	9	28.3	148.8	112.1
32-36	2,611	3.6	62	10	0	27.6	31	12.2	39.4	20.7
37-41	66,107	92.3	82	9	2	1.4	36	0.5	2.0	1.2
42 and Over	2,324	3.2	2	1	1	1.7	5	2.2	3.9	2.6
Not Stated	8	0	2	1	0	375.0	0	0.0	375.0	375.0
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>233</b>	<b>35</b>	<b>8</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>
<b>Multiple Births</b>										
Less than 28	70	2.6	6	1	0	100.0	14	222.2	300.0	300.0
28-31	170	6.2	7	0	0	41.2	4	24.5	64.7	24.5
32-36	1,069	39.2	6	0	0	5.6	6	5.6	11.2	6.6
37-41	1,417	52	1	0	0	0.7	3	2.1	2.8	0.7
42 and Over	0	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	0.0
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>20</b>	<b>1</b>	<b>0</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>

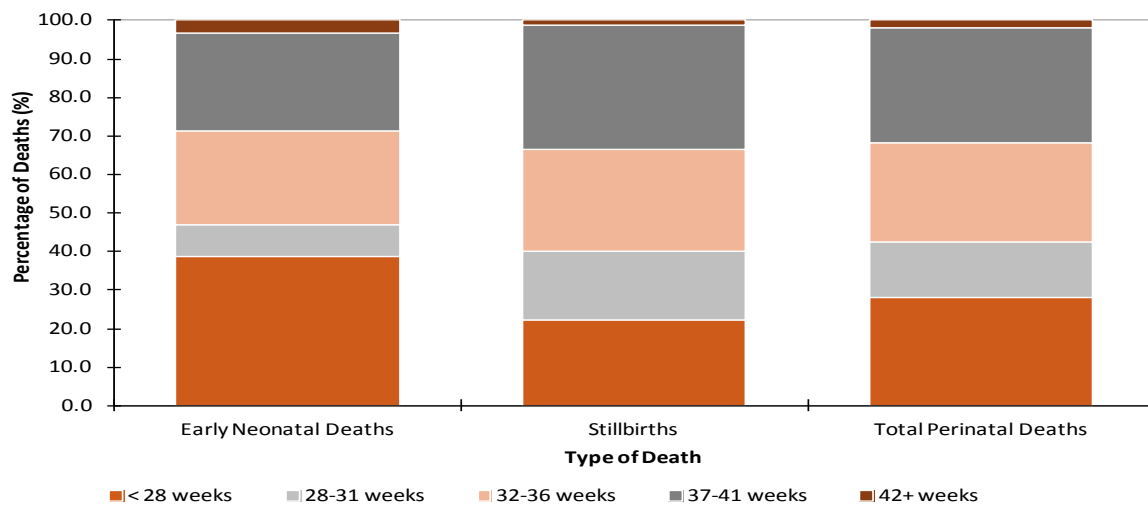
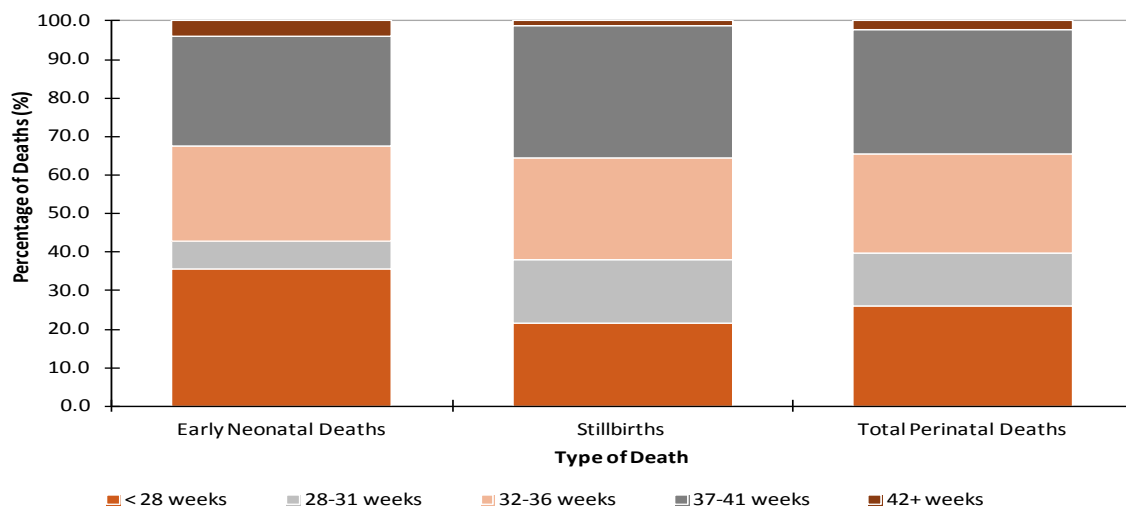
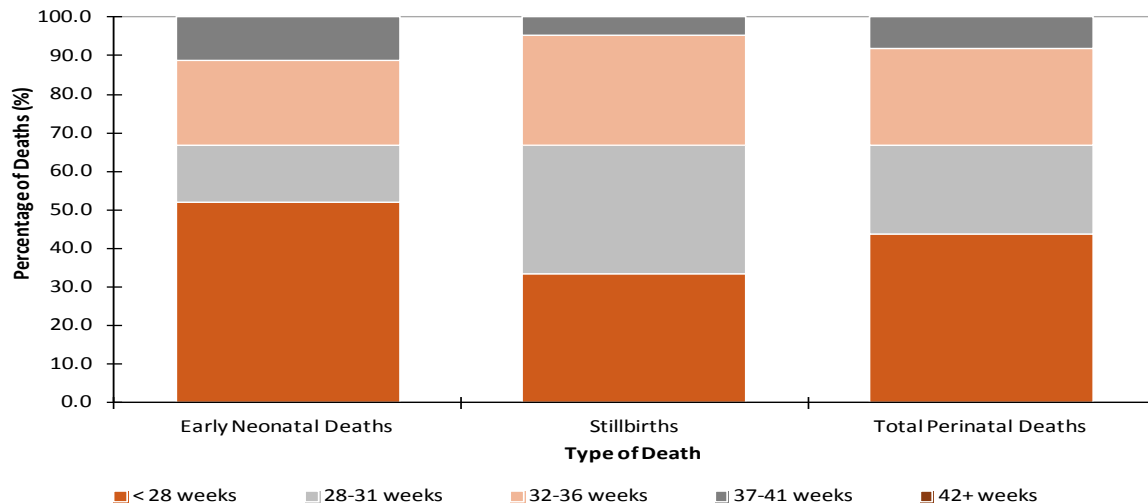
Note: \* Rate per 1,000 births. For stillbirths, perinatal deaths and adjusted perinatal deaths, rates are calculated on total live births and stillbirths. For early neonatal deaths, rates are calculated on total live births.

<sup>29</sup> Defined as less than 37 completed weeks of gestation.

<sup>30</sup> In 2011, 6.1 per cent of total births were pre-term.

**FIGURE 5.5**

Deaths by Gestational Age (weeks), Total, Singleton and Multiple Births

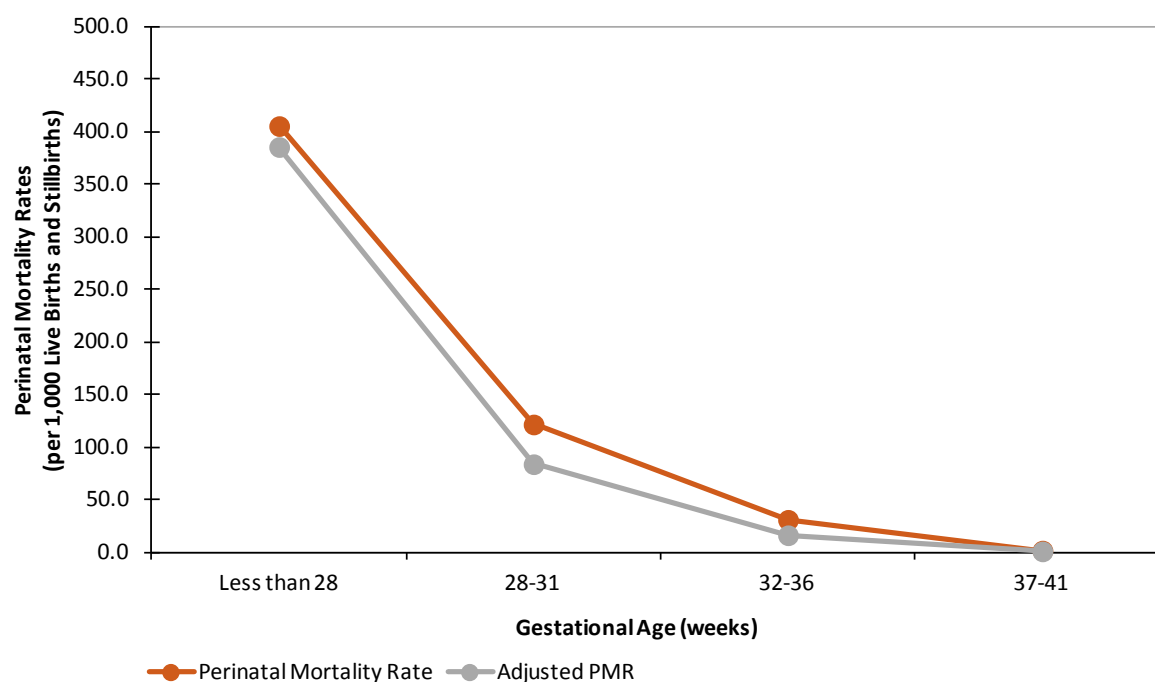
**Total Births****Singleton Births****Multiple Births**

Note: See Table 5.3 for data. 'Not Stated' values are not included in the calculation of percentages.

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.

**FIGURE 5.6**

Perinatal Mortality Rates by Gestational Age (weeks) at Delivery, Total Births



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

## CAUSE OF DEATH

Cause of death data for stillbirths, early neonatal deaths and total perinatal deaths are presented in Table 5.4. In 2011, 13.8 per cent of total perinatal deaths were classified as 'unspecified/unexplained'. The fact that almost 60 per cent of all perinatal deaths in Ireland do not undergo post-mortem may be a contributing factor to the numbers assigned to this category (see Table 5.6). This finding is not unique to Ireland, however, as many countries report high percentages of unexplained deaths in the perinatal period.

TABLE 5.4

Cause of Death by ICD-10 Chapter and Subcategories, Numbers and Mortality Rates

	ICD-10 Code	Total Deaths						Singleton Deaths						Multiple Deaths					
		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
<b>Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery</b>	<b>P00-P04</b>	<b>92</b>	<b>1.2</b>	<b>5</b>	<b>0.1</b>	<b>97</b>	<b>1.3</b>	<b>84</b>	<b>1.2</b>	<b>5</b>	<b>0.1</b>	<b>89</b>	<b>1.2</b>	<b>8</b>	<b>2.9</b>	<b>0</b>	<b>0.0</b>	<b>8</b>	<b>2.9</b>
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	12	0.2	1	0.0	13	0.2	5	0.1	1	0.0	6	0.1	7	2.6	0	0.0	7	2.6
Foetus and newborn affected by complications of placenta, cord and membranes	P020 - P029	73	1.0	4	0.1	77	1.0	72	1.0	4	0.1	76	1.1	1	0.4	0	0.0	1	0.4
Foetus and newborn affected by other complications of labour and delivery	P030 - P039	4	0.1	0	0.0	4	0.1	4	0.1	0	0.0	4	0.1	0	0.0	0	0.0	0	0.0
<b>Disorders related to length of gestation and foetal growth</b>	<b>P05-P08</b>	<b>31</b>	<b>0.4</b>	<b>35</b>	<b>0.5</b>	<b>66</b>	<b>0.9</b>	<b>29</b>	<b>0.4</b>	<b>24</b>	<b>0.3</b>	<b>53</b>	<b>0.7</b>	<b>2</b>	<b>0.7</b>	<b>11</b>	<b>4.1</b>	<b>13</b>	<b>4.8</b>
Slow foetal growth and foetal malnutrition	P050 - P059	10	0.1	0	0.0	10	0.1	10	0.1	0	0.0	10	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	21	0.3	35	0.5	56	0.8	19	0.3	24	0.3	43	0.6	2	0.7	11	4.1	13	4.8
<b>Respiratory and cardiovascular disorders specific to the perinatal period</b>	<b>P20-P29</b>	<b>24</b>	<b>0.3</b>	<b>23</b>	<b>0.3</b>	<b>47</b>	<b>0.6</b>	<b>23</b>	<b>0.3</b>	<b>20</b>	<b>0.3</b>	<b>43</b>	<b>0.6</b>	<b>1</b>	<b>0.4</b>	<b>3</b>	<b>1.1</b>	<b>4</b>	<b>1.5</b>
Intrauterine hypoxia	P200 - P209	23	0.3	2	0.0	25	0.3	22	0.3	2	0.0	24	0.3	1	0.4	0	0.0	1	0.4
Birth asphyxia	P210 - P219	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
Respiratory distress of newborn	P220 - P229	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
Interstitial emphysema and related conditions originating in the perinatal period	P250 - P258	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
Pulmonary haemorrhage originating in the perinatal period	P260 - P269	0	0.0	6	0.1	6	0.1	0	0.0	4	0.1	4	0.1	0	0.0	2	0.7	2	0.7
Other respiratory conditions originating in the perinatal period	P280 - P289	0	0.0	6	0.1	6	0.1	0	0.0	6	0.1	6	0.1	0	0.0	0	0.0	0	0.0
Cardiovascular disorders originating in the perinatal period	P290 - P299	1	0.0	3	0.0	4	0.1	1	0.0	3	0.0	4	0.1	0	0.0	0	0.0	0	0.0
<b>Infections specific to the perinatal period</b>	<b>P35-P39</b>	<b>6</b>	<b>0.1</b>	<b>3</b>	<b>0.0</b>	<b>9</b>	<b>0.1</b>	<b>6</b>	<b>0.1</b>	<b>2</b>	<b>0.0</b>	<b>8</b>	<b>0.1</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.4</b>	<b>1</b>	<b>0.4</b>
Bacterial sepsis of newborn	P360 - P369	3	0.0	2	0.0	5	0.1	3	0.0	1	0.0	4	0.1	0	0.0	1	0.4	1	0.4
Other congenital infectious and parasitic diseases	P370 - P379	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	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
<b>Haemorrhagic and haematological disorders of foetus and newborn</b>	<b>P50-P61</b>	<b>6</b>	<b>0.1</b>	<b>3</b>	<b>0.0</b>	<b>9</b>	<b>0.1</b>	<b>5</b>	<b>0.1</b>	<b>3</b>	<b>0.0</b>	<b>8</b>	<b>0.1</b>	<b>1</b>	<b>0.4</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.4</b>
Foetal blood loss	P500 - P509	4	0.1	0	0.0	4	0.1	3	0.0	0	0.0	3	0.0	1	0.4	0	0.0	1	0.4
Intracranial nontraumatic haemorrhage of foetus and newborn	P520 - P529	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 perinatal haematological disorders	P610 - P619	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

Table 5.4: Cause of Death by ICD-10 Chapter and Subcategories, Numbers and Mortality Rates (cont.)

	ICD-10 Code	Total Deaths						Singleton Deaths						Multiple Deaths					
		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
<b>Transitory endocrine and metabolic disorders specific to foetus and newborn</b>	<b>P70-P74</b>	<b>4</b>	<b>0.1</b>	<b>1</b>	<b>0.0</b>	<b>5</b>	<b>0.1</b>	<b>4</b>	<b>0.1</b>	<b>1</b>	<b>0.0</b>	<b>5</b>	<b>0.1</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>
Transitory disorders of carbohydrate metabolism specific to foetus and newborn	P700 - P709	4	0.1	1	0.0	5	0.1	4	0.1	1	0.0	5	0.1	0	0.0	0	0.0	0	0.0
<b>Digestive system disorders of foetus and newborn</b>	<b>P75 - P78</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.0</b>	<b>1</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.0</b>	<b>1</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>
Necrotizing enterocolitis of foetus and newborn	P77	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
<b>Conditions involving the integument and temperature regulation of foetus and newborn</b>	<b>P80-P83</b>	<b>8</b>	<b>0.1</b>	<b>1</b>	<b>0.0</b>	<b>9</b>	<b>0.1</b>	<b>8</b>	<b>0.1</b>	<b>1</b>	<b>0.0</b>	<b>9</b>	<b>0.1</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>
Other conditions of integument specific to foetus and newborn	P830 - P839	8	0.1	1	0.0	9	0.1	8	0.1	1	0.0	9	0.1	0	0.0	0	0.0	0	0.0
<b>Other disorders originating in the perinatal period</b>	<b>P90-P96</b>	<b>54</b>	<b>0.7</b>	<b>11</b>	<b>0.1</b>	<b>65</b>	<b>0.9</b>	<b>51</b>	<b>0.7</b>	<b>8</b>	<b>0.1</b>	<b>59</b>	<b>0.8</b>	<b>3</b>	<b>1.1</b>	<b>3</b>	<b>1.1</b>	<b>6</b>	<b>2.2</b>
Other disturbances of cerebral status of newborn	P910 - P919	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
Foetal death of unspecified cause, Condition origination in the perinatal period, unspecified	P95, P969	54	0.7	8	0.1	62	0.8	51	0.7	6	0.1	57	0.8	3	1.1	2	0.7	5	1.8
<b>Congenital malformations of the nervous system</b>	<b>Q00-Q07</b>	<b>10</b>	<b>0.1</b>	<b>20</b>	<b>0.3</b>	<b>30</b>	<b>0.4</b>	<b>9</b>	<b>0.1</b>	<b>16</b>	<b>0.2</b>	<b>25</b>	<b>0.3</b>	<b>1</b>	<b>0.4</b>	<b>4</b>	<b>1.5</b>	<b>5</b>	<b>1.8</b>
Anencephaly and similar malformations	Q000 - Q002	5	0.1	9	0.1	14	0.2	5	0.1	5	0.1	10	0.1	0	0.0	4	1.5	4	1.5
Congenital hydrocephalus	Q030 - Q039	1	0.0	6	0.1	7	0.1	1	0.0	6	0.1	7	0.1	0	0.0	0	0.0	0	0.0
Other congenital malformations of the brain	Q040 - Q049	1	0.0	3	0.0	4	0.1	1	0.0	3	0.0	4	0.1	0	0.0	0	0.0	0	0.0
Spina bifida	Q050 - Q059	3	0.0	2	0.0	5	0.1	2	0.0	2	0.0	4	0.1	1	0.4	0	0.0	1	0.4
<b>Congenital malformations of the circulatory system</b>	<b>Q20-Q28</b>	<b>9</b>	<b>0.1</b>	<b>9</b>	<b>0.1</b>	<b>18</b>	<b>0.2</b>	<b>9</b>	<b>0.1</b>	<b>7</b>	<b>0.1</b>	<b>16</b>	<b>0.2</b>	<b>0</b>	<b>0.0</b>	<b>2</b>	<b>0.7</b>	<b>2</b>	<b>0.7</b>
Congenital malformations of cardiac chambers and connections	Q200 - Q209	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 cardiac septa	Q210 - Q219	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 pulmonary and tricuspid valves	Q220 - Q229	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
Congenital malformations of aortic and mitral valves	Q230 - Q239	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 congenital malformations of heart	Q240 - Q249	4	0.1	6	0.1	10	0.1	4	0.1	5	0.1	9	0.1	0	0.0	1	0.4	1	0.4
Congenital malformations of great veins	Q260 - Q269	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
Other congenital malformations of peripheral vascular system	Q270 - Q279	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 circulatory system	Q280 - Q289	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
<b>Congenital malformations of the respiratory system</b>	<b>Q30-Q34</b>	<b>0</b>	<b>0.0</b>	<b>3</b>	<b>0.0</b>	<b>3</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>3</b>	<b>0.0</b>	<b>3</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>
Congenital malformations of trachea and bronchus	Q320 - Q324	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 lung	Q330 - Q339	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 congenital malformations of respiratory system	Q340 - Q349	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
<b>Cleft lip and cleft palate</b>	<b>Q35-Q37</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.0</b>	<b>1</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.0</b>	<b>1</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>
Cleft palate with cleft lip	Q370 - Q379	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

Table 5.4: Cause of Death by ICD-10 Chapter and Subcategories, Numbers and Mortality Rates (cont.)

	ICD-10 Code	Total Deaths						Singleton Deaths						Multiple Deaths					
		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
<b>Other congenital malformations of the digestive system</b>	<b>Q38-Q45</b>	<b>3</b>	<b>0.0</b>	<b>3</b>	<b>0.0</b>	<b>6</b>	<b>0.1</b>	<b>2</b>	<b>0.0</b>	<b>3</b>	<b>0.0</b>	<b>5</b>	<b>0.1</b>	<b>1</b>	<b>0.4</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.4</b>
Congenital malformations of oesophagus	Q390 - Q399	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 absence, atresia and stenosis of small intestine	Q410 - Q419	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 intestine	Q430 - Q439	1	0.0	1	0.0	2	0.0	0	0.0	1	0.0	1	0.0	1	0.4	0	0.0	1	0.4
Other congenital malformations of digestive system	Q450 - Q459	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
<b>Congenital malformations of genital organs</b>	<b>Q50-Q56</b>	<b>1</b>	<b>0.0</b>	<b>1</b>	<b>0.0</b>	<b>2</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.0</b>	<b>1</b>	<b>0.0</b>	<b>1</b>	<b>0.4</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.4</b>
Congenital malformations of uterus and cervix	Q510 - Q519	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
Indeterminate sex and pseudohermaphroditism	Q560 - Q564	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
<b>Congenital malformations of the urinary system</b>	<b>Q60-Q64</b>	<b>3</b>	<b>0.0</b>	<b>5</b>	<b>0.1</b>	<b>8</b>	<b>0.1</b>	<b>3</b>	<b>0.0</b>	<b>5</b>	<b>0.1</b>	<b>8</b>	<b>0.1</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>
Renal agenesis and other reduction defects of kidney	Q600 - Q606	1	0.0	3	0.0	4	0.1	1	0.0	3	0.0	4	0.1	0	0.0	0	0.0	0	0.0
Cystic kidney disease	Q610 - Q619	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 of kidney	Q630 - Q639	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
<b>Congenital malformations and deformations of the musculoskeletal system</b>	<b>Q65-Q79</b>	<b>6</b>	<b>0.1</b>	<b>2</b>	<b>0.0</b>	<b>8</b>	<b>0.1</b>	<b>6</b>	<b>0.1</b>	<b>2</b>	<b>0.0</b>	<b>8</b>	<b>0.1</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>
Osteochondrodysplasia with defects of growth of tubular bones and spine	Q770 - Q779	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 osteochondrodysplasias	Q780 - Q789	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
Congenital malformations of musculoskeletal system, not elsewhere classified	Q790 - Q799	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
<b>Other congenital malformations</b>	<b>Q80-Q89</b>	<b>11</b>	<b>0.1</b>	<b>8</b>	<b>0.1</b>	<b>19</b>	<b>0.3</b>	<b>9</b>	<b>0.1</b>	<b>5</b>	<b>0.1</b>	<b>14</b>	<b>0.2</b>	<b>2</b>	<b>0.7</b>	<b>3</b>	<b>1.1</b>	<b>5</b>	<b>1.8</b>
Other specified congenital malformation syndromes affecting multiple systems	Q870 - Q878	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 congenital malformations, not elsewhere classified	Q890 - Q899	9	0.1	8	0.1	17	0.2	7	0.1	5	0.1	12	0.2	2	0.7	3	1.1	5	1.8
<b>Chromosomal abnormalities, not elsewhere classified</b>	<b>Q90-Q99</b>	<b>29</b>	<b>0.4</b>	<b>18</b>	<b>0.2</b>	<b>47</b>	<b>0.6</b>	<b>28</b>	<b>0.4</b>	<b>18</b>	<b>0.3</b>	<b>46</b>	<b>0.6</b>	<b>1</b>	<b>0.4</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.4</b>
Downs syndrome	Q900 - Q909	8	0.1	0	0.0	8	0.1	7	0.1	0	0.0	7	0.1	1	0.4	0	0.0	1	0.4
Edwards syndrome and Patau syndrome	Q910 - Q917	15	0.2	14	0.2	29	0.4	15	0.2	14	0.2	29	0.4	0	0.0	0	0.0	0	0.0
Other trisomies and partial trisomies of the autosomes, not elsewhere classified	Q920 - Q929	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
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 chromosome abnormalities, not elsewhere classified	Q990 - Q999	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
<b>Total</b>		<b>297</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>450</b>	<b>6.1</b>	<b>276</b>	<b>3.8</b>	<b>126</b>	<b>1.8</b>	<b>402</b>	<b>5.6</b>	<b>21</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>48</b>	<b>17.6</b>

Notes: N equals number of deaths.

Rate per 1,000 births. 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.

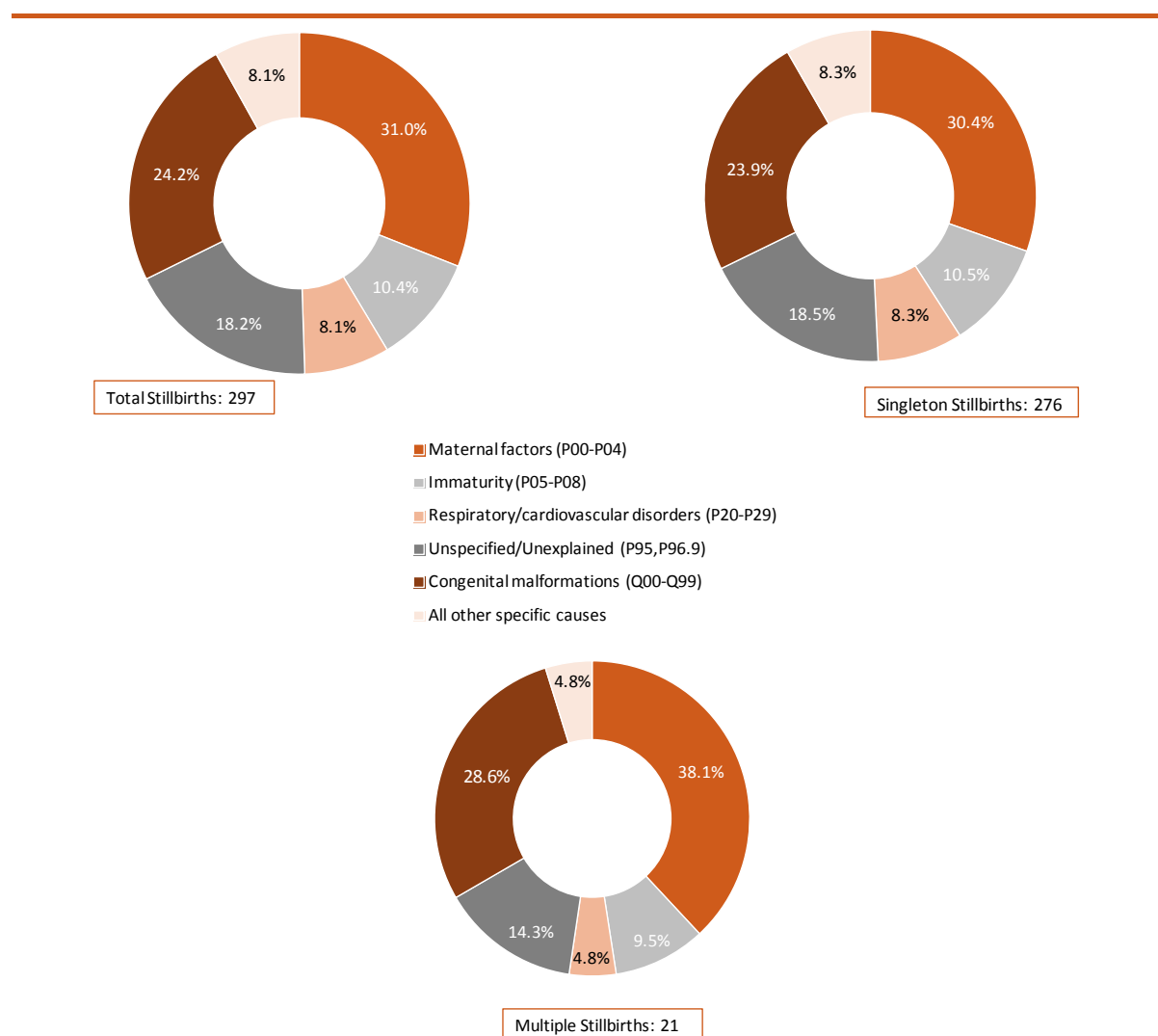
## STILLBIRTHS

Figure 5.7 presents the main cause of death for stillbirths.

- Maternal factors (P00-P04) were the leading cause of death for total stillbirths (31.0 per cent).
- While maternal factors accounted for 38.1 per cent of multiple stillbirths, the second leading cause of death was congenital malformations, accounting for 28.6 per cent of multiple stillbirths.
- Congenital malformations (Q00-Q99) contributed to almost one in 4 deaths for total stillbirths (24.2 per cent) and singleton stillbirths (23.9 per cent).
- The cause of death was unspecified/unexplained (P95, P96.9) for 18.2 per cent of total stillbirths.

**FIGURE 5.7**

Stillbirths by Cause of Death, Total, Singleton and Multiple Births



Note: See Table 5.4 for data. Percentages are subject to rounding.

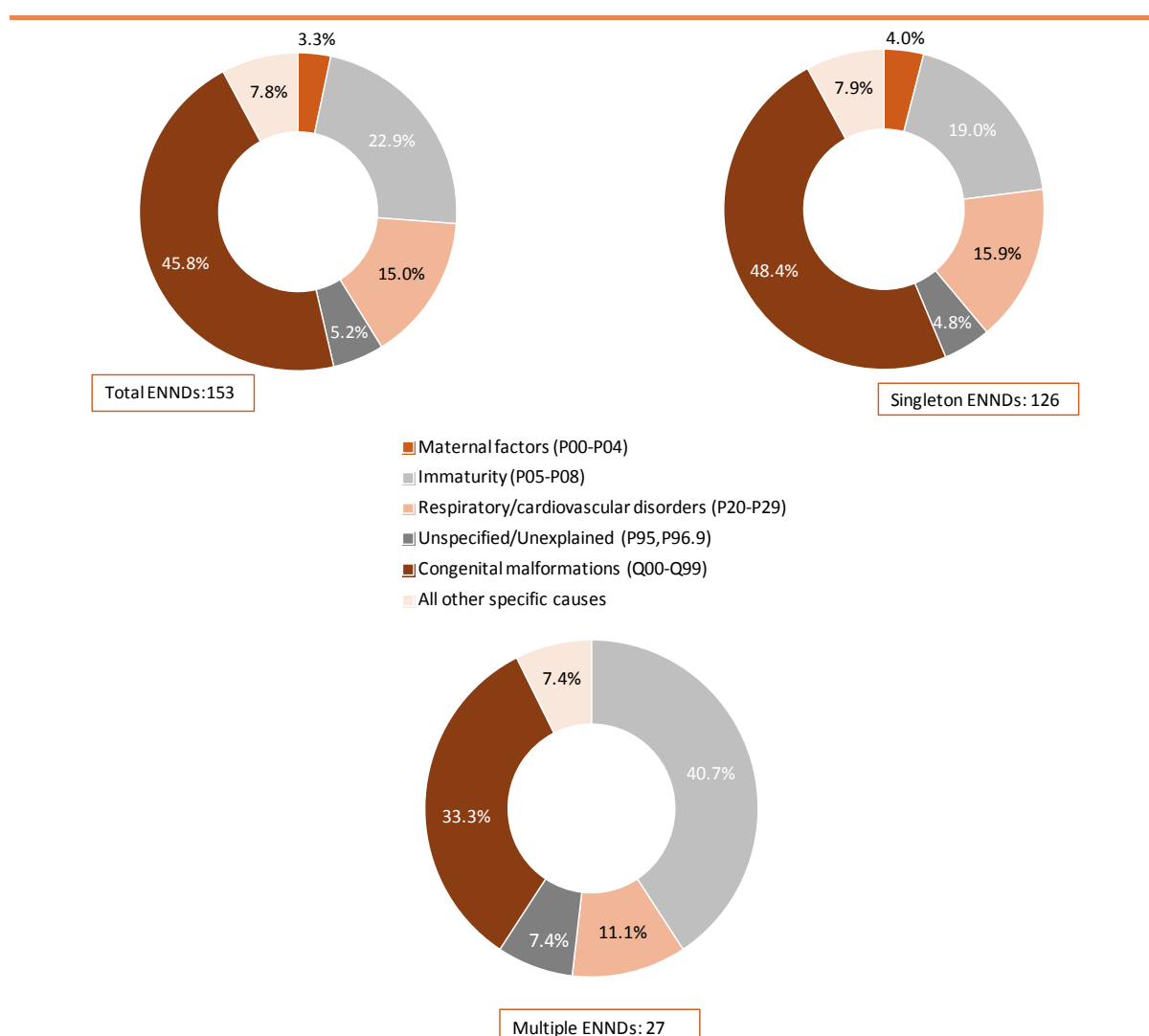
## EARLY NEONATAL DEATHS (ENNDs)

Figure 5.8 presents the main cause of death for early neonatal deaths.

- Over 45 per cent of total early neonatal deaths and 48.4 per cent of singleton early neonatal deaths were due to congenital malformations (Q00-Q99).
- Immaturity (P05-P08) was the second leading cause of death, contributing to 22.9 per cent of total early neonatal deaths and 19.0 per cent of singleton early neonatal deaths.
- Immaturity (P05-P08) accounted for 40.7 per cent of multiple early neonatal deaths.

**FIGURE 5.8**

Early Neonatal Deaths by Cause of Death, Total, Singleton and Multiple Births



Note: See Table 5.4 for data. Percentages are subject to rounding.

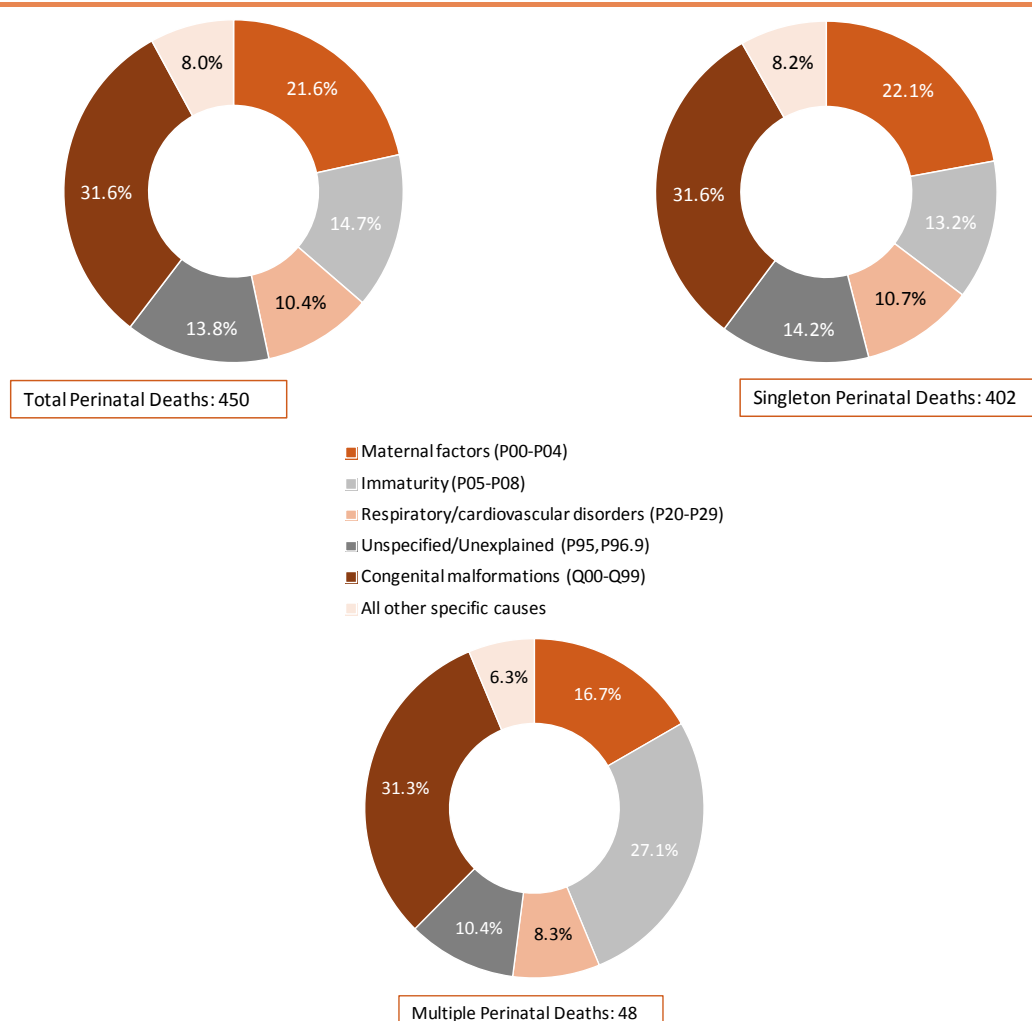
## TOTAL PERINATAL DEATHS

Figure 5.9 presents data on all perinatal deaths.

- Congenital malformations (Q00-Q99) accounted for almost 1 in 3 total perinatal deaths (31.6 per cent) and were the leading cause of death for total singleton perinatal deaths (31.6 per cent) and total multiple perinatal deaths (31.3 per cent).
- Maternal factors were the second most frequently reported cause of death for total singleton perinatal deaths (22.1 per cent).
- Immaturity (P05-P08) was the second most frequent cause of death for total multiple perinatal deaths accounting for 27.1 per cent of deaths.

**FIGURE 5.9**

Perinatal Deaths by Cause of Death, Total, Singleton and Multiple Births



Note: See Table 5.4 for data. Percentages are subject to rounding.

## AGE AT DEATH

Table 5.5 presents age at death for early neonatal deaths.

- 1 in 5 early neonatal deaths occurred within the first hour of life.
- Almost 60 per cent of total early neonatal deaths died within the first day of life.

**TABLE 5.5**

Age at Death, Early Neonatal Deaths

	Total Births		Singleton Births		Multiple Births	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
<b>Completed Hours</b>						
<1	30	19.6	28	22.2	2	7.4
1	16	10.5	10	7.9	6	22.2
2	10	6.5	8	6.3	2	7.4
3	11	7.2	9	7.1	2	7.4
4	2	1.3	2	1.6	0	0.0
5	4	2.6	4	3.2	0	0.0
6	1	0.7	1	0.8	0	0.0
7-10	2	1.3	1	0.8	1	3.7
11-15	7	4.6	6	4.8	1	3.7
16-23	4	2.6	4	3.2	0	0.0
<b>Total under 1 day</b>	<b>87</b>	<b>56.9</b>	<b>73</b>	<b>57.9</b>	<b>14</b>	<b>51.9</b>
<b>Completed Days</b>						
1	14	9.2	11	8.7	3	11.1
2	17	11.1	14	11.1	3	11.1
3	14	9.2	10	7.9	4	14.8
4	5	3.3	5	4.0	0	0.0
5	5	3.3	4	3.2	1	3.7
6	8	5.2	6	4.8	2	7.4
<b>Total under 1 Week</b>	<b>63</b>	<b>41.2</b>	<b>50</b>	<b>39.7</b>	<b>13</b>	<b>48.1</b>
Unknown	3	2.0	3	2.4	0	0.0
<b>Total</b>	<b>153</b>	<b>100</b>	<b>126</b>	<b>100</b>	<b>27</b>	<b>100</b>

## POST-MORTEM EXAMINATIONS

Post-mortem examinations were less likely in the case of early neonatal deaths compared to stillbirths and this trend is consistent over recent years.<sup>31</sup> Table 5.6 presents data on post-mortem examinations.

- The percentage of early neonatal deaths undergoing post-mortem examinations was 25.9 per cent compared to 48.1 per cent for stillbirths.
- A post-mortem examination was undertaken for 40.8 per cent of total perinatal deaths in 2011.

**TABLE 5.6**

Post-Mortem Examinations, Total Deaths

Frequency Row Per Cent Col. Per Cent	Type of Death		
	Early Neonatal Deaths	Stillbirths	Total
<b>Total Births</b>			
Post-Mortem	38	143	181
	21.0	79.0	100
	24.8	48.1	40.2
No Post-Mortem	109	154	263
	41.4	58.6	100
	71.2	51.9	58.4
Not Stated	6	0	6
	100	0.0	100
	3.9	0.0	1.3
<b>Total</b>	<b>153</b>	<b>297</b>	<b>450</b>
	<b>34.0</b>	<b>66.0</b>	<b>100</b>
	<b>100</b>	<b>100</b>	<b>100</b>
<b>Singleton Births</b>			
Post-Mortem	34	135	169
	20.1	79.9	100
	27.0	48.9	42.0
No Post-Mortem	86	141	227
	37.9	62.1	100
	68.3	51.1	56.5
Not Stated	6	0	6
	100	0.0	100
	4.8	0.0	1.5
<b>Total</b>	<b>126</b>	<b>276</b>	<b>402</b>
	<b>31.3</b>	<b>68.7</b>	<b>100</b>
	<b>100</b>	<b>100</b>	<b>100</b>
<b>Multiple Births</b>			
Post-Mortem	4	8	12
	33.3	66.7	100
	14.8	38.1	25.0
No Post-Mortem	23	13	36
	63.9	36.1	100
	85.2	61.9	75.0
Not Stated	0	0	0
	0.0	0.0	0.0
	0.0	0.0	0.0
<b>Total</b>	<b>27</b>	<b>21</b>	<b>48</b>
	<b>56.3</b>	<b>43.8</b>	<b>100</b>
	<b>100</b>	<b>100</b>	<b>100</b>

<sup>31</sup> Previous reports in this series can be downloaded from [www.esri.ie/health\\_information/latest\\_hipe\\_nprs\\_reports/](http://www.esri.ie/health_information/latest_hipe_nprs_reports/)

# APPENDICES

## APPENDIX A

### DEFINITIONS

This section collates the definitions of the terms used in the analyses for this report. All perinatal statistics and definitions are based on WHO ICD-10 Classifications.

**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.

**Age-Specific Fertility Rate (ASFR):** refers to 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 (see also definition for Total Period Fertility Rate (TPFR)).

**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. Since 2005 the *International Statistical Classification of Diseases and Related Health Problems*, 10<sup>th</sup> Revision, Vols. 1-3. Geneva: World Health Organisation is used to code Irish births.

**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 2011, 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 to indicate immunity to rubella.

**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 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' in discussion in this report)
3. Widowed
4. Separated (including deserted, legally separated, Church decree of nullity and otherwise separated)
5. Divorced.

**Maternity:** refers to a woman who has delivered a baby irrespective of outcome. In accordance with WHO guidelines, only births weighing 500 grams or more are included in any analysis of NPRS data.

**Method of Delivery:** Six categories are used:<sup>32</sup>

1. Spontaneous cephalic delivery
2. Breech delivery, spontaneous, with or without forceps to after-coming head, breech extraction
3. Forceps delivery
4. Vacuum extraction<sup>33</sup>
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 socioeconomic 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 the perinatal period covers pregnancy, delivery and ends at 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.

<sup>32</sup> For the purpose of presenting data in this report 'instrumental delivery' includes breech/forceps, forceps or vacuum extraction.

<sup>33</sup> Also known as Ventouse Deliveries (Source: World Health Organization, 2005, *International Statistical Classification of Diseases and Related Health Problems*, 10<sup>th</sup> Revision, Vol. 1. Geneva: World Health Organization).

**Plurality:** This indicates 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 in a dedicated maternity hospital/unit.

**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.

**Total Period Fertility Rate (TPFR):** is compiled by summing the Age-Specific Fertility Rate (ASFR) for the relevant five-year age groups, dividing by 1,000 and multiplying by 5. It gives the theoretical average number of children who would be born alive to a woman during her lifetime if she were to pass through her childbearing years conforming to the age-specific fertility rates of a given year. See also definition for ASFR.

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

**Twinning Rate:** This is given by:

$$\frac{\text{Number of Twin Births} / 2}{\text{Total Number of Maternities}} \times 1,000$$

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

**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). Any breastfeeding includes type of feeding recorded as either breast or combined at discharge from hospital.

## APPENDIX B

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

The following format was used for births in 2011.

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, BBA = 2, Domiciliary = 3)	2
HOSPITAL NO. 3		CASE NO. 6	NAME AND ADDRESS OF HOSPITAL
<b>INFANT'S DETAILS</b> DATE OF BIRTH (DD/MM/YYYY) 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			
<b>FATHER'S DETAILS</b> COUNTRY 31 NATIONALITY 34 OCCUPATION 38 DATE OF BIRTH (DDMMYYYY) 44			
<b>MOTHER'S HEALTH</b> ANTENATAL CARE THIS PREGNANCY (Hospital / Obstetrician = 1, G.P. Only = 2, Combined = 3, None = 4, Midwife 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 FOETUS OR INFANT 136 OTHER MATERNAL DISEASES OR CONDITIONS AFFECTING FOETUS OR INFANT 141			
<b>INFANT'S HEALTH</b> 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			
<b>HOSPITAL</b> 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			
<b>GENERAL PRACTITIONER ATTENDED BY MOTHER</b>			
<b>PERINATAL DEATH</b> 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 102 IF STILLBIRTH, DID DEATH OCCUR BEFORE LABOUR (1) DURING LABOUR (2) NOT KNOWN (3) 106			
<b>CAUSE OF DEATH</b> MAIN DISEASE OR CONDITION IN FOETUS OR INFANT 107 OTHER DISEASES OR CONDITIONS IN FOETUS OR INFANT 112			

Signature

Date

BNF01/2003

## 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. For the purposes of presenting data on father's occupation in this report, the categories 'Not Applicable' and 'Not Stated' are combined.

#### The full list of socioeconomic 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.<sup>34</sup> The principal coding criteria are summarised here.

The main cause of death should as far as possible 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).

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<sup>34</sup> World Health Organization, 2005, *International Statistical Classification of Diseases and Related Health Problems*, 10<sup>th</sup> 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.

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*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 groupings according to a system devised by the CSO, see below:

#### Ireland includes the following:

Ireland  
Irish American  
Irish English  
Irish European  
Irish Other.

#### UK includes the following:

England  
Great Britain  
Northern Ireland  
Scotland  
Wales.

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

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

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#### EU 15 to EU 27 includes the following:

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

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#### 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  
Iceland  
Isle of Man

Turkey  
Ukraine  
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	

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**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	

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**Australia includes the following:**

Australia.

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**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	

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**Multi-Nationality includes the following:**

Mixed/Multi-Nationality (stated as so).

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**No Nationality:**

Stated as so.

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**Not Stated:**

Where nationality is not provided.

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**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. If a nationality is given for the father then the appropriate nationality code has been used. For the purposes of presenting data on father's nationality in this report, the categories 'Not Applicable' and 'Not Stated' are combined.

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**All Other Nationalities:**

Where nationality is not recorded to any category listed above.

## APPENDIX G

### SOURCE DATA FOR FIGURES

- G1 Percentage Distribution of Total Births by Mother's Marital Status, 2007–2011
- G2 Mother's County of Residence by Mother's Marital Status, Total Births
- G3 Percentage Distribution of Total Births by Mother's Nationality, 2007–2011
- G4 Mother's Average Age by Mother's Nationality, Total Maternities
- G5 Age of Mother by Maternal Parity, Total Maternities
- G6 Percentage Distribution of Total Births to Primiparous Women by Maternal Age, 2007 and 2011
- G7 Percentage Distribution of Total Births to Multiparous Women by Maternal Age, 2007 and 2011
- G8 Birthweight (grams) for Primiparous Women
- G9 Birthweight (grams) for Multiparous Women
- G10 Birthweight (grams), Numbers and Percentages, Total Live Births
- G11 Birthweight (grams) by Sex, Total Live Births
- G12 Gestational Age (weeks) at Delivery for Primiparous Women
- G13 Gestational Age (weeks) at Delivery for Multiparous Women
- G14 Method of Delivery by Mother's Postnatal Length of Stay, Singleton and Multiple Births
- G15 Method of Delivery by Parity, Total, Singleton and Multiple Births
- G16 Mother's County of Residence by Infant's Type of Feeding, Total Live Births
- G17 Mother's Nationality by Infant's Type of Feeding, Total Live Births
- G18 Birthweight (grams) Total Births, Antepartum and Intrapartum Stillbirths, Early Neonatal Deaths, and Mortality Rates

**TABLE G1**

Percentage Distribution of Total Births by Mother's Marital Status, 2007–2011

Marital Status	2007	2008	2009	2010	2011
Married	66.4	66.1	66.1	65.6	65.3
Single	31.7	32.3	32.2	32.9	33.2
Widowed	0.1	0.1	0.1	0.1	0.1
Separated	1.1	0.9	0.9	0.8	0.9
Divorced	0.6	0.6	0.6	0.6	0.5

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

TABLE G2

Mother's County of Residence by Mother's Marital Status, Total Births

Frequency Row Per Cent Col. Per Cent	Mother's Marital Status						Total
	Married	Single	Widowed	Separated	Divorced	Not Stated	
Carlow	633	362	0	7	4	1	1,007
	62.9	35.9	0.0	0.7	0.4	0.1	100
	1.3	1.5	0.0	1.1	1.0	1.6	1.4
Cavan	889	355	3	12	10	2	1,271
	69.9	27.9	0.2	0.9	0.8	0.2	100
	1.8	1.4	3.3	1.8	2.5	3.1	1.7
Clare	1,186	507	0	5	3	0	1,701
	69.7	29.8	0.0	0.3	0.2	0.0	100
	2.4	2.1	0.0	0.8	0.7	0.0	2.3
Cork	5,806	2,460	13	58	36	0	8,373
	69.3	29.4	0.2	0.7	0.4	0.0	100
	12.0	10.0	14.3	8.8	8.8	0.0	11.3
Donegal	1,458	701	2	24	4	1	2,190
	66.6	32.0	0.1	1.1	0.2	0.0	100
	3.0	2.8	2.2	3.7	1.0	1.6	2.9
Dublin City	9,069	6,311	16	154	99	13	15,662
	57.9	40.3	0.1	1.0	0.6	0.1	100
	18.7	25.6	17.6	23.5	24.3	20.3	21.1
Dublin County	4,163	1,718	9	64	40	9	6,003
	69.3	28.6	0.1	1.1	0.7	0.1	100
	8.6	7.0	9.9	9.8	9.8	14.1	8.1
Galway	2,861	1,059	5	31	17	1	3,974
	72.0	26.6	0.1	0.8	0.4	0.0	100
	5.9	4.3	5.5	4.7	4.2	1.6	5.3
Kerry	1,353	603	6	24	15	0	2,001
	67.6	30.1	0.3	1.2	0.7	0.0	100
	2.8	2.4	6.6	3.7	3.7	0.0	2.7
Kildare	2,645	1,152	4	35	15	1	3,852
	68.7	29.9	0.1	0.9	0.4	0.0	100
	5.5	4.7	4.4	5.3	3.7	1.6	5.2
Kilkenny	976	421	2	12	7	0	1,418
	68.8	29.7	0.1	0.8	0.5	0.0	100
	2.0	1.7	2.2	1.8	1.7	0.0	1.9
Laois	837	484	2	18	8	2	1,351
	62.0	35.8	0.1	1.3	0.6	0.1	100
	1.7	2.0	2.2	2.7	2.0	3.1	1.8
Leitrim	346	125	0	1	2	0	474
	73.0	26.4	0.0	0.2	0.4	0.0	100
	0.7	0.5	0.0	0.2	0.5	0.0	0.6
Limerick	2,023	1,087	1	14	7	0	3,132
	64.6	34.7	0.0	0.4	0.2	0.0	100
	4.2	4.4	1.1	2.1	1.7	0.0	4.2
Longford	424	205	2	9	3	0	643
	65.9	31.9	0.3	1.4	0.5	0.0	100
	0.9	0.8	2.2	1.4	0.7	0.0	0.9
Louth	1,122	760	3	24	12	0	1,921
	58.4	39.6	0.2	1.2	0.6	0.0	100
	2.3	3.1	3.3	3.7	2.9	0.0	2.6
Mayo	1,317	468	2	14	11	4	1,816
	72.5	25.8	0.1	0.8	0.6	0.2	100
	2.7	1.9	2.2	2.1	2.7	6.3	2.4

**TABLE G2**

Mother's County of Residence by Mother's Marital Status, Total Births (cont.)

Frequency Row Per Cent Col. Per Cent	Mother's Marital Status						Total
	Married	Single	Widowed	Separated	Divorced	Not Stated	
Meath	2,479	942	0	35	32	3	3,491
	71.0	27.0	0.0	1.0	0.9	0.1	100
	5.1	3.8	0.0	5.3	7.9	4.7	4.7
Monaghan	596	261	0	5	15	1	878
	67.9	29.7	0.0	0.6	1.7	0.1	100
	1.2	1.1	0.0	0.8	3.7	1.6	1.2
Offaly	790	428	4	7	5	0	1,234
	64.0	34.7	0.3	0.6	0.4	0.0	100
	1.6	1.7	4.4	1.1	1.2	0.0	1.7
Roscommon	602	226	0	9	3	0	840
	71.7	26.9	0.0	1.1	0.4	0.0	100
	1.2	0.9	0.0	1.4	0.7	0.0	1.1
Sligo	596	324	1	7	1	0	929
	64.2	34.9	0.1	0.8	0.1	0.0	100
	1.2	1.3	1.1	1.1	0.2	0.0	1.2
Tipperary	1,558	817	7	20	9	4	2,415
	64.5	33.8	0.3	0.8	0.4	0.2	100
	3.2	3.3	7.7	3.0	2.2	6.3	3.2
Waterford	1,075	709	4	21	13	0	1,822
	59.0	38.9	0.2	1.2	0.7	0.0	100
	2.2	2.9	4.4	3.2	3.2	0.0	2.4
Westmeath	940	464	2	10	5	0	1,421
	66.2	32.7	0.1	0.7	0.4	0.0	100
	1.9	1.9	2.2	1.5	1.2	0.0	1.9
Wexford	1,350	899	2	17	23	3	2,294
	58.8	39.2	0.1	0.7	1.0	0.1	100
	2.8	3.6	2.2	2.6	5.7	4.7	3.1
Wicklow	1,390	813	1	19	8	19	2,250
	61.8	36.1	0.0	0.8	0.4	0.8	100
	2.9	3.3	1.1	2.9	2.0	29.7	3.0
Other	8	6	0	0	0	0	14
	57.1	42.9	0.0	0.0	0.0	0.0	100
	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>48,492</b>	<b>24,667</b>	<b>91</b>	<b>656</b>	<b>407</b>	<b>64</b>	<b>74,377</b>
	<b>65.2</b>	<b>33.2</b>	<b>0.1</b>	<b>0.9</b>	<b>0.5</b>	<b>0.1</b>	<b>100</b>
	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

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

**TABLE G3**

Percentage Distribution of Total Births by Mother's Nationality, 2007–2011

Mother's Nationality	2007	2008	2009	2010	2011
Ireland	79.3	77.5	76.2	75.5	76.2
UK	3.0	2.7	2.6	2.7	2.3
EU15 to EU27	7.2	9.3	10.3	11.3	11.6
Africa	3.6	3.4	3.4	3.0	2.6
Asia	3.6	3.7	4.0	3.9	4.0

Notes: Percentages calculated for the five most frequent nationalities in 2011  
 'Not Stated' values are not included in the calculation of percentages.

**TABLE G4**

Mother's Average Age by Mother's Nationality, Total Maternities

Mother's Nationality	Average Age in Years
Ireland	32.1
UK	31.7
EU15 (excluding Ireland & UK)	33.3
EU15 to EU27	29.1
Rest of Europe	31.1
Africa	31.4
Asia	31.3
America	32.1
Australia	34.3
<b>Total</b>	<b>31.7</b>

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**

Age of Mother by Maternal Parity, Total Maternities

Frequency Row Per Cent	Maternal Parity									Total
	0	1	2	3	4	5	6	More than 6	Not Stated	
Under 20 Years	1,506 89.2	162 9.6	18 1.1	2 0.1	0 0.0	0 0.0	1 0.1	0 0.0	0 0.0	1,689 100
20-24 Years	4,526 61.6	2,195 29.9	488 6.6	109 1.5	25 0.3	3 0.0	0 0.0	0 0.0	0 0.0	7,346 100
25-29 Years	7,998 48.4	5,605 33.9	2,002 12.1	644 3.9	193 1.2	57 0.3	15 0.1	6 0.0	2 0.0	16,522 100
30-34 Years	10,113 38.4	9,787 37.1	4,349 16.5	1,363 5.2	434 1.6	177 0.7	73 0.3	48 0.2	2 0.0	26,346 100
35-39 Years	4,112 23.7	5,909 34.1	4,652 26.8	1,773 10.2	553 3.2	201 1.2	68 0.4	84 0.5	0 0.0	17,352 100
40 Years and Over	879 23.4	1,087 29.0	937 25.0	454 12.1	214 5.7	87 2.3	34 0.9	60 1.6	0 0.0	3,752 100
Not Stated	1 100.0	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	1 100
<b>Total</b>	<b>29,135 39.9</b>	<b>24,745 33.9</b>	<b>12,446 17.0</b>	<b>4,345 6.0</b>	<b>1,419 1.9</b>	<b>525 0.7</b>	<b>191 0.3</b>	<b>198 0.3</b>	<b>4 0.0</b>	<b>73,008 100</b>

**TABLE G6**

Percentage Distribution of Total Births to Primiparous Women by Maternal Age, 2007 and 2011

Maternal Age (years)	2007	2011
Under 20 Years	7.6	5.1
20-24 Years	19.7	15.3
25-29 Years	27.2	27.2
30-34 Years	31.0	34.7
35-39 Years	12.4	14.5
40 Years and Over	2.1	3.2
<b>Total</b>	<b>100</b>	<b>100</b>

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

**TABLE G7**

Percentage Distribution of Total Births to Multiparous Women by Maternal Age, 2007 and 2011

Maternal Age (years)	2007	2011
Under 20 Years	0.5	0.4
20-24 Years	7.3	6.4
25-29 Years	20.4	19.4
30-34 Years	36.5	37.0
35-39 Years	29.3	30.2
40 Years and Over	6.0	6.6
<b>Total</b>	<b>100</b>	<b>100</b>

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

**TABLE G8**

Birthweight (grams) for Primiparous Women: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
500-749	86	0.3	59	27	314.0	25	423.7	604.7	580.2	75
750-999	93	0.3	80	13	139.8	7	87.5	215.1	188.9	80
1000-1249	123	0.4	109	14	113.8	5	45.9	154.5	95.7	98
1250-1499	120	0.4	109	11	91.7	2	18.3	108.3	69.6	98
1500-1999	458	1.5	443	15	32.8	5	11.3	43.7	22.3	354
2000-2499	1,209	4.1	1,188	21	17.4	4	3.4	20.7	15.0	1,025
2500-2999	4,087	13.7	4,072	15	3.7	5	1.2	4.9	3.7	3,883
3000-3499	10,296	34.6	10,282	14	1.4	5	0.5	1.8	1.3	10,232
3500-3999	9,564	32.1	9,555	9	0.9	5	0.5	1.5	1.0	9,553
4000-4499	3,179	10.7	3,176	3	0.9	1	0.3	1.3	0.9	3,178
4500 and Over	559	1.9	559	0	0.0	0	0.0	0.0	0.0	559
Not Stated	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0
<b>Total</b>	<b>29,774</b>	<b>100</b>	<b>29,632</b>	<b>142</b>	<b>4.8</b>	<b>64</b>	<b>2.2</b>	<b>6.9</b>	<b>5.1</b>	<b>29,135</b>
<b>Singleton Births</b>										
500-749	64	0.2	40	24	375.0	15	375.0	609.4	583.3	64
750-999	67	0.2	56	11	164.2	4	71.4	223.9	187.5	67
1000-1249	76	0.3	66	10	131.6	2	30.3	157.9	135.1	76
1250-1499	73	0.3	64	9	123.3	1	15.6	137.0	73.5	73
1500-1999	268	0.9	254	14	52.2	5	19.7	70.9	38.6	268
2000-2499	850	3.0	829	21	24.7	3	3.6	28.2	21.3	850
2500-2999	3,674	12.9	3,659	15	4.1	4	1.1	5.2	4.1	3,674
3000-3499	10,149	35.6	10,135	14	1.4	5	0.5	1.9	1.3	10,149
3500-3999	9,544	33.5	9,535	9	0.9	5	0.5	1.5	1.0	9,544
4000-4499	3,177	11.1	3,174	3	0.9	1	0.3	1.3	0.9	3,177
4500 and Over	559	2.0	559	0	0.0	0	0.0	0.0	0.0	559
Not Stated	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0
<b>Total</b>	<b>28,501</b>	<b>100</b>	<b>28,371</b>	<b>130</b>	<b>4.6</b>	<b>45</b>	<b>1.6</b>	<b>6.1</b>	<b>4.6</b>	<b>28,501</b>
<b>Multiple Births</b>										
500-749	22	1.7	19	3	136.4	10	526.3	590.9	571.4	11
750-999	26	2.0	24	2	76.9	3	125.0	192.3	192.3	13
1000-1249	47	3.7	43	4	85.1	3	69.8	148.9	24.4	22
1250-1499	47	3.7	45	2	42.6	1	22.2	63.8	63.8	25
1500-1999	190	14.9	189	1	5.3	0	0.0	5.3	0.0	86
2000-2499	359	28.2	359	0	0.0	1	2.8	2.8	0.0	175
2500-2999	413	32.4	413	0	0.0	1	2.4	2.4	0.0	209
3000-3499	147	11.5	147	0	0.0	0	0.0	0.0	0.0	83
3500-3999	20	1.6	20	0	0.0	0	0.0	0.0	0.0	9
4000-4499	2	0.2	2	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	0.0	0
Not Stated	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0
<b>Total</b>	<b>1,273</b>	<b>100</b>	<b>1,261</b>	<b>12</b>	<b>9.4</b>	<b>19</b>	<b>15.1</b>	<b>24.4</b>	<b>16.6</b>	<b>634</b>

Notes: \* Rate per 1,000 births. 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.  
There were 4 maternities with parity unknown; these were excluded from this table.

TABLE G9

Birthweight (grams) for Multiparous Women: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
500-749	62	0.1	39	23	371.0	18	461.5	661.3	631.6	60
750-999	70	0.2	55	15	214.3	12	218.2	385.7	283.3	64
1000-1249	87	0.2	72	15	172.4	5	69.4	229.9	151.9	78
1250-1499	99	0.2	85	14	141.4	4	47.1	181.8	119.6	83
1500-1999	454	1.0	427	27	59.5	10	23.4	81.5	39.2	361
2000-2499	1,189	2.7	1,176	13	10.9	12	10.2	21.0	10.2	1,018
2500-2999	4,622	10.4	4,603	19	4.1	5	1.1	5.2	3.5	4,337
3000-3499	13,634	30.6	13,621	13	1.0	11	0.8	1.8	1.2	13,504
3500-3999	16,003	35.9	15,994	9	0.6	9	0.6	1.1	0.6	15,986
4000-4499	7,018	15.7	7,012	6	0.9	1	0.1	1.0	1.0	7,017
4500 and Over	1,360	3.0	1,360	0	0.0	0	0.0	0.0	0.0	1,360
Not Stated	1	0.0	1	0	0.0	1	1000.0	1000.0	1000.0	1
<b>Total</b>	<b>44,599</b>	<b>100</b>	<b>44,445</b>	<b>154</b>	<b>3.5</b>	<b>88</b>	<b>2.0</b>	<b>5.4</b>	<b>3.5</b>	<b>43,869</b>
<b>Singleton Births</b>										
500-749	55	0.1	34	21	381.8	18	529.4	709.1	680.0	55
750-999	58	0.1	44	14	241.4	9	204.5	396.6	285.7	58
1000-1249	70	0.2	55	15	214.3	4	72.7	271.4	177.4	70
1250-1499	73	0.2	61	12	164.4	4	65.6	219.2	149.3	73
1500-1999	282	0.7	259	23	81.6	9	34.7	113.5	49.4	282
2000-2499	850	2.0	837	13	15.3	12	14.3	29.4	14.3	850
2500-2999	4,045	9.4	4,026	19	4.7	5	1.2	5.9	4.0	4,045
3000-3499	13,368	31.0	13,355	13	1.0	10	0.7	1.7	1.1	13,368
3500-3999	15,969	37.0	15,960	9	0.6	7	0.4	1.0	0.6	15,969
4000-4499	7,015	16.3	7,009	6	0.9	1	0.1	1.0	1.0	7,015
4500 and Over	1,360	3.2	1,360	0	0.0	0	0.0	0.0	0.0	1,360
Not Stated	1	0.0	1	0	0.0	1	1000.0	1000.0	1000.0	1
<b>Total</b>	<b>43,146</b>	<b>100</b>	<b>43,001</b>	<b>145</b>	<b>3.4</b>	<b>80</b>	<b>1.9</b>	<b>5.2</b>	<b>3.3</b>	<b>43,146</b>
<b>Multiple Births</b>										
500-749	7	0.5	5	2	285.7	0	0.0	285.7	285.7	5
750-999	12	0.8	11	1	83.3	3	272.7	333.3	272.7	6
1000-1249	17	1.2	17	0	0.0	1	58.8	58.8	58.8	8
1250-1499	26	1.8	24	2	76.9	0	0.0	76.9	40.0	10
1500-1999	172	11.8	168	4	23.3	1	6.0	29.1	23.4	79
2000-2499	339	23.3	339	0	0.0	0	0.0	0.0	0.0	168
2500-2999	577	39.7	577	0	0.0	0	0.0	0.0	0.0	292
3000-3499	266	18.3	266	0	0.0	1	3.8	3.8	3.8	136
3500-3999	34	2.3	34	0	0.0	2	58.8	58.8	0.0	17
4000-4499	3	0.2	3	0	0.0	0	0.0	0.0	0.0	2
4500 and Over	0	0.0	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	0.0	0
<b>Total</b>	<b>1,453</b>	<b>100</b>	<b>1,444</b>	<b>9</b>	<b>6.2</b>	<b>8</b>	<b>5.5</b>	<b>11.7</b>	<b>8.3</b>	<b>723</b>

Notes: \* Rate per 1,000 births. 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.  
There were 4 maternities with parity unknown; these were excluded from this table.

**TABLE G10**

Birthweight (grams), Numbers and Percentages, Total Live Births

Birthweight (grams)	Number	Per Cent
Less than 1,500 grams	608	0.8
1,500 - 2,499 grams	3,234	4.4
2,500 - 4,499 grams	68,318	92.2
4,500 grams and Over	1,919	2.6
Not Stated	1	0.0
<b>Total</b>	<b>74,080</b>	<b>100.0</b>

**TABLE G11**

Birthweight (grams) by Sex, Total Live Births

	Male		Female		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
500-749	52	0.1	46	0.1	98	0.1
750-999	76	0.2	59	0.2	135	0.2
1000-1249	98	0.3	83	0.2	181	0.2
1250-1499	109	0.3	85	0.2	194	0.3
1500-1999	427	1.1	443	1.2	870	1.2
2000-2499	1,063	2.8	1,301	3.6	2,364	3.2
2500-2999	3,842	10.1	4,833	13.4	8,675	11.7
3000-3499	11,111	29.2	12,793	35.5	23,904	32.3
3500-3999	13,746	36.2	11,805	32.7	25,551	34.5
4000-4499	6,175	16.2	4,013	11.1	10,188	13.8
4500 and Over	1,316	3.5	603	1.7	1,919	2.6
Not Stated	0	0.0	1	0.0	1	0.0
<b>Total</b>	<b>38,015</b>	<b>100.0</b>	<b>36,065</b>	<b>100.0</b>	<b>74,080</b>	<b>100.0</b>

**TABLE G12**

Gestational Age (weeks) at Delivery for Primiparous Women: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
Less than 28	172	0.6	141	31	180.2	33	234.0	372.1	357.1	148
28-31	283	1.0	258	25	88.3	2	7.8	95.4	65.7	230
32-36	1,724	5.8	1,693	31	18.0	12	7.1	24.9	15.8	1,459
37-41	26,320	88.4	26,268	52	2.0	13	0.5	2.5	1.6	26,023
42 and Over	1,273	4.3	1,271	2	1.6	4	3.1	4.7	2.4	1,273
Not Stated	2	0.0	1	1	500.0	0	0.0	500.0	500.0	2
<b>Total</b>	<b>29,774</b>	<b>100</b>	<b>29,632</b>	<b>142</b>	<b>4.8</b>	<b>64</b>	<b>2.2</b>	<b>6.9</b>	<b>5.1</b>	<b>29,135</b>
<b>Singleton Births</b>										
Less than 28	120	0.4	93	27	225.0	20	215.1	391.7	370.7	120
28-31	184	0.6	162	22	119.6	1	6.2	125.0	100.6	184
32-36	1,197	4.2	1,170	27	22.6	9	7.7	30.1	19.4	1,197
37-41	25,725	90.3	25,674	51	2.0	11	0.4	2.4	1.7	25,725
42 and Over	1,273	4.5	1,271	2	1.6	4	3.1	4.7	2.4	1,273
Not Stated	2	0.0	1	1	500.0	0	0.0	500.0	500.0	2
<b>Total</b>	<b>28,501</b>	<b>100</b>	<b>28,371</b>	<b>130</b>	<b>4.6</b>	<b>45</b>	<b>1.6</b>	<b>6.1</b>	<b>4.6</b>	<b>28,501</b>
<b>Multiple Births</b>										
Less than 28	52	4.1	48	4	76.9	13	270.8	326.9	326.9	28
28-31	99	7.8	96	3	30.3	1	10.4	40.4	0.0	46
32-36	527	41.4	523	4	7.6	3	5.7	13.3	7.6	262
37-41	595	46.7	594	1	1.7	2	3.4	5.0	0.0	298
42 and Over	0	0.0	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	0.0	0
<b>Total</b>	<b>1,273</b>	<b>100</b>	<b>1,261</b>	<b>12</b>	<b>9.4</b>	<b>19</b>	<b>15.1</b>	<b>24.4</b>	<b>16.6</b>	<b>634</b>

Notes: \* Rate per 1,000 births. 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.  
There were 4 maternities with parity unknown; these were excluded from this table.

**TABLE G13**

Gestational Age (weeks) at Delivery for Multiparous Women: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
<b>Total Births</b>										
Less than 28	135	0.3	101	34	251.9	26	257.4	444.4	418.6	127
28-31	250	0.6	223	27	108.0	11	49.3	152.0	105.5	213
32-36	1,956	4.4	1,909	47	24.0	25	13.1	36.8	17.2	1,682
37-41	41,201	92.4	41,159	42	1.0	25	0.6	1.6	0.9	40,790
42 and Over	1,051	2.4	1,049	2	1.9	1	1.0	2.9	2.9	1,051
Not Stated	6	0.0	4	2	333.3	0	0.0	333.3	333.3	6
<b>Total</b>	<b>44,599</b>	<b>100</b>	<b>44,445</b>	<b>154</b>	<b>3.5</b>	<b>88</b>	<b>2.0</b>	<b>5.4</b>	<b>3.5</b>	<b>43,869</b>
<b>Singleton Births</b>										
Less than 28	117	0.3	86	31	265.0	25	290.7	478.6	450.5	117
28-31	179	0.4	156	23	128.5	8	51.3	173.2	124.3	179
32-36	1,414	3.3	1,369	45	31.8	22	16.1	47.4	21.8	1,414
37-41	40,379	93.6	40,337	42	1.0	24	0.6	1.6	0.9	40,379
42 and Over	1,051	2.4	1,049	2	1.9	1	1.0	2.9	2.9	1,051
Not Stated	6	0.0	4	2	333.3	0	0.0	333.3	333.3	6
<b>Total</b>	<b>43,146</b>	<b>100</b>	<b>43,001</b>	<b>145</b>	<b>3.4</b>	<b>80</b>	<b>1.9</b>	<b>5.2</b>	<b>3.3</b>	<b>43,146</b>
<b>Multiple Births</b>										
Less than 28	18	1.2	15	3	166.7	1	66.7	222.2	222.2	10
28-31	71	4.9	67	4	56.3	3	44.8	98.6	58.8	34
32-36	542	37.3	540	2	3.7	3	5.6	9.2	5.6	268
37-41	822	56.6	822	0	0.0	1	1.2	1.2	1.2	411
42 and Over	0	0.0	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	0.0	0
<b>Total</b>	<b>1,453</b>	<b>100</b>	<b>1,444</b>	<b>9</b>	<b>6.2</b>	<b>8</b>	<b>5.5</b>	<b>11.7</b>	<b>8.3</b>	<b>723</b>

Notes: \* Rate per 1,000 births. 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.  
There were 4 maternities with parity unknown; these were excluded from this table.

**TABLE G14**

Method of Delivery by Mother's Postnatal Length of Stay, Singleton and Multiple Births

	Postnatal Length of Stay					
Frequency Row Per Cent Col. Per Cent	0-2 Days	3-5 Days	6-8 Days	9+ Days	Not Stated	Total
Singleton Births						
Spontaneous	31,688	8,839	234	41	10	40,812
	77.6	21.7	0.6	0.1	0.0	100
	80.4	28.9	19.1	16.8	76.9	57.1
Breech/Forceps	191	110	10	0	0	311
	61.4	35.4	3.2	0.0	0.0	100
	0.5	0.4	0.8	0.0	0.0	0.4
Forceps	1,571	1,340	42	11	0	2,964
	53.0	45.2	1.4	0.4	0.0	100
	4.0	4.4	3.4	4.5	0.0	4.1
Vacuum extraction	5,007	3,217	86	14	0	8,324
	60.2	38.6	1.0	0.2	0.0	100
	12.7	10.5	7.0	5.7	0.0	11.6
Caesarean section	911	17,104	851	178	3	19,047
	4.8	89.8	4.5	0.9	0.0	100
	2.3	55.9	69.5	73.0	23.1	26.6
Other specified & combined	21	3	1	0	0	25
	84.0	12.0	4.0	0.0	0.0	100
	0.1	0.0	0.1	0.0	0.0	0.0
Total	39,389	30,613	1,224	244	13	71,483
	55.1	42.8	1.7	0.3	0.0	100
	100	100	100	100	100	100
Multiple Births						
Spontaneous	220	340	26	4	0	590
	37.3	57.6	4.4	0.7	0.0	100
	62.3	16.8	8.9	7.5	0.0	21.6
Breech/Forceps	37	74	3	1	0	115
	32.2	64.3	2.6	0.9	0.0	100
	10.5	3.7	1.0	1.9	0.0	4.2
Forceps	12	48	1	1	0	62
	19.4	77.4	1.6	1.6	0.0	100
	3.4	2.4	0.3	1.9	0.0	2.3
Vacuum extraction	47	109	12	0	0	168
	28.0	64.9	7.1	0.0	0.0	100
	13.3	5.4	4.1	0.0	0.0	6.2
Caesarean section	37	1,455	250	47	2	1,791
	2.1	81.2	14.0	2.6	0.1	100
	10.5	71.8	85.6	88.7	100.0	65.7
Other specified & combined	0	0	0	0	0	0
	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0
Total	353	2,026	292	53	2	2,726
	12.9	74.3	10.7	1.9	0.1	100
	100	100	100	100	100	100

Note: Domiciliary births, of which there were 168 births, are excluded from this table. See Section Six for detailed analysis.

**TABLE G15**

Method of Delivery by Parity, Total, Singleton and Multiple Births

	Total Births		Singleton Births		Multiple Births	
	Number	Per cent	Number	Per cent	Number	Per cent
<b>Total Births</b>						
Spontaneous	41,568	55.9	40,978	57.2	590	21.6
Breech/Forceps	425	0.6	310	0.4	115	4.2
Forceps	3,026	4.1	2,964	4.1	62	2.3
Vacuum extraction	8,492	11.4	8,324	11.6	168	6.2
Caesarean section	20,837	28.0	19,046	26.6	1,791	65.7
Other specified & combined	25	0.0	25	0.0	0	0.0
<b>Total</b>	<b>74,373</b>	<b>100</b>	<b>71,647</b>	<b>100</b>	<b>2,726</b>	<b>100</b>
<b>Births to Primiparous Women</b>						
Spontaneous	12,078	40.6	11,922	41.8	156	12.3
Breech/Forceps	210	0.7	162	0.6	48	3.8
Forceps	2,517	8.5	2,473	8.7	44	3.5
Vacuum extraction	6,157	20.7	6,053	21.2	104	8.2
Caesarean section	8,812	29.6	7,891	27.7	921	72.3
Other specified & combined	0	0.0	0	0.0	0	0.0
<b>Total</b>	<b>29,774</b>	<b>100</b>	<b>28,501</b>	<b>100</b>	<b>1,273</b>	<b>100</b>
<b>Births to Multiparous Women</b>						
Spontaneous	29,490	66.1	29,056	67.3	434	29.9
Breech/Forceps	215	0.5	148	0.3	67	4.6
Forceps	509	1.1	491	1.1	18	1.2
Vacuum extraction	2,335	5.2	2,271	5.3	64	4.4
Caesarean section	12,025	27.0	11,155	25.9	870	59.9
Other specified & combined	25	0.1	25	0.1	0	0.0
<b>Total</b>	<b>44,599</b>	<b>100</b>	<b>43,146</b>	<b>100</b>	<b>1,453</b>	<b>100</b>

Note: There were 4 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

Frequency Row Per Cent Col. Per Cent	Type of Feeding				
	Artificial	Breast	Combined	Not Stated	Total
Carlow	483	497	21	0	1,001
	48.3	49.7	2.1	0.0	100
	1.5	1.4	0.3	0.0	1.4
Cavan	660	556	49	0	1,265
	52.2	44.0	3.9	0.0	100
	2.0	1.6	0.8	0.0	1.7
Clare	948	633	106	0	1,687
	56.2	37.5	6.3	0.0	100
	2.9	1.8	1.7	0.0	2.3
Cork	3,311	4,407	615	0	8,333
	39.7	52.9	7.4	0.0	100
	10.0	12.8	9.7	0.0	11.3
Donegal	1,277	740	157	0	2,174
	58.7	34.0	7.2	0.0	100
	3.9	2.1	2.5	0.0	2.9
Dublin City	6,097	7,829	1,650	0	15,576
	39.1	50.3	10.6	0.0	100
	18.4	22.7	26.0	0.0	21.1
Dublin County	2,079	3,224	673	1	5,977
	34.8	53.9	11.3	0.0	100
	6.3	9.4	10.6	33.3	8.1
Galway	1,670	1,622	661	0	3,953
	42.2	41.0	16.7	0.0	100
	5.0	4.7	10.4	0.0	5.3
Kerry	1,013	843	137	0	1,993
	50.8	42.3	6.9	0.0	100
	3.1	2.4	2.2	0.0	2.7
Kildare	1,665	1,782	378	0	3,825
	43.5	46.6	9.9	0.0	100
	5.0	5.2	6.0	0.0	5.2
Kilkenny	660	739	11	0	1,410
	46.8	52.4	0.8	0.0	100
	2.0	2.1	0.2	0.0	1.9
Laois	652	641	53	0	1,346
	48.4	47.6	3.9	0.0	100
	2.0	1.9	0.8	0.0	1.8
Leitrim	237	179	53	0	469
	50.5	38.2	11.3	0.0	100
	0.7	0.5	0.8	0.0	0.6
Limerick	1,930	980	194	0	3,104
	62.2	31.6	6.3	0.0	100
	5.8	2.8	3.1	0.0	4.2
Longford	318	291	28	0	637
	49.9	45.7	4.4	0.0	100
	1.0	0.8	0.4	0.0	0.9
Louth	1,029	717	161	0	1,907
	54.0	37.6	8.4	0.0	100
	3.1	2.1	2.5	0.0	2.6
Mayo	854	628	318	0	1,800
	47.4	34.9	17.7	0.0	100
	2.6	1.8	5.0	0.0	2.4

**TABLE G16**

Mother's County of Residence by Infant's Type of Feeding, Total Live Births (cont.)

Frequency Row Per Cent Col. Per Cent	Type of Feeding				
	Artificial	Breast	Combined	Not Stated	Total
Meath	1,520	1,669	284	1	3,474
	43.8	48.0	8.2	0.0	100
	4.6	4.8	4.5	33.3	4.7
Monaghan	479	343	51	0	873
	54.9	39.3	5.8	0.0	100
	1.4	1.0	0.8	0.0	1.2
Offaly	675	514	35	1	1,225
	55.1	42.0	2.9	0.1	100
	2.0	1.5	0.6	33.3	1.7
Roscommon	398	360	73	0	831
	47.9	43.3	8.8	0.0	100
	1.2	1.0	1.2	0.0	1.1
Sligo	439	330	153	0	922
	47.6	35.8	16.6	0.0	100
	1.3	1.0	2.4	0.0	1.2
Tipperary	1,289	1,048	56	0	2,393
	53.9	43.8	2.3	0.0	100
	3.9	3.0	0.9	0.0	3.2
Waterford	756	1,018	35	0	1,809
	41.8	56.3	1.9	0.0	100
	2.3	3.0	0.6	0.0	2.4
Westmeath	613	733	66	0	1,412
	43.4	51.9	4.7	0.0	100
	1.8	2.1	1.0	0.0	1.9
Wexford	1,128	1,051	104	0	2,283
	49.4	46.0	4.6	0.0	100
	3.4	3.1	1.6	0.0	3.1
Wicklow	968	1,056	210	0	2,234
	43.3	47.3	9.4	0.0	100
	2.9	3.1	3.3	0.0	3.0
Other	2	10	2	0	14
	14.3	71.4	14.3	0.0	100
	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>33,150</b>	<b>34,440</b>	<b>6,334</b>	<b>3</b>	<b>73,927</b>
	<b>44.8</b>	<b>46.6</b>	<b>8.6</b>	<b>0.0</b>	<b>100</b>
	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Note: See Appendix E for details of county of residence classification.  
This table excludes Early Neonatal Deaths.

**TABLE G17**

Mother's Nationality by Infant's Type of Feeding, Total Live Births

Frequency Row Per Cent	Type of Feeding				
	Artificial	Breast	Combined	Not Stated	Total
Ireland	30,340	22,393	3,523	3	56,259
	53.9	39.8	6.3	0.0	100
UK	675	855	154	0	1,684
	40.1	50.8	9.1	0.0	100
EU15 (excluding Ireland & UK)	106	844	127	0	1,077
	9.8	78.4	11.8	0.0	100
EU15 to EU27 Accession States	1,067	6,528	972	0	8,567
	12.5	76.2	11.3	0.0	100
Rest of Europe	69	470	64	0	603
	11.4	77.9	10.6	0.0	100
Africa	292	972	647	0	1,911
	15.3	50.9	33.9	0.0	100
Asia	440	1,762	740	0	2,942
	15.0	59.9	25.2	0.0	100
America	99	439	75	0	613
	16.2	71.6	12.2	0.0	100
Australia	17	80	7	0	104
	16.3	76.9	6.7	0.0	100
New Zealand and Other Oceania	4	33	6	0	43
	9.3	76.7	14.0	0.0	100
Multi-Nationality	0	0	2	0	2
	0.0	0.0	100.0	0.0	100
Other Nationality	1	1	0	0	2
	50.0	50.0	0.0	0.0	100
Not Stated	40	63	17	0	120
	33.3	52.5	14.2	0.0	100
<b>Total</b>	<b>33,150</b>	<b>34,440</b>	<b>6,334</b>	<b>3</b>	<b>73,927</b>
	<b>44.8</b>	<b>46.6</b>	<b>8.6</b>	<b>0.0</b>	<b>100</b>

Notes: See Appendix F for a description of the classification system for nationality.  
This table excludes Early Neonatal Deaths.

**TABLE G18**

Birthweight (grams): Total Births, Antepartum and Intrapartum Stillbirths, Early Neonatal Deaths, and Mortality Rates

	Total Births	Total Births %	Ante-partum Stillbirths	Intra-partum Stillbirths	Not Stated	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*
<b>Total Births</b>										
500-749	148	0.2	38	9	3	337.8	43	438.8	628.4	601.4
750-999	163	0.2	25	3	0	171.8	19	140.7	288.3	226.7
1000-1249	210	0.3	24	4	1	138.1	10	55.2	185.7	118.6
1250-1499	219	0.3	21	3	1	114.2	6	30.9	141.6	91.8
1500-1999	913	1.2	39	4	0	47.1	15	17.2	63.5	31.7
2000-2499	2,398	3.2	28	6	0	14.2	16	6.8	20.9	12.6
2500-2999	8,709	11.7	31	2	1	3.9	10	1.2	5.1	3.6
3000-3499	23,931	32.2	24	2	1	1.1	16	0.7	1.8	1.2
3500-3999	25,569	34.4	15	3	0	0.7	15	0.6	1.3	0.8
4000-4499	10,197	13.7	8	0	1	0.9	2	0.2	1.1	1.0
4500 and	1,919	2.6	0	0	0	0.0	0	0.0	0.0	0.0
Not Stated	1	0.0	0	0	0	0.0	1	1000.0	1000.0	1000.0
<b>Total</b>	<b>74,377</b>	<b>100</b>	<b>253</b>	<b>36</b>	<b>8</b>	<b>4.0</b>	<b>153</b>	<b>2.1</b>	<b>6.1</b>	<b>4.1</b>
<b>Singleton Births</b>										
500-749	119	0.2	34	8	3	378.2	33	445.9	655.5	627.3
750-999	125	0.2	22	3	0	200.0	13	130.0	304.0	230.1
1000-1249	146	0.2	20	4	1	171.2	6	49.6	212.3	154.4
1250-1499	146	0.2	17	3	1	143.8	5	40.0	178.1	111.1
1500-1999	551	0.8	34	4	0	69.0	14	27.3	94.4	45.9
2000-2499	1,700	2.4	28	6	0	20.0	15	9.0	28.8	17.8
2500-2999	7,719	10.8	31	2	1	4.4	9	1.2	5.6	4.0
3000-3499	23,518	32.8	24	2	1	1.1	15	0.6	1.8	1.2
3500-3999	25,515	35.6	15	3	0	0.7	13	0.5	1.2	0.8
4000-4499	10,192	14.2	8	0	1	0.9	2	0.2	1.1	1.0
4500 and	1,919	2.7	0	0	0	0.0	0	0.0	0.0	0.0
Not Stated	1	0.0	0	0	0	0.0	1	1000.0	1000.0	1000.0
<b>Total</b>	<b>71,651</b>	<b>100</b>	<b>233</b>	<b>35</b>	<b>8</b>	<b>3.9</b>	<b>126</b>	<b>1.8</b>	<b>5.6</b>	<b>3.8</b>
<b>Multiple Births</b>										
500-749	29	1.1	4	1	0	172.4	10	416.7	517.2	500.0
750-999	38	1.4	3	0	0	78.9	6	171.4	236.8	216.2
1000-1249	64	2.3	4	0	0	62.5	4	66.7	125.0	34.5
1250-1499	73	2.7	4	0	0	54.8	1	14.5	68.5	55.6
1500-1999	362	13.3	5	0	0	13.8	1	2.8	16.6	11.1
2000-2499	698	25.6	0	0	0	0.0	1	1.4	1.4	0.0
2500-2999	990	36.3	0	0	0	0.0	1	1.0	1.0	0.0
3000-3499	413	15.2	0	0	0	0.0	1	2.4	2.4	2.4
3500-3999	54	2.0	0	0	0	0.0	2	37.0	37.0	0.0
4000-4499	5	0.2	0	0	0	0.0	0	0.0	0.0	0.0
4500 and	0	0.0	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	0.0
<b>Total</b>	<b>2,726</b>	<b>100</b>	<b>20</b>	<b>1</b>	<b>0</b>	<b>7.7</b>	<b>27</b>	<b>10.0</b>	<b>17.6</b>	<b>12.2</b>

Note: \* Rate per 1,000 births. 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.

## APPENDIX H

### DOMICILIARY BIRTHS, 2002–2011

#### 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.

Table H1 presents selected statistics for domiciliary births for the period 2002 to 2011.

- There were 168 domiciliary births in 2011 representing just 0.2 per cent of all births.
- The number of domiciliary births has decreased by 41.7 per cent over the decade while the decrease from 2010 is estimated at 5.1 percent. The lowest number of domiciliary births over the 10-year period was reported for 2009 (148) and the highest number reported in 2002 (288) (see Figure H1).
- The average age of mothers having domiciliary births has remained stable, ranging from 33.4 years in 2005 to 35.0 years in 2009 and is recorded as 33.7 years in 2011.
- For all domiciliary births in 2011, 29.2 per cent were to single mothers compared with 22.7 per cent in 2002.
- Women choosing a domiciliary delivery in 2011 had an average maternal parity of 1.5 previous births.
- The percentage of women recording any breastfeeding was 95.1 per cent in 2002; this has increased to 99.4 per cent in 2011.
- Exclusively breastfeeding was reported for 98.2 per cent of domiciliary births in 2011.
- The average birthweight for domiciliary births in 2011 was 3,679.6 grams.

More detailed analysis of domiciliary births for 2011 is presented in Tables H2 to H7, 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 H1

Trends in Domiciliary Births—Selected Statistics, 2002–2011

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	% Change	
												2002-2011	2010-2011
General Characteristics													
Total Domiciliary Births		288	236	202	183	170	186	158	148	177	168	-41.7	-5.1
Age of mother (years) <sup>1</sup>	Avg	34.1	34.0	34.3	33.4	34.3	34.1	34.3	35.0	33.8	33.7	-1.2	-0.3
Single mothers <sup>1, 2</sup>	%	22.7	28.0	29.2	23.5	20.0	16.1	25.3	22.3	24.4	29.2	28.6	19.7
Maternal parity <sup>1</sup>	Avg	1.7	1.6	1.6	1.7	1.7	1.6	1.5	1.7	1.4	1.5	-11.8	7.1
Gestational age at delivery in weeks <sup>1</sup>	Avg	40.1	40.1	40.0	40.0	40.1	40.0	40.1	40.0	40.0	40.0	-0.2	0.0
Interval since last birth (years) <sup>3</sup>	Avg	3.7	3.7	3.5	3.3	3.4	3.4	3.6	3.7	3.4	3.2	-13.5	-5.9
Immunity to Rubella <sup>1</sup>	%	91.6	94.1	97.0	95.1	96.5	100.0	96.2	98.0	97.2	97.0	5.9	-0.2
Any Breastfeeding <sup>4, 5</sup>	%	95.1	95.8	98.0	94.0	98.2	96.2	95.6	97.3	97.2	99.4	4.5	2.3
Exclusive Breastfeeding <sup>4</sup>	%	94.0	94.1	97.5	94.0	97.1	95.7	95.6	97.3	96.6	98.2	4.5	1.7
Combined Antenatal Care - Midwife and G.P./Hospital <sup>6</sup>	%	57.7	66.1	64.4	71.6	76.5	60.8	77.8	99.3	98.9	93.5	62.0	-5.5
Birthweight (grams) <sup>7</sup>	Avg	3730.1	3754.3	3738.4	3760.1	3742.2	3699.2	3667.1	3764.9	3833.9	3679.6	-1.4	-4.0
Low Birthweight (<2,500 grams) <sup>7</sup>	%	0.3	0.0	1.0	0.5	0.6	1.1	0.6	0.0	0.0	0.0	-100.0	

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

There were no domiciliary multiple births in the years 2002–2011.

<sup>1</sup> Based on maternities.

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

<sup>3</sup> Based on multiparous maternities.

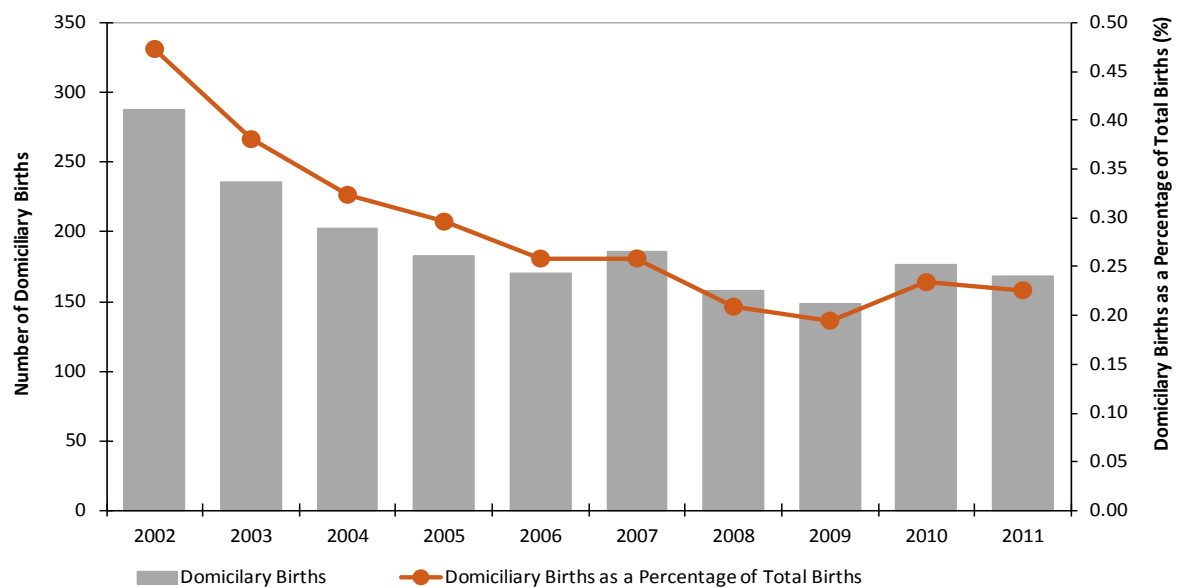
<sup>4</sup> Based on maternities with live births. Excludes early neonatal deaths.

<sup>5</sup> Any breastfeeding includes type of feeding recorded as either breast or combined.

<sup>6</sup> Based on maternities. This figure applies to the percentage of home births where antenatal care is stated as 'combined', rather than 'midwife only'.

<sup>7</sup> Based on live births.

**FIGURE H1**  
Number and Percentage of Domiciliary Births Reported, 2002–2011



*Note:* See Table 2.2 and Table H1 for data.

**TABLE H2**  
Age of Mother by Maternal Parity

	Maternal Parity							
Frequency Row Per Cent Col. Per Cent	0	1	2	3	4	5	6	Total
< 25 Years	4	2	0	0	0	0	0	6
	66.7	33.3	0.0	0.0	0.0	0.0	0.0	100
	10.5	3.6	0.0	0.0	0.0	0.0	0.0	3.6
25-29 Years	13	9	8	2	0	0	0	32
	40.6	28.1	25.0	6.3	0.0	0.0	0.0	100
	34.2	16.4	18.2	7.7	0.0	0.0	0.0	19.0
30-34 Years	13	23	13	9	0	1	0	59
	22.0	39.0	22.0	15.3	0.0	1.7	0.0	100
	34.2	41.8	29.5	34.6	0.0	50.0	0.0	35.1
35-39 Years	5	17	20	13	2	0	1	58
	8.6	29.3	34.5	22.4	3.4	0.0	1.7	100
	13.2	30.9	45.5	50.0	100.0	0.0	100.0	34.5
40 Years and Over	3	4	3	2	0	1	0	13
	23.1	30.8	23.1	15.4	0.0	7.7	0.0	100
	7.9	7.3	6.8	7.7	0.0	50.0	0.0	7.7
Total	38	55	44	26	2	2	1	168
	22.6	32.7	26.2	15.5	1.2	1.2	0.6	100
	100	100	100	100	100	100	100	100

**TABLE H3****Mother's Marital Status by Age of Mother**

Frequency Row Per Cent Col. Per Cent	Age of Mother					Total
	< 25 Years	25-29 Years	30-34 Years	35-39 Years	40+ Years	
Married	1	14	43	47	9	114
	0.9	12.3	37.7	41.2	7.9	100
	16.7	43.8	72.9	81.0	69.2	67.9
Single	5	18	14	10	2	49
	10.2	36.7	28.6	20.4	4.1	100
	83.3	56.3	23.7	17.2	15.4	29.2
Other*	0	0	2	1	2	5
	0.0	0.0	40.0	20.0	40.0	100
	0.0	0.0	3.4	1.7	15.4	3.0
Total	6	32	59	58	13	168
	3.6	19.0	35.1	34.5	7.7	100
	100	100	100	100	100	100

Note: \* Includes widowed, separated, divorced and 'not stated'.

**TABLE H4****Age of Mother by Gestational Age (weeks) at Delivery**

Frequency Row Per Cent Col. Per Cent	Gestational Age (weeks)		
	37-41	42 and Over	Total
< 25 Years	6	0	6
	100.0	0.0	100
	3.8	0.0	3.6
25-29 Years	30	2	32
	93.8	6.3	100
	18.9	22.2	19.0
30-34 Years	55	4	59
	93.2	6.8	100
	34.6	44.4	35.1
35-39 Years	55	3	58
	94.8	5.2	100
	34.6	33.3	34.5
40 Years and Over	13	0	13
	100.0	0.0	100
	8.2	0.0	7.7
Total	159	9	168
	94.6	5.4	100
	100	100	100

**TABLE H5**  
Birthweight (grams) by Gestational Age (weeks) at Delivery

Frequency Row Per Cent Col. Per Cent	Gestational Age (weeks)		
	37-41	42 and Over	Total
<3000	7	1	8
	87.5	12.5	100
	4.4	11.1	4.8
3000-3499	50	1	51
	98.0	2.0	100
	31.4	11.1	30.4
3500-3999	65	4	69
	94.2	5.8	100
	40.9	44.4	41.1
4000-4499	31	2	33
	93.9	6.1	100
	19.5	22.2	19.6
4500 and Over	6	1	7
	85.7	14.3	100
	3.8	11.1	4.2
Total	159	9	168
	94.6	5.4	100
	100	100	100

**TABLE H6**  
Mother's Occupation by Birthweight

Frequency Row Per Cent Col. Per Cent	Birthweight (grams)					
	<3000	3000-3499	3500-3999	4000-4499	4500 and Over	Total
Farmers and Farm Managers	0	1	1	0	0	2
	0.0	50.0	50.0	0.0	0.0	100
	0.0	2.0	1.4	0.0	0.0	1.2
Other Agricultural Occupations & Fishermen	0	1	1	0	0	2
	0.0	50.0	50.0	0.0	0.0	100
	0.0	2.0	1.4	0.0	0.0	1.2
Higher Professional	0	3	4	1	1	9
	0.0	33.3	44.4	11.1	11.1	100
	0.0	5.9	5.8	3.0	14.3	5.4
Lower Professional	1	13	19	11	3	47
	2.1	27.7	40.4	23.4	6.4	100
	12.5	25.5	27.5	33.3	42.9	28.0
Employers & Managers	2	1	4	2	0	9
	22.2	11.1	44.4	22.2	0.0	100
	25.0	2.0	5.8	6.1	0.0	5.4
Intermediate Non-Manual Workers	2	4	6	0	1	13
	15.4	30.8	46.2	0.0	7.7	100
	25.0	7.8	8.7	0.0	14.3	7.7
Other Non-Manual Workers	1	13	12	2	1	29
	3.4	44.8	41.4	6.9	3.4	100
	12.5	25.5	17.4	6.1	14.3	17.3
Skilled Manual Workers	0	0	2	4	0	6
	0.0	0.0	33.3	66.7	0.0	100
	0.0	0.0	2.9	12.1	0.0	3.6
Unemployed	0	1	0	0	1	2
	0.0	50.0	0.0	0.0	50.0	100
	0.0	2.0	0.0	0.0	14.3	1.2
Not Classifiable	1	1	2	2	0	6
	16.7	16.7	33.3	33.3	0.0	100
	12.5	2.0	2.9	6.1	0.0	3.6
Home Duties	1	13	18	11	0	43
	2.3	30.2	41.9	25.6	0.0	100
	12.5	25.5	26.1	33.3	0.0	25.6
Total	8	51	69	33	7	168
	4.8	30.4	41.1	19.6	4.2	100
	100	100	100	100	100	100

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

TABLE H7

## Mother's Occupation by Type of Feeding

Frequency Row Per Cent Col. Per Cent	Type of Feeding			
	Artificial	Breast	Combined	Total
Farmers and Farm Managers	0 0.0 0.0	2 100.0 1.2	0 0.0 0.0	2 100 1.2
Other Agricultural Occupations & Fishermen	0 0.0 0.0	2 100.0 1.2	0 0.0 0.0	2 100 1.2
Higher Professional	0 0.0 0.0	9 100.0 5.5	0 0.0 0.0	9 100 5.4
Lower Professional	0 0.0 0.0	47 100.0 28.5	0 0.0 0.0	47 100 28.0
Employers & Managers	0 0.0 0.0	8 88.9 4.8	1 11.1 50.0	9 100 5.4
Intermediate Non-Manual Workers	0 0.0 0.0	13 100.0 7.9	0 0.0 0.0	13 100 7.7
Other Non-Manual Workers	1 3.4 100.0	28 96.6 17.0	0 0.0 0.0	29 100 17.3
Skilled Manual Workers	0 0.0 0.0	6 100.0 3.6	0 0.0 0.0	6 100 3.6
Unemployed	0 0.0 0.0	2 100.0 1.2	0 0.0 0.0	2 100 1.2
Not Classifiable	0 0.0 0.0	6 100.0 3.6	0 0.0 0.0	6 100 3.6
Home Duties	0 0.0 0.0	42 97.7 25.5	1 2.3 50.0	43 100 25.6
<b>Total</b>	<b>1 0.6 100</b>	<b>165 98.2 100</b>	<b>2 1.2 100</b>	<b>168 100 100</b>

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



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