

Perinatal Statistics Report

Health Research and Information Division

November 2013

2012



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 contribution to NPRS.

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, Lorna Collins, Gráinne Cosgrove and Hugh Magee (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
SECTION ONE	1
INTRODUCTION	
Introduction	2
Purpose of this Report	2
Structure of this Report	2
Conventions used in this Report	3
National Minimum Data Set	4
Data Collection and Quality	5
SECTION TWO	7
TIME TRENDS AND INTERNATIONAL COMPARISONS	
Introduction	8
Trends in Selected Statistics	8
Singleton and Multiple Births	13
Method of Delivery for Primiparous and Multiparous Women.....	14
Perinatal Mortality	16
Birth Rates	18
Fertility	20
SECTION THREE	23
GENERAL CHARACTERISTICS	
Introduction	24
Maternal Age	25
Mother's Marital Status	27
Mother's County of Residence	28
Socio-economic Group.....	29
Mother's Socio-economic Group	29
Father's Socio-economic Group.....	31
Nationality	34
Mother's Nationality	34
Father's Nationality	36
Maternal Parity	38
Number of Previous Stillbirths	40
Interval Since Last Birth	41
Birthweight	42
Gestational Age	46
Month of Birth	47

SECTION FOUR	49
PERINATAL CARE	
Introduction	50
Type of Antenatal Care	51
Duration of Pregnancy at First Antenatal Visit	52
Advance Hospital Bookings	53
Mother's Antenatal Length of Stay	54
Mother's Postnatal Length of Stay	55
Rubella: Immune Status of Mother	57
Method of Delivery	57
Method of Delivery by Births and Plurality	57
Method of Delivery by Maternal Age	59
Distribution of Births by Size of Maternity Unit	60
Inter-Hospital Transfer of Infants	61
Infant's Length of Stay	62
Infant's Type of Feeding	63
SECTION FIVE	71
PERINATAL OUTCOMES	
Introduction	72
Mortality by Birthweight and Parity	72
Cause of Death by Birthweight	75
Mortality by Gestational Age	80
Cause of Death	82
Age at Death	89
Post-Mortem Examinations	90
APPENDICES	91
Appendix A: Definitions	92
Appendix B: Copy of Part 3 of the Birth Notification Form	96
Appendix C: Classification of Socio-economic Group.....	97
Appendix D: Cause of Death Classification	98
Appendix E: Classification of County of Residence	102
Appendix F: Classification of Nationality	103
Appendix G: Source Data for Figures	107
Appendix H: Domiciliary Births	119

LIST OF TABLES

Tables for Time Trends and International Comparisons:

2.1	Trends in Selected Statistics, 2003–2012	11
2.2	Singleton and Multiple Births, 2003–2012	13
2.3	Live Births, Stillbirths and Early Neonatal Deaths, Numbers and Rates, Singleton and Multiple Births, 2003–2012	14
2.4	Percentage Distribution of Maternities by Method of Delivery, Primiparous and Multiparous Women, 2003–2012	15
2.5	Live Births, Stillbirths, Early Neonatal Deaths, and Perinatal Deaths, 2003–2012	16

Tables for General Characteristics:

3.1	Age of Mother	25
3.2	Mother's Marital Status	27
3.3	Mother's Socio-economic Group.....	30
3.4	Father's Socio-economic Group.....	32
3.5	Mother's Nationality	35
3.6	Father's Nationality	37
3.7	Maternal Parity	38
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	47

Tables for Perinatal Care:

4.1	Type of Antenatal Care	51
4.2	Time of First Visit (weeks) to Doctor or Hospital during Pregnancy	52
4.3	Advance Hospital Bookings	53
4.4	Mother's Antenatal Length of Stay	54
4.5	Mother's Postnatal Length of Stay	55
4.6	Rubella: Immune Status of Mother, Numbers and Percentages	57
4.7a	Method of Delivery, Total Births	58
4.7b	Method of Delivery by Maternal Age	59
4.8	Size of Maternity Unit (Number of Live Births and Stillbirths Annually)	60
4.9	Inter-Hospital Transfer of Infants	61
4.10	Infant's Length of Stay (days) in Hospital, Live Births	62
4.11	Age of Mother by Infant's Type of Feeding, Numbers and Percentages, Total Live Births	64
4.12	Mother's Socio-economic Group by Infant's Type of Feeding, Total Live Births	67

Tables for Perinatal Outcomes:

5.1	Birthweight (grams): Total Perinatal Deaths, Antepartum and Intrapartum Stillbirths, Early Neonatal Deaths, and Mortality Rates.....	73
5.2	Cause of Death by ICD-10 Chapter by Birthweight, Numbers and Perinatal Mortality Rate	76
5.3	Gestational Age (weeks): Total Perinatal Deaths, Antepartum, and Intrapartum Stillbirths, Early Neonatal Deaths, and Mortality Rates.....	80
5.4	Cause of Death by ICD-10 Chapter and Subcategories, Numbers and Mortality Rates	83
5.5	Age at Death, Early Neonatal Deaths	89
5.6	Post-Mortem Examinations, Total Perinatal Deaths	90

Appendix Tables:

D1	Cause of Death Coding Rules	100
D2	ICD-10, Cause of Death Codes	101

Tables for Source Data for Figures:

G1	Mother's County of Residence, Total Births	108
G2	Mother's Average Age by Mother's Nationality, Total Maternities	109
G3	Age of Mother by Maternal Parity, Total Maternities	109
G4	Birthweight (grams) for Primiparous Women.....	110
G5	Birthweight (grams) for Multiparous Women	111
G6	Birthweight (grams), Numbers and Percentages, Total Live Births	112
G7	Birthweight (grams) by Sex, Total Live Births	112
G8	Gestational Age (weeks) at Delivery, Primiparous Women	113
G9	Gestational Age (weeks) at Delivery, Multiparous Women	113
G10	Method of Delivery by Mother's Postnatal Length of Stay, Singleton and Multiple Births	114
G11	Mother's County of Residence by Infant's Type of Feeding, Total Live Births	115
G12	Mother's Nationality by Infant's Type of Feeding, Total Live Births	117
G13	Birthweight (grams): Total Perinatal Deaths, Antepartum and Intrapartum Stillbirths, Early Neonatal Deaths, and Mortality Rates.....	118

Tables for Domiciliary Births:

H1	Trends in Domiciliary Births - Selected Statistics, 2003–2012	120
H2	Age of Mother by Maternal Parity	121
H3	Mother's Marital Status by Age of Mother	122
H4	Age of Mother by Gestational Age (weeks) at Delivery	122
H5	Birthweight (grams) by Gestational Age (weeks) at Delivery	123
H6	Mother's Socio-economic Group by Birthweight	123
H7	Mother's Socio-economic Group by Type of Feeding	124

LIST OF FIGURES

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

Figures for Time Trends and International Comparisons:

2.1	Percentage Distribution of Maternities Delivering by Caesarean Section for Total, Primiparous and Multiparous Women, 2003–2012	15
2.2	Stillbirth, Early Neonatal and Perinatal Mortality Rates, Ireland, 2003–2012	17
2.3	Perinatal Mortality Rates for Selected EU Countries.....	18
2.4	Trends in Birth Rates for Selected EU Countries, 2003–2012	19
2.5	Birth Rates per 1,000 Population for EU Countries, 2012.....	19
2.6	Age-Specific Fertility Rates (ASFRs) and Total Period Fertility Rates (TPFRs), Ireland, 2003–2012	20
2.7	Total Period Fertility Rates for EU Countries, 2012	21

Figures for General Characteristics:

3.1	Age-specific Stillbirth, Early Neonatal and Perinatal Mortality Rates.....	26
3.2	Percentage of Births by Mother's County of Residence, Total Births	28
3.3	Perinatal Mortality Rates by Mother's Socio-economic Group.....	31
3.4	Perinatal Mortality Rate by Father's Socio-economic Group.....	33
3.5	Average Age of Mother by Mother's Nationality, Total Maternities	36
3.6	Parity by Age of Mother, Total Maternities	39
3.7	Birthweight: Cumulative Percentages of Total Live Births	44
3.8	Percentage of Births by Birthweight Groups, Total Live Births	44
3.9	Percentage Distribution for Males and Females across Birthweight Groups, Total Live Births	45
3.10	Percentage of Births by Month of Birth, Total Births	48

Figures for Perinatal Care:

4.1	Mother's Postnatal Length of Stay by Method of Delivery, Singleton Births	56
4.2	Mother's Postnatal Length of Stay by Method of Delivery, Multiple Births	56
4.3	Percentage Distribution of Total Live Births by Method of Delivery	59
4.4	Percentage of Total Births by Method of Delivery and Age of Mother	60
4.5	Percentage Distribution of Births by Size of Maternity Unit, Total Births	61
4.6	Percentage Distribution of Total Live Births by Infant's Length of Stay	63
4.7	Percentage Distribution of Infant's Type of Feeding by Age of Mother, Total Live Births	65
4.8	Percentage Distribution of Breastfed Infants by Mother's County of Residence, Total Live Births	66
4.9	Percentage Distribution of Infant's Type of Feeding by Mother's Socio-economic Group, Total Live Births	68
4.10	Percentage Distribution of Breastfed Infants by Mother's Nationality, Total Live Births	69

Figures for Perinatal Outcomes:

5.1	Perinatal Deaths by Birthweight Groups and Parity	74
5.2	Perinatal Mortality Rates by Birthweight.....	75
5.3	Total Perinatal Deaths with Birthweight < 2,500 grams by Cause of Death	79
5.4	Total Perinatal Deaths with Birthweight ≥ 2,500 grams by Cause of Death	79
5.5	Perinatal Deaths by Gestational Age (weeks).....	81
5.6	Perinatal Mortality Rates by Gestational Age (weeks) at Delivery.....	82
5.7	Stillbirths by Cause of Death.....	86
5.8	Early Neonatal Deaths by Cause of Death.....	87
5.9	Perinatal Deaths by Cause of Death.....	88

Figures for Domiciliary Births:

H1	Number and Percentage of Domiciliary Births Reported, 2003–2012	121
----	-----------------------------------------------------------------------	-----

KEY FINDINGS

The Perinatal Statistics Report 2012 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 2012.

SUMMARY STATISTICS, 2012

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

	Total Births	Live Births	Stillbirths		Early Neonatal Deaths		Perinatal Deaths		Adjusted Perinatal Deaths [#]	
	Number	Number	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*
Singleton	69,452	69,188	264	3.8	122	1.8	386	5.6	279	4.0
Multiple	2,534	2,517	17	6.7	21	8.3	38	15.0	30	11.9
Total	71,986	71,705	281	3.9	143	2.0	424	5.9	309	4.3

Notes: * Rates are calculated 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, 2012

- 71,986 births were reported to NPRS in 2012, representing a 3.2 per cent decrease between 2011 and 2012
- 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 2012, compared to 51% in 2008 and 45% in 2003
- 47% of babies were exclusively breastfed, compared to 44% in 2008 and 41% in 2003
- 29% of total live births were delivered by caesarean section, with 28% of singleton and 65% of multiple live births delivered by this method. In 2003, 24% of total live births were delivered by caesarean section
- 95% of singleton births and 62% of multiple births were discharged from hospital within 5 days of birth
- The perinatal mortality rate was 5.9 per 1,000 live births and stillbirths (5.6 per 1,000 singleton births and 15.0 per 1,000 multiple births). This rate has fallen by 31% since 2003, when it was 8.6 per 1,000 live births and stillbirths
- At 9.6 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 5.1 per 1,000 live births and stillbirths was for babies born to mothers aged 25 to 29 years.

MOTHERS, 2012

- 70,709 maternities were reported to NPRS in 2012, representing a 3.1 per cent decrease between 2011 and 2012
- The average age of mothers has increased from 30.6 years in 2003 to 31.9 years in 2012
- 30% of mothers were aged 35 years or older, up from 23% in 2003
- 18% of first births were to women aged 35 years or older compared to 12% in 2003
- 2% of total mothers giving birth were aged under 20 years, compared to 5% in 2003
- 39% gave birth for the first time, with an average age for first time mothers of 30.0 years
- 34% of births were to single mothers, who had an average age of 28.8 years
- 2% had a multiple pregnancy
- 55% of mothers recorded any breastfeeding, compared to 51% in 2008 and 45% in 2003
- 47% of mothers exclusively breastfed, compared to 45% in 2008 and 41% in 2003
- 57% of women having a singleton live birth delivered spontaneously, while deliveries using forceps accounted for 4%, vacuum extractions for 11%, and 28% 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 12% 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 2012 were to mothers born outside Ireland compared to 23% in 2008.

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 2012.¹ 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 over the past decade 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 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.

¹ Previous reports in this series can be downloaded from www.esri.ie/health_information/nprs/nprs_reports/

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 2003 and tables on selected variables for 2012.

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.²
- 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.
- In contrast to previous reports, 'Not Stated' values are included in the calculation of percentages used in discussion or in compilation of figures. As a result, caution should be exercised when comparing data used in discussion in this report with data used in discussion in previous Perinatal Statistics Reports. 'Not Stated' values are also 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 as the current birth notification form does not differentiate between different hospital schemes.
- Father's details are only required for registration purposes where mother's marital status is recorded as 'married'. As a result, there is a proportion of records for which information is incomplete, these are assigned to the category 'not applicable'. This category is combined with 'not stated' for the purposes of presenting data on father's socio-economic group³ and father's nationality in this report.

² See www.who.int/classifications/icd/ICD-10_2nd_ed_volume2.pdf ; pg 96, 5.7.2. Reporting Criteria

³ In previous NPRS reports data on mother's and father's Socio-economic Group were reported as Occupation, in this report these data are reported as Socio-economic Group. The classification for grouping occupations into socio-economic groups used in this and previous reports has not changed, for further details see Appendix C Classification of socio-economic group.

NATIONAL MINIMUM DATA SET

The NPRS data set provides a national minimum data set, which is intended to serve as a basis for the analysis 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 and data collection by the NPRS. 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 (since 2004)
- Date of mother's birth, mother's county and country of residence, mother's occupation, mother's nationality (since 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.

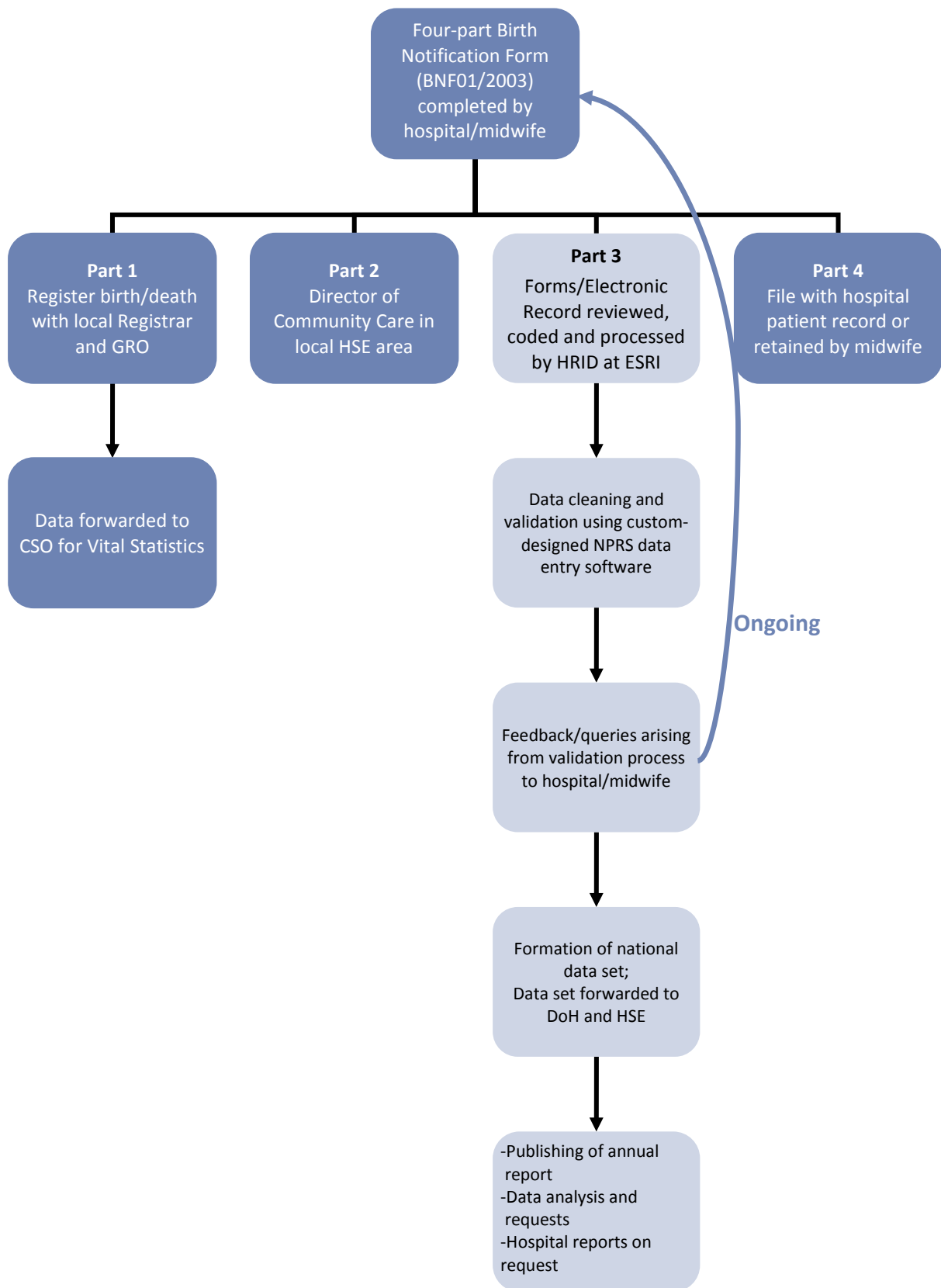
DATA COLLECTION AND QUALITY

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 IT Department 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 processed using 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 on each independent midwife working in the community.

Alongside the software developments noted above, the ESRI is currently piloting a computerised version of the birth notification form which, when implemented at the national level, would improve the efficiency of the system as edits and checks are more immediate. A fully computerised system would also be expected to assist with data quality initiatives and also make the data more immediately available to the hospital for analytical, management and educational purposes.

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.⁴ Analyses on single and multiple births and method of delivery for the period 2003 to 2012 are presented. 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 2003 to 2012.⁵

TRENDS IN SELECTED STATISTICS

Table 2.1 presents trends in selected statistics and show the following:

- Total births increased from 61,989 births in 2003 to 71,986 births in 2012, a 16.1 per cent increase over the decade. The number of total births reported has decreased between 2011 and 2012 by 3.2 per cent.
- Mothers giving birth in Ireland in 2012 with an average age of 31.9 years were on average 1.3 years older than those who gave birth in 2003 (average age 30.6 years) and just slightly older than those giving birth in 2011 (average age 31.7 years).
- The average age of single mothers has increased from 26.1 years in 2003 to 28.8 years in 2012.
- Over the decade 2003–2012, the percentage of total births to single mothers increased from 30.1 to 34.3 per cent, representing a 14.0 per cent increase over the period.
- Average parity (number of previous live births and stillbirths) has remained stable over the decade 2003–2012 and is recorded at 1.0 in 2012.
- Over the decade 2003–2012, the proportion of mothers giving birth for the first time fell for those aged less than 30 years and increased for those aged 30 years or more. Births to primiparous women aged less than 20 years accounted for 10.3 per cent of births in 2003 compared with 5.1 per cent in 2012 representing a decrease of 50.5 per cent over the decade. Births to primiparous women aged 40 years and older accounted for 1.7 per cent of births in 2003 compared to 3.2 per cent in 2012, representing an increase of 88.2 per cent over the decade.
- The proportion of mothers giving birth for a second time or more fell for all mothers aged less than 35 years and increased for mothers aged over 35 years. Births to multiparous women aged less than 20 years accounted for 0.8 per cent of births in 2003 compared with 0.4 per cent in 2012 representing a decrease of 50.0 per cent over the decade. Births to multiparous women aged 40 years and older accounted for 5.2 per cent of births in 2003 compared with 7.0 per cent in 2012 representing an increase of 34.6 per cent over the decade.

⁴ In contrast to previous reports, 'Not Stated' values are included in the calculation of percentages used in discussion or in compilation of figures. As a result, caution should be exercised when comparing data used in discussion in this report with data used in discussion in previous Perinatal Statistics Reports.

⁵ Previous reports in this series can be downloaded from www.esri.ie/health_information/nprs/nprs_reports/

- The number of previous stillbirths per 1,000 maternities has declined by 23.0 per cent over the decade from an average of 12.6 in 2003 to 9.7 in 2012.
- The interval in years since last delivery has remained relatively stable over time and was 3.8 years in 2012.
- Immunity to rubella for mothers increased from 87.3 per cent in 2003 to 94.3 per cent in 2012.⁶
- The percentage of women recording any breastfeeding was 44.8 per cent in 2003. This rate has increased to 55.4 per cent in 2012 which represents an increase of 23.7 per cent in the proportion of women recording any breastfeeding over the decade. In 2011 women recording any breastfeeding was reported at 55.3 per cent, with an increase of just 0.2 per cent for the period 2011 to 2012.⁷
- The percentage of women exclusively breastfeeding has increased from 41.3 per cent in 2003 to 46.9 per cent in 2012. This represents an increase of 13.6 per cent in the proportion of women recording exclusive breastfeeding over the decade. In 2011 the percentage of women exclusively breastfeeding was reported at 47.0 per cent, this represents a decrease of 0.2 per cent between 2011 and 2012.
- Mother's average length of stay in hospital was recorded at 4.0 days in 2003 and has decreased to 3.4 days in 2012 representing a decrease of 15.0 per cent over the decade. An increase of 3.0 per cent is reported over the year from an average length of stay of 3.3 days in 2011.

Data on parents' nationality,⁸ collected since 2004, show the following:

- Births to mothers born in Ireland has declined from 82.0 per cent of births in 2004 to 76.0 per cent of births in 2012, a decrease of 7.3 per cent over the time period.
- A decline of 0.8 per cent was recorded in births to mothers from EU countries from 13.0 per cent in 2011 to 12.9 per cent in 2012.
- Births to fathers born in Ireland have increased over the time period and were recorded at 53.6 per cent in 2004 and 57.5 per cent in 2012.⁹
- A decline of 4.5 per cent was recorded in births to fathers from EU countries from 8.8 per cent in 2011 to 8.4 per cent in 2012.

⁶ For further discussion and analysis on this issue see O'Dwyer V, Bonham S, Mulligan A, O'Connor C, Farah N, Kennelly MM, Turner MJ. *Antenatal rubella immunity in Ireland*. IMJ 2013;106:232-5.

⁷ For further discussion and analysis on this issue see Brick A, Nolan A. *Explaining the Increase in Breastfeeding at Hospital Discharge in Ireland, 2004–2010*. Irish Journal of Medical Science, September 2013. 10.1007/s11845-013-1012-0

⁸ As the EU expanded over this period caution should be exercised when interpreting these data.

⁹ Father's details are only required for registration purposes where mother's marital status is recorded as 'married'. As a result, there is a proportion of records for which information is incomplete, these are assigned to the category 'not applicable'. This category is combined with 'not stated' for the purposes of presenting data on father's nationality in this report. The data presented here, report father's nationality where recorded, regardless of mother's marital status.

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

- For total live births the percentage of spontaneous deliveries fell from 61.2 per cent in 2003 to 55.6 per cent in 2012. The upward trend in delivery by Caesarean section continues with a rate of 28.9 per cent reported in 2012 compared with 24.2 per cent for 2003. This represents an increase of 19.4 per cent in the proportion of Caesarean section deliveries for live births over the decade, and a 2.8 per cent increase from 28.1 per cent in 2011 to 28.9 per cent in 2012.
- For total maternities, the percentage of spontaneous deliveries fell from 61.8 per cent in 2003 to 56.3 per cent in 2012. The rate in delivery by Caesarean section has increased from 23.6 per cent in 2003 to 28.1 per cent in 2012, which represents an increase of 19.1 per cent in the proportion of Caesarean section deliveries for maternities over the decade, and a 2.9 per cent increase from 27.3 per cent in 2011 to 28.1 per cent in 2012.

Regarding infant's characteristics, trends have been largely consistent over the decade 2003 to 2012.

- The average birthweight for total live births was 3,464.0 grams in 2012 which is broadly consistent with the preceding decade and almost unchanged since 2011 (3,467.0 grams).
- While the average birthweight for singleton births of 3502.0 grams has remained consistent over the decade, slightly more variation is observed for multiple births, ranging from a high of 2,487.1 grams in 2003 to a low of 2,420.2 grams in 2012.
- The percentage of total live births recording low birthweight (<2,500 grams) was 5.1 per cent in 2003 compared with 5.4 per cent for 2012. This represents a 5.9 per cent increase in the proportion of low birthweight babies over the decade and a 3.8 per cent increase between 2011 and 2012.
- The percentage of total live births classified as high birthweight (4,500 grams or more) has decreased from 2.8 per cent in 2003 to 2.5 per cent in 2012. In 2011, 2.6 per cent of total births were classified as high birthweight.
- For total births, the infant's average length of stay in hospital declined from 3.8 days in 2003 to 3.2 days in 2012. This represents a 15.8 per cent decrease over the decade, with no change reported since 2010.

TABLE 2.1

Trends in Selected Statistics, 2003–2012

			2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change	
													2003–2012	2011–2012
Total Births		N	61,989	62,406	61,786	65,810	71,963	75,587	76,023	75,600	74,377	71,986	16.1	-3.2
Birth Rate¹		Per 1,000 population	15.5	15.3	14.9	15.5	16.4	16.8	16.7	16.5	16.2	15.6	0.6	-3.7
Maternal Characteristics														
Age of mother (years) ²		Avg	30.6	30.8	31.0	31.0	31.1	31.1	31.3	31.5	31.7	31.9	4.2	0.6
Age of single mother (years) ^{2,3}		Avg	26.1	26.4	26.6	26.8	27.1	27.3	27.5	28.0	28.3	28.8	10.3	1.8
Mother's Marital Status	Married	%	68.4	67.7	67.6	66.8	66.4	66.0	66.0	65.6	65.2	64.0	-6.4	-1.8
	Single	%	30.1	30.5	30.5	31.4	31.7	32.2	32.2	32.8	33.2	34.3	14.0	3.3
	All other	%	1.5	1.7	1.8	1.9	1.9	1.7	1.8	1.6	1.6	1.7	13.3	6.3
Maternal parity ²		Avg	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0
Births to Primiparous Women by Maternal Age ²	Under 20 Years	%	10.3	9.1	8.9	8.0	7.7	6.9	6.5	5.9	5.2	5.1	-50.5	-1.9
	20–24 Years	%	20.8	20.3	19.6	20.5	19.9	19.5	18.4	16.8	15.5	15.3	-26.4	-1.3
	25–29 Years	%	27.5	26.9	25.7	26.7	27.3	28.5	29.5	29.2	27.5	26.1	-5.1	-5.1
	30–34 Years	%	29.6	31.1	32.3	30.5	30.9	30.8	31.1	32.6	34.7	35.6	20.3	2.6
	35–39 Years	%	10.1	10.5	11.6	12.1	12.2	12.1	12.4	12.9	14.1	14.8	46.5	5.0
	40 Years and Older	%	1.7	1.8	1.9	2.1	2.1	2.1	2.2	2.6	3.0	3.2	88.2	6.7
Births to Multiparous Women by Maternal Age ²	Under 20 Years	%	0.8	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	-50.0	0.0
	20–24 Years	%	9.1	8.9	8.1	7.6	7.4	7.2	7.1	6.7	6.4	6.1	-33.0	-4.7
	25–29 Years	%	21.5	21.1	19.9	20.7	20.4	20.4	20.3	19.9	19.4	18.5	-14.0	-4.6
	30–34 Years	%	37.3	36.9	37.2	36.6	36.5	36.1	35.4	36.2	37.0	36.8	-1.3	-0.5
	35–39 Years	%	26.0	27.0	28.3	28.7	29.2	29.8	30.4	30.4	30.2	31.1	19.6	3.0
	40 Years and Older	%	5.2	5.3	5.8	5.9	5.9	5.9	6.3	6.3	6.5	7.0	34.6	7.7
Number of previous stillbirths per 1,000 maternities ²		Avg	12.6	12.6	12.8	10.6	10.8	10.9	11.7	11.5	11.9	9.7	-23.0	-18.5
Gestational age at delivery (weeks) ²		Avg	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.3	39.3	-0.3	0.0
Interval since last birth (years) ⁴		Avg	3.8	3.7	3.8	3.8	3.9	3.9	3.8	3.9	3.8	3.8	0.0	0.0
Immunity to rubella ²		%	87.3	90.5	90.3	92.2	92.4	90.0	90.5	92.3	94.3	94.3	8.0	0.0
Any breastfeeding ^{1,2,5,6}		%	44.8	45.6	47.7	48.9	50.6	51.1	52.8	54.1	55.3	55.4	23.7	0.2
Exclusive breastfeeding ^{1,2,5}		%	41.3	42.4	44.1	44.4	45.2	44.6	45.5	46.2	47.0	46.9	13.6	-0.2
Mother's length of stay (days) ^{1,2,7}		Avg	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.4	-15.0	3.0

TABLE 2.1

Trends in Selected Statistics, 2003–2012 (contd.)

			2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change	
													2003–2012	2011–2012
Parents Nationality⁸														
Mother's Nationality	Irish	%	-	82.0	82.9	81.4	79.1	77.3	76.1	75.4	76.1	76.0	-7.3†	-0.1
	UK	%	-	3.0	3.3	3.3	2.9	2.7	2.6	2.7	2.3	2.4	-20.0†	4.3
	EU ⁹	%	-	2.0	3.2	5.2	8.5	10.6	11.7	12.9	13.0	12.9	545.0†	-0.8
	Africa	%	-	5.4	4.4	4.0	3.6	3.4	3.4	3.0	2.6	2.7	-50.0†	3.8
	Asia	%	-	2.5	2.9	3.0	3.6	3.7	4.0	3.8	4.0	4.0	60.0†	0.0
Father's Nationality ¹⁰	Irish	%	-	53.6	61.6	62.1	60.5	58.4	58.0	59.1	59.4	57.5	7.3†	-3.2
	UK	%	-	2.2	2.9	2.8	2.6	2.5	2.3	2.4	2.2	2.0	-9.1†	-9.1
	EU ⁹	%	-	1.0	1.8	2.9	5.3	6.8	7.8	8.6	8.8	8.4	740.0†	-4.5
	Africa	%	-	3.7	3.5	3.2	3.0	2.7	2.7	2.4	2.1	1.9	-48.6†	-9.5
	Asia	%	-	1.5	2.0	2.3	2.8	2.9	3.3	3.1	3.3	3.1	106.7†	-6.1
Perinatal Care														
Hospital & G.P. combined antenatal care ²		%	75.8	77.2	77.4	78.9	77.4	79.3	80.7	80.9	77.3	77.3	2.0	0.0
Booked hospital admissions ^{2,7}		%	97.5	98.3	98.4	98.9	99.0	98.9	99.0	99.3	99.3	99.3	1.8	0.0
Method of delivery ¹¹ Total live births ¹²	Spontaneous	%	61.2	59.5	59.0	58.8	57.3	56.6	56.4	56.5	55.8	55.6	-9.2	-0.4
	Caesarean section	%	24.2	25.2	25.9	25.4	26.2	26.7	26.9	27.1	28.1	28.9	19.4	2.8
	Forceps ¹³	%	2.9	2.5	2.8	3.0	3.7	3.7	4.1	4.0	4.1	3.9	34.5	-4.9
Method of delivery ¹¹ Total maternities	Spontaneous	%	61.8	60.2	59.7	59.4	58.0	57.4	57.0	57.2	56.6	56.3	-8.9	-0.5
	Caesarean section	%	23.6	24.6	25.3	24.8	25.5	25.9	26.2	26.3	27.3	28.1	19.1	2.9
	Forceps ¹³	%	2.9	2.5	2.8	3.0	3.7	3.7	4.1	4.0	4.1	3.9	34.5	-4.9
Infant Characteristics														
Birthweight (grams) ¹	Total births	Avg	3471.1	3476.6	3472.0	3473.0	3465.4	3464.0	3466.1	3468.4	3467.0	3464.0	-0.2	-0.1
	Singleton births	Avg	3500.6	3508.0	3503.2	3503.9	3499.3	3501.9	3498.9	3504.0	3505.0	3502.0	0.0	-0.1
	Multiple births	Avg	2487.1	2471.2	2469.2	2464.8	2421.4	2424.5	2465.2	2447.2	2464.6	2420.2	-2.7	-1.8
Low birthweight (<2500 grams) ¹	Total births	%	5.1	5.0	5.0	5.0	5.3	5.3	5.0	5.1	5.2	5.4	5.9	3.8
	Singleton births	%	3.9	3.7	3.8	3.7	3.8	3.8	3.7	3.6	3.6	3.8	-2.6	5.6
	Multiple births	%	45.1	45.5	45.6	46.4	50.4	48.4	45.4	47.6	46.0	49.9	10.6	8.5
High birthweight (≥4500 grams) ¹	Total births	%	2.8	2.8	2.9	2.9	2.8	2.7	2.7	2.7	2.6	2.5	-10.7	-3.8
	Multiple births	Avg	3.8	3.8	3.7	3.7	3.5	3.4	3.3	3.2	3.2	3.2	-15.8	0.0
Infant's length of stay (days) ^{1,5,7}	Singleton births	Avg	3.6	3.6	3.5	3.5	3.3	3.1	3.1	3.0	3.0	3.0	-16.7	0.0
	Multiple births	Avg	10.1	10.6	10.1	9.9	10.0	9.9	9.0	9.5	8.6	9.4	-6.9	9.3
	Post-mortems for early neonatal deaths	%	38.4	34.5	23.0	26.3	30.3	28.9	33.5	32.9	24.8	27.3	-28.9	10.1

Notes: † Percentage change for mother and father nationality based on 2004-2012.

Percentage columns are subject to rounding.

¹ Based on live births. ² Based on maternities. ³ Data recording marital status as 'never married' are classified as 'single' in this report. ⁴ Based on multiparous maternities. ⁵ Excludes early neonatal deaths. ⁶ Any breastfeeding includes type of feeding recorded as either breast or combined. ⁷ Excludes domiciliary births. ⁸ Nationality data collected from 2004. ⁹ Based on EU25 for 2004-2006 and EU27 from 2007 onwards. As the EU expanded over this period caution should be exercised when interpreting these data. See also Appendix F. ¹⁰ Father's details are only required for registration purposes where mother's marital status is recorded as 'married'. As a result, there is a proportion of records for which information is incomplete, these are assigned to the category 'not applicable'. The data presented here, reports father's nationality where recorded, regardless of mother's marital status. ¹¹ See also Section 2 'Method of Delivery for Primiparous and Multiparous Women'. ¹² These figures were based on total live births, as each infant in a multiple pregnancy can have a different method of delivery. ¹³ Excludes breech deliveries.

SINGLETON AND MULTIPLE BIRTHS

Table 2.2 shows the numbers of singleton and multiple births each year for the period 2003 to 2012.

- There were 69,452 singleton births, 2,435 twin births and 99 triplet births in 2012.¹⁰
- The twinning rate was 17.2 per 1,000 maternities in 2012; this represents an increase of 20.3 per cent over the decade and a 5.0 per cent decrease between 2011 and 2012.

TABLE 2.2

Singleton and Multiple Births, 2003–2012

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change	
											2003-2012	2011-2012
Singleton births	60,164	60,499	59,902	63,839	69,692	72,916	73,603	73,046	71,651	69,452	15.4	-3.1
Twin births	1,747	1,849	1,833	1,916	2,185	2,575	2,373	2,480	2,638	2,435	39.4	-7.7
Triplet births	78	54	47	51	83	92	39	74	84	99	26.9	17.9
Quadruplet births	0	4	4	4	3	4	4	0	4	0	–	-100.0
Twinning rate (per 1,000 maternities)	14.3	15	15.1	14.8	15.4	17.4	15.9	16.7	18.1	17.2	20.3	-5.0

Notes: Percentage columns are subject to rounding.
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 2003 and 2012 are presented in Table 2.3.

- 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 2003 to 4.4 in 2006, to the 2012 rate of 3.8 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 2012 compared to a rate of 2.6 per 1,000 live births in 2003.

¹⁰ 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 2012, there were 69,506 singleton births, 2,448 twin births and 105 triplets reported to the NPRS; of these 73 births weighed less than 500 grams (including 54 singleton births and 19 multiple births) and so were excluded from the analysis.

TABLE 2.3

Live Births, Stillbirths and Early Neonatal Deaths, Numbers and Rates, Singleton and Multiple Births, 2003–2012

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change	
	Number of Births and Perinatal Deaths										2003-2012	2011-2012
Total Births	61,989	62,406	61,786	65,810	71,963	75,587	76,023	75,600	74,377	71,986	16.1	-3.2
Singleton	60,164	60,499	59,902	63,839	69,692	72,916	73,603	73,046	71,651	69,452	15.4	-3.1
Multiple	1,825	1,907	1,884	1,971	2,271	2,671	2,420	2,554	2,726	2,534	38.8	-7.0
Live Births	61,632	62,067	61,480	65,502	71,570	75,229	75,651	75,245	74,080	71,705	16.3	-3.2
Singleton	59,837	60,186	59,621	63,555	69,318	72,582	73,247	72,709	71,375	69,188	15.6	-3.1
Multiple	1,795	1,881	1,859	1,947	2,252	2,647	2,404	2,536	2,705	2,517	40.2	-7.0
Stillbirths	357	339	306	308	393	358	372	355	297	281	-21.3	-5.4
Singleton	327	313	281	284	374	334	356	337	276	264	-19.3	-4.3
Multiple	30	26	25	24	19	24	16	18	21	17	-43.3	-19.0
Early Neonatal Deaths	177	168	139	152	132	159	155	161	153	143	-19.2	-6.5
Singleton	156	140	109	129	118	138	142	135	126	122	-21.8	-3.2
Multiple	21	28	30	23	14	21	13	26	27	21	0.0	-22.2
	Rates *											
Stillbirths	5.8	5.4	5.0	4.7	5.5	4.7	4.9	4.7	4.0	3.9	-32.8	-2.5
Singleton	5.4	5.2	4.7	4.4	5.4	4.6	4.8	4.6	3.9	3.8	-29.6	-2.6
Multiple	16.4	13.6	13.3	12.2	8.4	9.0	6.6	7.0	7.7	6.7	-59.1	-13.0
Early Neonatal Deaths	2.9	2.7	2.3	2.3	1.8	2.1	2.0	2.1	2.1	2.0	-31.0	-4.8
Singleton	2.6	2.3	1.8	2.0	1.7	1.9	1.9	1.9	1.8	1.8	-30.8	0.0
Multiple	11.7	14.9	16.1	11.8	6.2	7.9	5.4	10.3	10.0	8.3	-29.1	-17.0

Notes: Percentage columns are subject to rounding.

* Rates are calculated per 1,000 births. 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 PRIMIPAROUS¹¹ AND MULTIPAROUS¹² WOMEN

Table 2.4 outlines trends in the method of delivery for primiparous and multiparous women over the decade 2003 to 2012.

- Spontaneous deliveries have fallen for total maternities from 61.8 per cent in 2003 to 56.3 per cent in 2012, with the rate of decrease higher for primiparous than multiparous women.
- Delivery by Caesarean section has increased for total maternities from 23.6 per cent in 2003 to 28.1 per cent in 2012.
- 30.3 per cent of primiparous women delivered by Caesarean section in 2012 compared to 26.3 per cent in 2003, with the rate of increase for Caesarean section delivery higher for multiparous women, increasing from 21.7 per cent in 2003 to 26.7 per cent in 2012 (see Figure 2.1).

¹¹ Women who have had no previous pregnancy resulting in a live birth or stillbirth.

¹² Women who have had at least one previous pregnancy resulting in a live birth or stillbirth.

TABLE 2.4

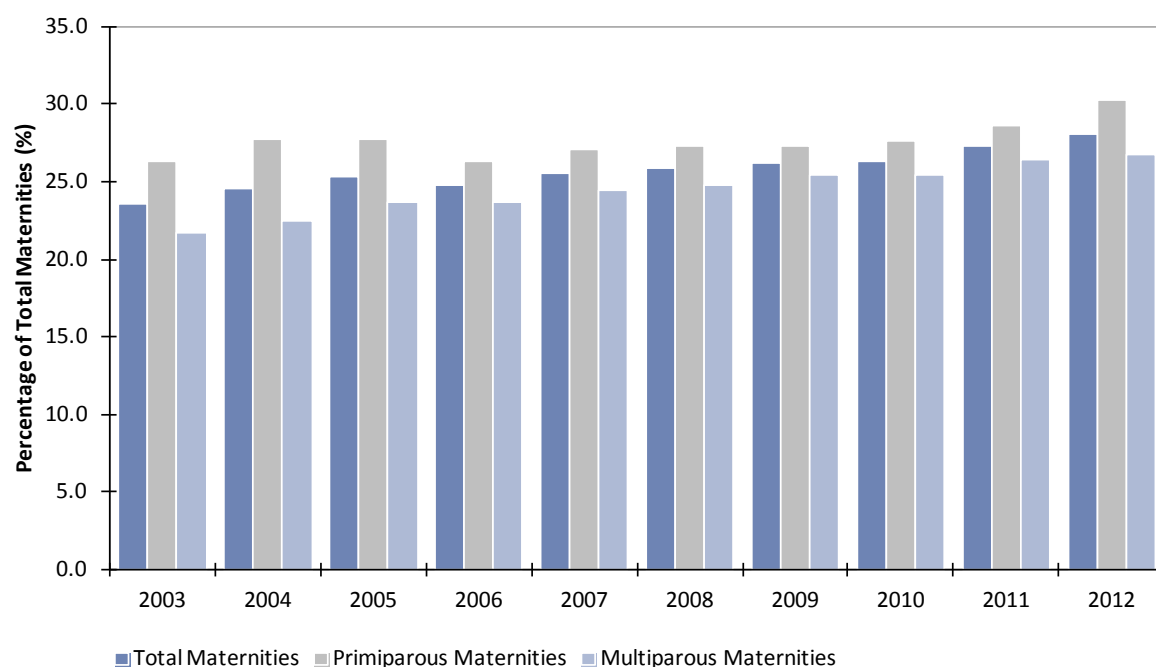
Percentage Distribution of Maternities by Method of Delivery, Primiparous and Multiparous Women, 2003–2012

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change	
											2003–2012	2011–2012
Total Maternities												
Spontaneous	61.8	60.2	59.6	59.4	58.0	57.4	57.0	57.2	56.6	56.3	-8.9	-0.5
Breech/forceps	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.3	-25.0	-25.0
Forceps	2.9	2.5	2.8	3.0	3.7	3.7	4.1	4.0	4.1	3.9	34.5	-4.9
Vacuum extraction	11.0	12.0	11.7	12.2	12.2	12.6	12.2	11.9	11.5	11.3	2.7	-1.7
Caesarean section	23.6	24.6	25.3	24.8	25.5	25.9	26.2	26.3	27.3	28.1	19.1	2.9
Other specified & combined	0.2	0.3	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	-100.0	0.0
Total	100	100	100	100	100	100	100	100	100	100		
Primiparous												
Spontaneous	47.8	45.4	45.0	45.6	44.1	43.5	42.7	42.7	41.2	40.5	-15.3	-1.7
Breech/forceps	0.6	0.5	0.6	0.6	0.6	0.5	0.5	0.7	0.6	0.4	-33.3	-33.3
Forceps	5.7	5.1	5.6	5.8	7.2	7.2	8.2	8.0	8.6	8.3	45.6	-3.5
Vacuum extraction	19.4	21.2	21.0	21.5	21.0	21.4	21.2	21.0	21.0	20.5	5.7	-2.4
Caesarean section	26.3	27.7	27.6	26.3	27.1	27.3	27.3	27.6	28.6	30.3	15.2	5.9
Other specified & combined	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	-100.0	0.0
Total	100	100	100	100	100	100	100	100	100	100		
Multiparous												
Spontaneous	71.5	70.1	69.5	69.1	68.0	67.6	67.4	67.5	66.8	66.4	-7.1	-0.6
Breech/forceps	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.0	0.0
Forceps	1.0	0.8	0.9	1.0	1.2	1.1	1.1	1.2	1.1	1.1	10.0	0.0
Vacuum extraction	5.3	5.9	5.5	5.7	5.8	6.0	5.7	5.4	5.2	5.4	1.9	3.8
Caesarean section	21.7	22.5	23.7	23.7	24.4	24.8	25.4	25.4	26.4	26.7	23.0	1.1
Other specified & combined	0.2	0.4	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	-100.0	-100.0
Total	100	100	100	100	100	100	100	100	100	100		

Notes: Percentage columns are subject to rounding.
Maternities with 'not stated' parity were excluded from the table.

FIGURE 2.1

Percentage Distribution of Maternities Delivering by Caesarean Section for Total, Primiparous and Multiparous Women, 2003–2012



Note: See Table 2.4 for data.

PERINATAL MORTALITY

Despite improvements in reducing perinatal mortality in recent decades, the perinatal period continues to be a time of relatively high risk.¹³ Stillbirths account for 66.3 per cent of perinatal deaths in 2012.^{14,15}

Table 2.5 presents the numbers and rates for total births and perinatal deaths for Ireland from 2003 to 2012.

- In 2012 approximately 1 in every 255 births was stillborn and 1 in every 500 live births died in the first week of life.
- The perinatal mortality rate has fallen from 8.6 per 1,000 live births and stillbirths in 2003 to 5.9 per 1,000 in 2012. This represents a 31.4 per cent decrease over the decade, and a 3.3 per cent decrease since 2011 (see Figure 2.2).

TABLE 2.5

Live Births, Stillbirths, Early Neonatal Deaths, and Perinatal Deaths, 2003–2012

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change	
	Number of Births and Perinatal Deaths										2003–2012	2011–2012
Total Births	61,989	62,406	61,786	65,810	71,963	75,587	76,023	75,600	74,377	71,986	16.1	-3.2
Live Births	61,632	62,067	61,480	65,502	71,570	75,229	75,651	75,245	74,080	71,705	16.3	-3.2
Stillbirths	357	339	306	308	393	358	372	355	297	281	-21.3	-5.4
Early Neonatal Deaths	177	168	139	152	132	159	155	161	153	143	-19.2	-6.5
Perinatal Deaths	534	507	445	460	525	517	527	516	450	424	-20.6	-5.8
Adjusted Perinatal Deaths	384	382	330	345	383	384	381	368	308	309	-19.5	0.3
	Rates *											
Stillbirth	5.8	5.4	5.0	4.7	5.5	4.7	4.9	4.7	4.0	3.9	-32.8	-2.5
Early Neonatal Death	2.9	2.7	2.3	2.3	1.8	2.1	2.0	2.1	2.1	2.0	-31.0	-4.8
Perinatal Mortality	8.6	8.1	7.2	7.0	7.3	6.8	6.9	6.8	6.1	5.9	-31.4	-3.3
Adjusted Perinatal Mortality	6.2	6.1	5.4	5.3	5.3	5.1	5.0	4.9	4.1	4.3	-30.6	4.9

Notes: Percentage columns are subject to rounding.

* Rates are calculated 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. For numbers and rates by singleton and multiple births see Section Two 'Singleton and Multiple Births'.

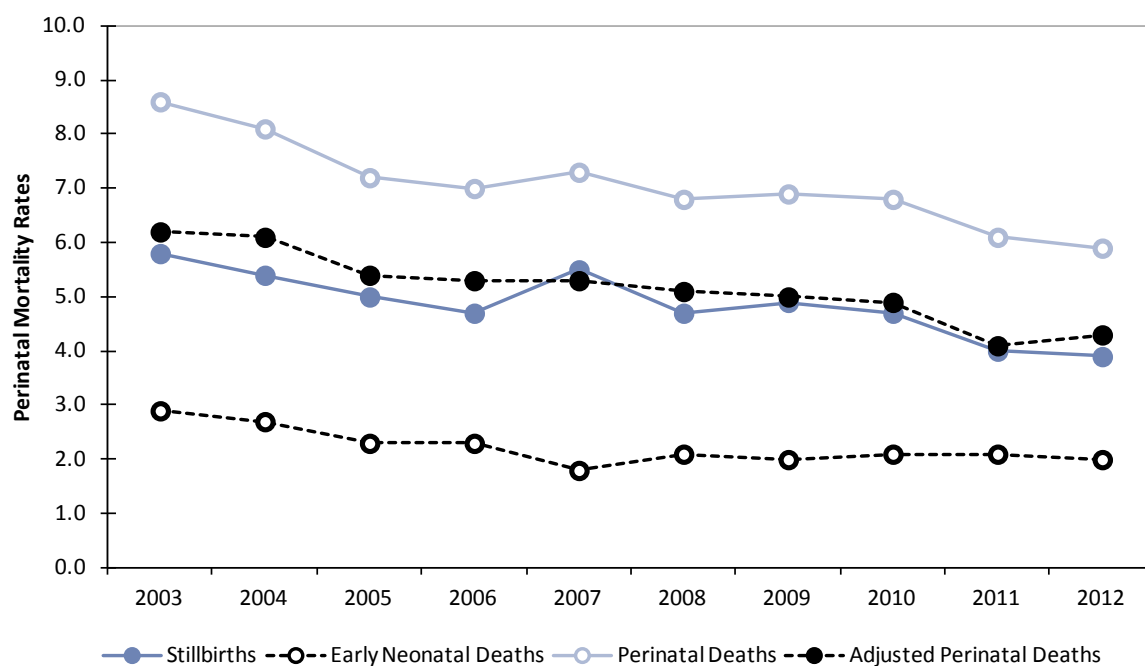
¹³ EURO-PERISTAT Project with SCPE and EUROCAT. *European Perinatal Health Report. The health and care of pregnant women and babies in Europe in 2010*. May 2013. Available www.europeristat.com

¹⁴ Details on rate calculations are in Appendix A.

¹⁵ 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 2.2

Stillbirth, Early Neonatal and Perinatal Mortality Rates, Ireland, 2003–2012



Note: See Table 2.5 for data.

Using available data from 2010 onwards, a European comparison¹⁶ of perinatal mortality rates in Figure 2.3 shows that for the countries included;

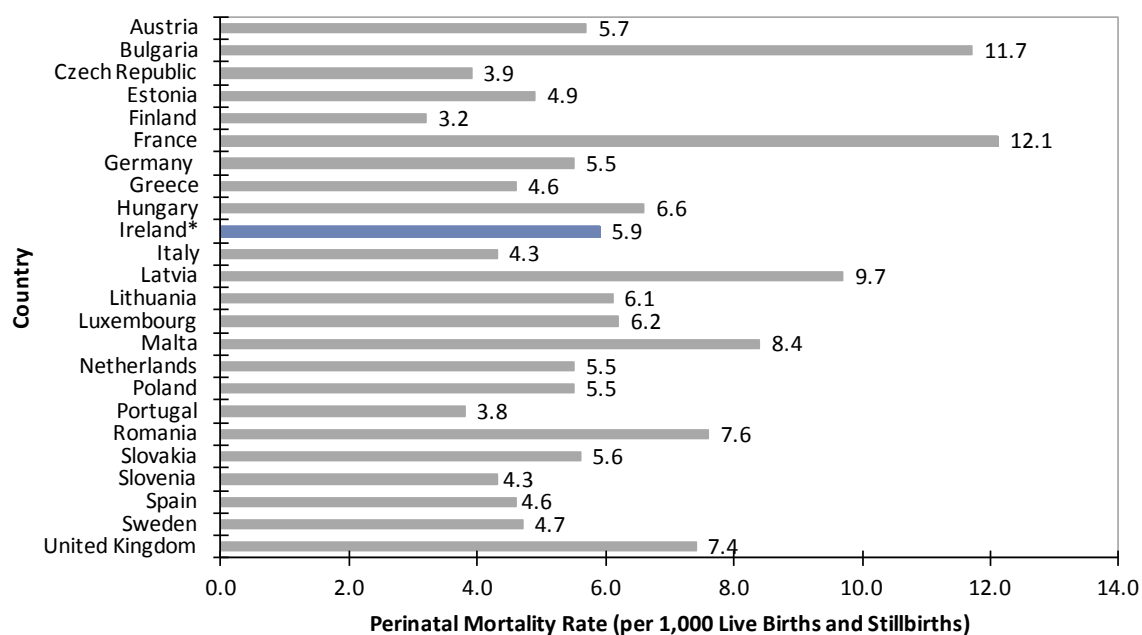
- In 2012, the perinatal mortality rate for Ireland was recorded at 5.9 per 1,000 live births and stillbirths.
- France recorded a perinatal mortality rate of 12.1 per 1,000 live births and stillbirths.
- Finland recorded a perinatal mortality rate of 3.2 per 1,000 live births and stillbirths.

¹⁶ 'Population and Social Conditions', Eurostat, Data Navigation Tree, date consulted November 2013.

<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 2.3
Perinatal Mortality Rates for Selected EU Countries^a



Sources: 'Population and Social Conditions', Eurostat, Data Navigation Tree, date consulted November 2013.

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

^a Rates based on 2012 or nearest year available.

* National Figure for 2012 compiled by NPRS. See Table 2.5 for data.

BIRTH RATES¹⁷

The birth rate is based on the total number of live births per 1,000 population.¹⁸ Figure 2.4 presents trends in birth rates for selected EU countries over the decade 2003 to 2012. Figure 2.5 presents birth rates in the 27 EU countries for 2012.

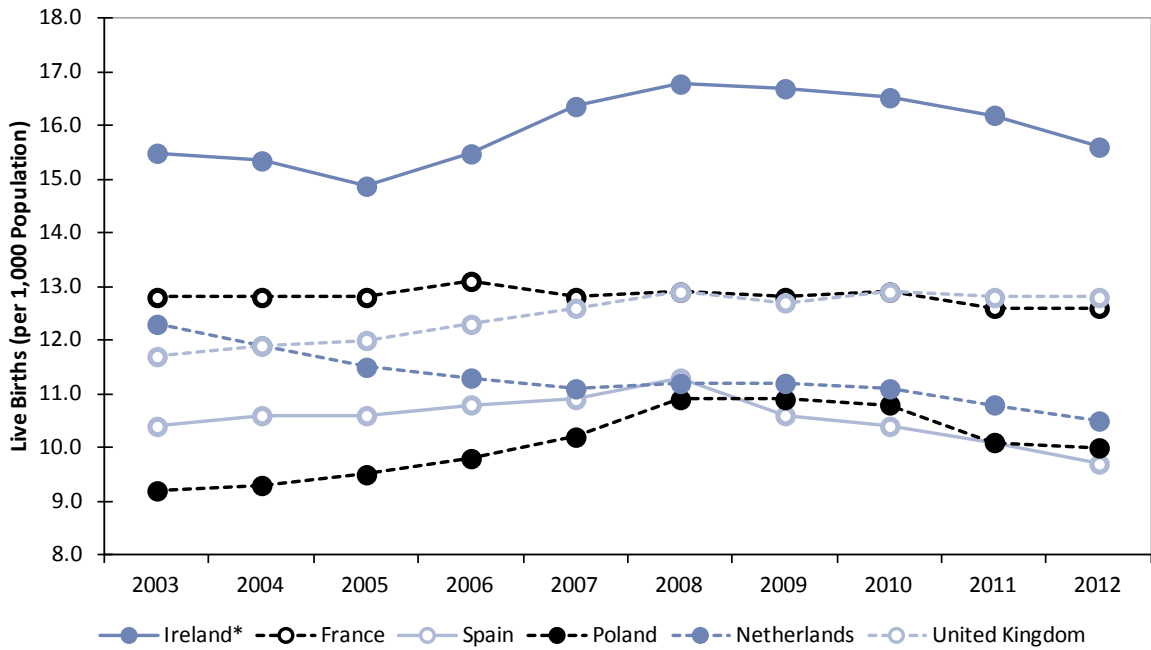
- Of the countries reviewed, Ireland has consistently had the highest birth rate over the period, increasing from 15.5 per 1000 population in 2003 to 15.6 per 1,000 population in 2012.¹⁹
- The birth rate for Ireland has declined from a high of 16.8 per 1,000 population in 2008 to 16.2 per 1,000 in 2011 and 15.6 per 1,000 in 2012.
- After Ireland, the countries with the next highest birth rates are the United Kingdom and France (12.8 and 12.6 respectively) followed by Sweden and Cyprus (11.9 and 11.8 respectively). In 2012, Germany (8.4) had the lowest birth rate with Portugal (8.5) next in line (see Figure 2.5).

¹⁷ 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.

¹⁸ The population estimates used in the denominator of the birth rate were calculated by the CSO Statistical Databases, date consulted November 2013. www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA11&PLanguage=0

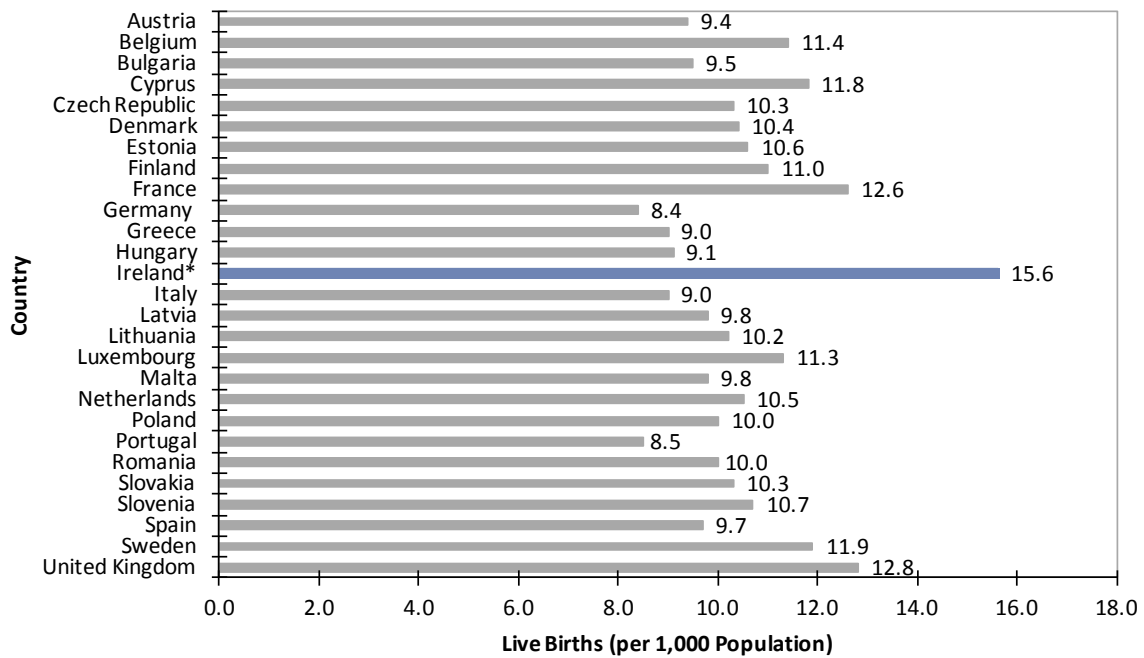
¹⁹ The CSO estimates the Irish birth rate at 15.8 per 1,000 of the population for 2012. See Vital Statistics, Fourth Quarter and Yearly Summary 2012, May 2013. CSO 2012 data are provisional and are based on the number of births registered within the year as opposed to births occurring in the year.

FIGURE 2.4
Trends in Birth Rates for Selected EU Countries, 2003–2012



Sources: 'Population and Social Conditions', Eurostat, Data Navigation Tree, date consulted November 2013. <http://epp.eurostat.ec.europa.eu>
 *Data for Ireland are based on NPRS data on live births from 2003 onwards. The population estimates used in the denominator of the birth rate were calculated by the CSO Statistical Databases, date consulted November 2013. www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA11&PLanguage=0

FIGURE 2.5
Birth Rates per 1,000 Population for EU Countries, 2012



Sources: 'Population and Social Conditions', Eurostat, Data Navigation Tree, date consulted November 2013. <http://epp.eurostat.ec.europa.eu>
 * Data for Ireland are based on NPRS data on live births. The population estimates used in the denominator of the birth rate were calculated by the CSO Statistical Databases, date consulted November 2013. www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA11&PLanguage=0

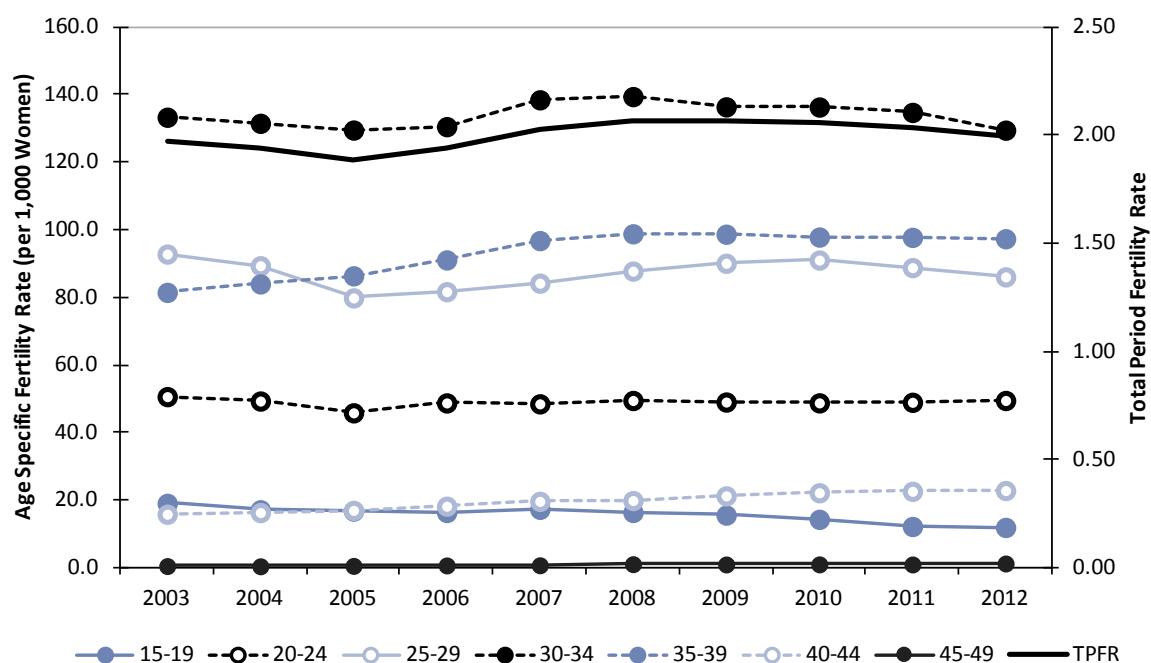
FERTILITY

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.²⁰ The ASFR refers to the number of live births to women in a particular age group per 1,000 women. Figure 2.6 displays the trend in the TPFR in Ireland from 2003 to 2012.

- The Irish TPFR has increased from an average of 1.97 in 2003 to a high of 2.07 in 2008 and is estimated at 1.99 in 2012.²¹
- The 20 to 24 year age group and the 40 to 49 year age groups recorded increasing rates for 2012. All other age groups recorded decreasing rates for 2012.
- The ASFRs show women aged 25 to 29 recorded an annual decrease in fertility between 2003 and 2005 and reported increasing rates between 2006 and 2010. For 2011 and 2012 the ASFRs for this age group have declined.
- 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 2012, a trend observed in greater proportions since 2005.

FIGURE 2.6

Age-Specific Fertility Rates (ASFRs) and Total Period Fertility Rates (TPFRs), Ireland, 2003–2012



Sources: Total period fertility rates (TPFRs) and age-specific fertility rates (ASFRs) are calculated using NPRS data from 2003 onwards. Female population estimates from 2003 onwards were obtained from the CSO Statistical Databases, date consulted November 2013. www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0

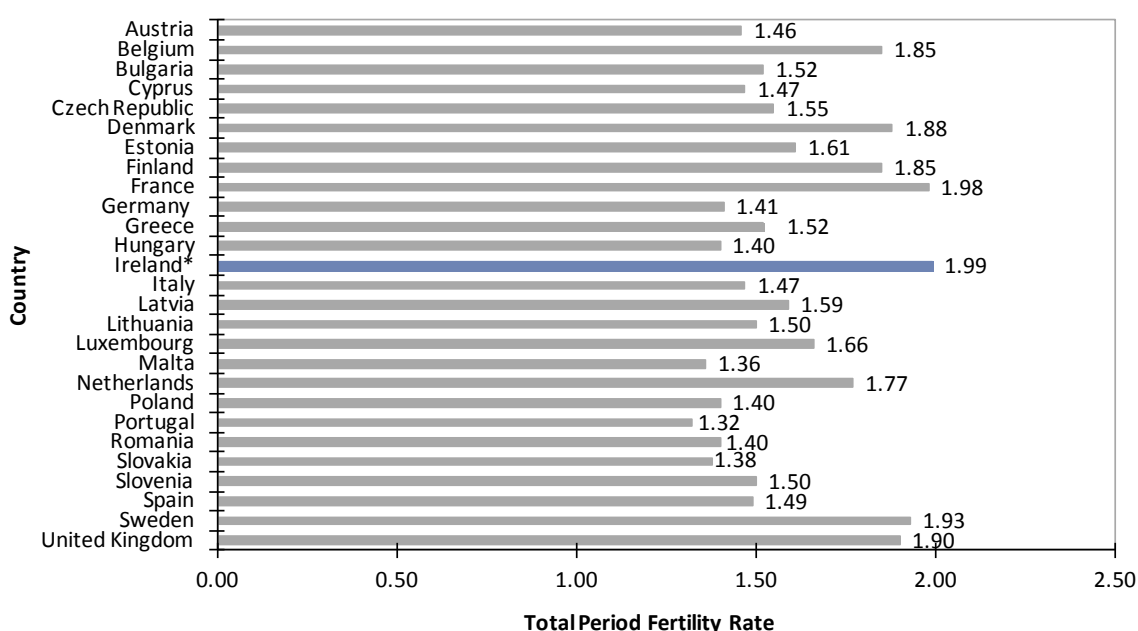
²⁰ See Appendix A, definitions for calculation of TPFR and ASFR.

²¹ The CSO estimates the TPFR at 2.01 for 2012. See Vital Statistics, Fourth Quarter and Yearly Summary 2012, May 2013. CSO 2012 data are provisional and are based on the number of births registered within the year as opposed to births occurring in the year.

The TPF_R for Ireland is based on population data for 2012²², and at 1.99 is below the level required for the long-term replacement of the population in the absence of any net inward migration (2.10). Figure 2.7 presents data on TPF_Rs for 2012 using data from The World Health Organization, Global Health Observatory Data Repository and the NPRS.

- Ireland had the highest TPF_R in the 27 EU countries for 2012.
- France and Sweden were just behind Ireland with a TPF_R of 1.98 and 1.93 respectively, while Portugal (1.32) and Malta (1.36) recorded the lowest TPF_R in 2012.

FIGURE 2.7
Total Period Fertility Rates for EU Countries, 2012



Sources: World Health Organization, Global Health Observatory Data Repository, date consulted November 2013.
<http://apps.who.int/gho/data/node.country.regionEUR?lang=en>

* Data for Ireland are based on NPRS data on live births. Female population estimates for 2012 were obtained from the CSO Statistical Databases, date consulted November 2013.
www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0

²² CSO Statistical Databases, date consulted November 2013.
www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0

SECTION THREE

GENERAL CHARACTERISTICS

INTRODUCTION

This section presents more detailed analyses of data reported to the NPRS for 2012.

Data for a selection of variables are presented including:

- mother's age, marital status, county of residence, socio-economic group²³, nationality, parity, number of previous stillbirths, and interval since last birth
- father's socio-economic group and nationality
- 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.

²³ In previous NPRS reports data on mother's and father's Socio-economic Group were reported as Occupation, in this report these data are reported as Socio-economic Group. The classification for grouping occupations into socio-economic groups used in this and previous reports has not changed, for further details see Appendix C Classification of socio-economic group.

MATERNAL AGE

Table 3.1 presents data on maternal age.

- In 2012, over 36 per cent of total births were to mothers aged 30 to 34 years, representing 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
Total Births										
Under 20 Years	1,613	2.2	1,609	4	2.5	7	4.4	6.8	4.4	1,599
20-24 Years	6,923	9.6	6,897	26	3.8	16	2.3	6.1	5.3	6,861
25-29 Years	15,356	21.3	15,305	51	3.3	28	1.8	5.1	3.6	15,191
30-34 Years	26,126	36.3	26,039	87	3.3	49	1.9	5.2	3.8	25,698
35-39 Years	17,903	24.9	17,817	86	4.8	30	1.7	6.5	4.8	17,473
40-44 Years	3,850	5.3	3,826	24	6.2	13	3.4	9.6	5.7	3,700
45 Years and Over	212	0.3	209	3	14.2	0	0.0	14.2	14.2	184
Not Stated	3	0.0	3	0	–	0	–	–	–	3
Total	71,986	100	71,705	281	3.9	143	2.0	5.9	4.3	70,709
Singleton Births										
Under 20 Years	1,585	2.3	1,581	4	2.5	7	4.4	6.9	4.4	1,585
20-24 Years	6,797	9.8	6,773	24	3.5	15	2.2	5.7	5.0	6,797
25-29 Years	15,026	21.6	14,977	49	3.3	27	1.8	5.1	3.5	15,026
30-34 Years	25,271	36.4	25,186	85	3.4	40	1.6	4.9	3.5	25,271
35-39 Years	17,056	24.6	16,979	77	4.5	22	1.3	5.8	4.4	17,056
40-44 Years	3,556	5.1	3,534	22	6.2	11	3.1	9.3	5.4	3,556
45 Years and Over	158	0.2	155	3	19.0	0	0.0	19.0	19.0	158
Not Stated	3	0.0	3	0	–	0	–	–	–	3
Total	69,452	100	69,188	264	3.8	122	1.8	5.6	4.0	69,452
Multiple Births										
Under 20 Years	28	1.1	28	0	–	0	–	–	–	14
20-24 Years	126	5.0	124	2	15.9	1	8.1	23.8	23.8	64
25-29 Years	330	13.0	328	2	6.1	1	3.0	9.1	9.1	165
30-34 Years	855	33.7	853	2	2.3	9	10.6	12.9	11.7	427
35-39 Years	847	33.4	838	9	10.6	8	9.5	20.1	13.1	417
40-44 Years	294	11.6	292	2	6.8	2	6.8	13.6	10.2	144
45 Years and Over	54	2.1	54	0	–	0	–	–	–	26
Not Stated	0	0.0	0	0	–	0	–	–	–	0
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

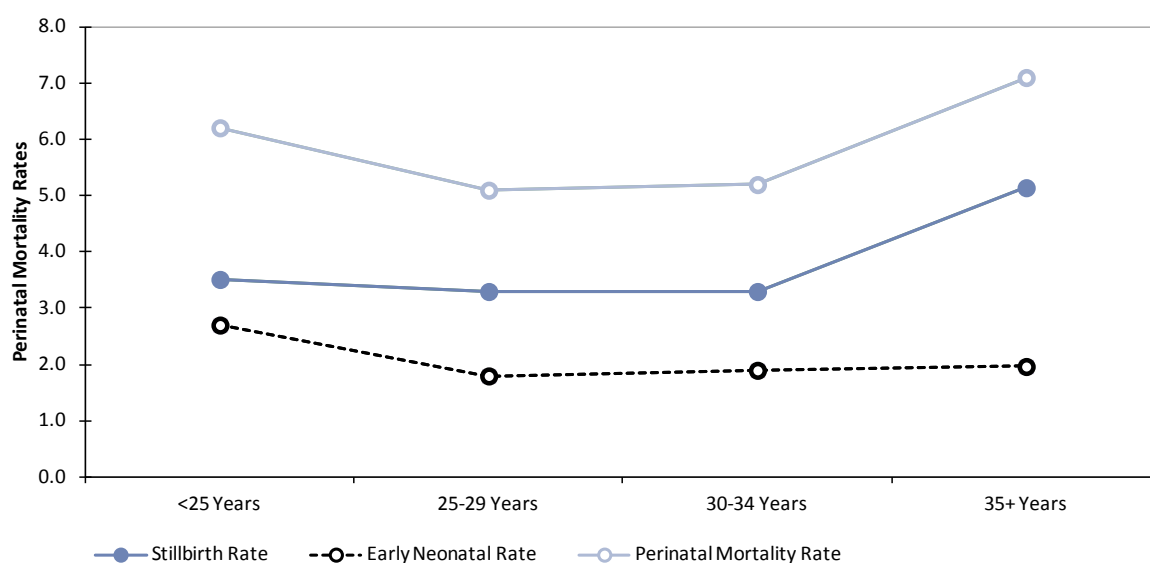
Notes: Percentage column is subject to rounding.

* Rates are calculated 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 3.1 presents perinatal mortality rates.

- The perinatal mortality rate is highest for mothers aged 35 years and older, with a rate of 7.1 per 1,000 live births and stillbirths, while the lowest perinatal mortality rate was recorded for the 25 to 29 year age group (5.1 per 1,000 live births and stillbirths).
- At 5.1 per 1,000 live births and stillbirths the highest stillbirth rate was recorded for mothers aged 35 years and older, while the lowest stillbirth rate was recorded for the 25 to 29 and 30 to 34 year age groups (3.3 per 1,000 live births and stillbirths).
- At 2.7 per 1,000 live births the highest early neonatal rate was recorded for mothers aged less than 25 years, while the lowest early neonatal rate was recorded for mothers aged 25 to 29 years (1.8 per 1,000 live births).

FIGURE 3.1
Age-Specific Stillbirth, Early Neonatal and Perinatal Mortality Rates



Note: See Table 3.1 for data.

MOTHER'S MARITAL STATUS

Table 3.2 presents data on mother's marital status.

- Close to two-thirds of 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
Total Births										
Married	46,037	64.0	45,863	174	3.8	89	1.9	5.7	4.0	45,088
Single	24,724	34.3	24,627	97	3.9	50	2.0	5.9	4.7	24,418
Widowed	87	0.1	86	1	11.5	0	–	11.5	–	87
Separated	654	0.9	650	4	6.1	3	4.6	10.7	4.6	643
Divorced	436	0.6	431	5	11.5	1	2.3	13.8	6.9	427
Not Stated	48	0.1	48	0	–	0	–	–	–	46
Total	71,986	100	71,705	281	3.9	143	2.0	5.9	4.3	70,709
Singleton Births										
Married	44,156	63.6	43,991	165	3.7	77	1.8	5.5	3.9	44,156
Single	24,114	34.7	24,025	89	3.7	42	1.7	5.4	4.3	24,114
Widowed	87	0.1	86	1	11.5	0	–	11.5	–	87
Separated	632	0.9	628	4	6.3	3	4.8	11.1	4.8	632
Divorced	418	0.6	413	5	12.0	0	–	12.0	7.2	418
Not Stated	45	0.1	45	0	–	0	–	–	–	45
Total	69,452	100	69,188	264	3.8	122	1.8	5.6	4.0	69,452
Multiple Births										
Married	1,881	74.2	1,872	9	4.8	12	6.4	11.2	8.5	932
Single	610	24.1	602	8	13.1	8	13.3	26.2	23.0	304
Widowed	0	0.0	0	0	–	0	–	–	–	0
Separated	22	0.9	22	0	–	0	–	–	–	11
Divorced	18	0.7	18	0	–	1	55.6	55.6	–	9
Not Stated	3	0.1	3	0	–	0	–	–	–	1
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

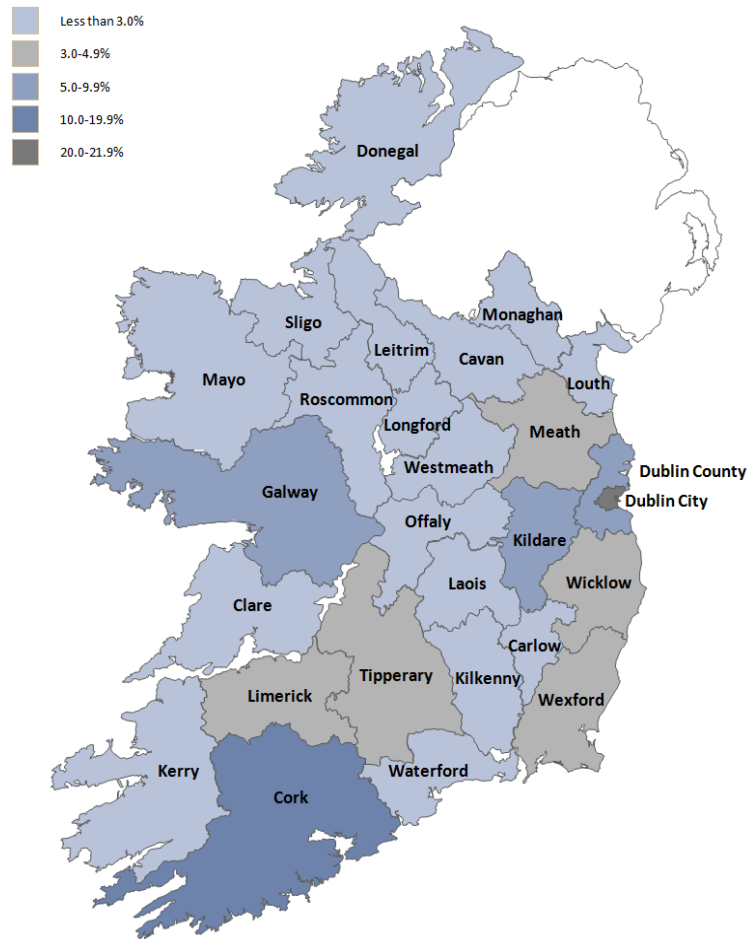
Notes: Percentage column is subject to rounding.

- * Rates are calculated 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.

MOTHER'S COUNTY OF RESIDENCE

- Figure 3.2 presents the distribution of births by mother's county of residence. Over 21 per cent of births were to mothers resident in Dublin City, with less than 1 per cent of births to mothers resident in Longford or Leitrim (See Appendix E for details of county of residence classification).

FIGURE 3.2
Percentage of Births by Mother's County of Residence, Total Births



Notes: See Appendix G, Table G1 for data.
Example: 2.7 per cent of all births were to mothers resident in Louth.

SOCIO-ECONOMIC GROUP

MOTHER'S SOCIO-ECONOMIC GROUP

Table 3.3 presents data on mother's socio-economic group.

- The highest proportions of total births were to mothers whose socio-economic group was classified as either 'intermediate non-manual workers' (20.9 per cent) or 'home duties' (19.2 per cent).
- Mothers classified as 'lower professional' accounted for 16.6 per cent of total births, while mothers in the 'other non-manual workers' group accounted for a further 14.0 per cent of total births.
- Where rates are calculated on more than 20 observations, the highest perinatal mortality rate of 6.7 per 1,000 live births and stillbirths was reported for mothers in the socio-economic group of 'home duties' (see Figure 3.3).
- The lowest perinatal mortality rate was recorded for mothers in the 'other non-manual workers' socio-economic group (5.3 per 1,000 live births and stillbirths), while a perinatal mortality rate of 5.5 per 1,000 live births and stillbirths was recorded for mothers in the 'higher professional' socio-economic group.

TABLE 3.3

Mother's Socio-economic Group: 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
Total Births										
Farmers & Farm Managers	76	0.1	76	0	–	0	–	–	–	76
Other Agricultural Occupations & Fishermen	109	0.2	109	0	–	0	–	–	–	108
Higher Professional	4,943	6.9	4,928	15	3.0	12	2.4	5.5	4.1	4,831
Lower Professional	11,982	16.6	11,927	55	4.6	22	1.8	6.4	4.4	11,757
Employers & Managers	5,228	7.3	5,206	22	4.2	10	1.9	6.1	4.8	5,099
Salaried Employees	1,000	1.4	999	1	1.0	3	3.0	4.0	2.0	978
Intermediate Non-Manual Workers	15,050	20.9	14,990	60	4.0	27	1.8	5.8	4.1	14,768
Other Non-Manual Workers	10,077	14.0	10,043	34	3.4	19	1.9	5.3	4.0	9,933
Skilled Manual Workers	1,001	1.4	999	2	2.0	4	4.0	6.0	5.0	986
Semi-Skilled Manual Workers	2,209	3.1	2,200	9	4.1	1	0.5	4.5	3.6	2,172
Unskilled Manual Workers	11	0.0	11	0	–	0	–	–	–	10
Unemployed	3,265	4.5	3,251	14	4.3	8	2.5	6.7	5.2	3,231
Not Classifiable	2,949	4.1	2,943	6	2.0	5	1.7	3.7	3.1	2,906
Home Duties	13,793	19.2	13,731	62	4.5	31	2.3	6.7	4.9	13,566
Not Stated	293	0.4	292	1	3.4	1	3.4	6.8	6.8	288
Total	71,986	100	71,705	281	3.9	143	2.0	5.9	4.3	70,709
Singleton Births										
Farmers & Farm Managers	76	0.1	76	0	–	0	–	–	–	76
Other Agricultural Occupations & Fishermen	107	0.2	107	0	–	0	–	–	–	107
Higher Professional	4,722	6.8	4,708	14	3.0	11	2.3	5.3	3.8	4,722
Lower Professional	11,540	16.6	11,488	52	4.5	17	1.5	6.0	4.1	11,540
Employers & Managers	4,977	7.2	4,957	20	4.0	6	1.2	5.2	4.0	4,977
Salaried Employees	956	1.4	955	1	1.0	3	3.1	4.2	2.1	956
Intermediate Non-Manual Workers	14,492	20.9	14,440	52	3.6	21	1.5	5.0	3.5	14,492
Other Non-Manual Workers	9,787	14.1	9,755	32	3.3	18	1.8	5.1	3.8	9,787
Skilled Manual Workers	970	1.4	968	2	2.1	4	4.1	6.2	5.2	970
Semi-Skilled Manual Workers	2,133	3.1	2,124	9	4.2	1	0.5	4.7	3.8	2,133
Unskilled Manual Workers	9	0.0	9	0	–	0	–	–	–	9
Unemployed	3,195	4.6	3,182	13	4.1	8	2.5	6.6	5.0	3,195
Not Classifiable	2,861	4.1	2,855	6	2.1	5	1.8	3.8	3.1	2,861
Home Duties	13,343	19.2	13,281	62	4.6	27	2.0	6.7	4.8	13,343
Not Stated	284	0.4	283	1	3.5	1	3.5	7.0	7.0	284
Total	69,452	100	69,188	264	3.8	122	1.8	5.6	4.0	69,452
Multiple Births										
Farmers & Farm Managers	0	0.0	0	0	–	0	–	–	–	0
Other Agricultural Occupations & Fishermen	2	0.1	2	0	–	0	–	–	–	1
Higher Professional	221	8.7	220	1	4.5	1	4.5	9.0	9.0	109
Lower Professional	442	17.4	439	3	6.8	5	11.4	18.1	13.6	217
Employers & Managers	251	9.9	249	2	8.0	4	16.1	23.9	20.0	122
Salaried Employees	44	1.7	44	0	–	0	–	–	–	22
Intermediate Non-Manual Workers	558	22.0	550	8	14.3	6	10.9	25.1	18.1	276
Other Non-Manual Workers	290	11.4	288	2	6.9	1	3.5	10.3	10.3	146
Skilled Manual Workers	31	1.2	31	0	–	0	–	–	–	16
Semi-Skilled Manual Workers	76	3.0	76	0	–	0	–	–	–	39
Unskilled Manual Workers	2	0.1	2	0	–	0	–	–	–	1
Unemployed	70	2.8	69	1	14.3	0	–	14.3	14.3	36
Not Classifiable	88	3.5	88	0	–	0	–	–	–	45
Home Duties	450	17.8	450	0	–	4	8.9	8.9	6.7	223
Not Stated	9	0.4	9	0	–	0	–	–	–	4
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

Notes: Percentage column is subject to rounding.

* Rates are calculated 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 socio-economic group.

FIGURE 3.3
Perinatal Mortality Rates by Mother's Socio-economic Group



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

FATHER'S SOCIO-ECONOMIC GROUP

Father's details are only required for registration purposes where mother's marital status is recorded as 'married'. As a result, there is a proportion of records for which information is incomplete; these are assigned to the category 'not applicable'. This category is combined with 'not stated' for the purposes of presenting data on father's socio-economic group in this report. The data presented in the following table reports father's socio-economic group where occupation was recorded, regardless of mother's marital status. 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 socio-economic group.

- 19 per cent of total births were to fathers whose socio-economic group was classified as 'skilled manual workers'.
- Fathers classified as 'other non-manual workers' accounted for 9.3 per cent of total births.
- Where rates are calculated on more than 20 observations, the socio-economic groups recording the highest perinatal mortality rates were 'unemployed' which recorded a perinatal mortality rate of 8.4 per 1,000 live births and stillbirths, and 'higher professional' which recorded a perinatal mortality rate of 6.6 per 1,000 live births and stillbirths (see Figure 3.4).
- The lowest perinatal mortality rates were recorded for 'employers and managers' at 4.3 per 1,000 live births and stillbirths and 'other non-manual workers' at 5.1 per 1,000 live births and stillbirths.

TABLE 3.4

Father's Socio-economic Group: 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
Total Births										
Farmers & Farm Managers	2,062	2.9	2,054	8	3.9	5	2.4	6.3	3.9	2,028
Other Agricultural Occupations & Fishermen	612	0.9	610	2	3.3	0	–	3.3	3.3	594
Higher Professional	5,161	7.2	5,140	21	4.1	13	2.5	6.6	5.4	5,037
Lower Professional	4,274	5.9	4,266	8	1.9	5	1.2	3.0	2.6	4,195
Employers & Managers	5,093	7.1	5,079	14	2.7	8	1.6	4.3	2.6	4,972
Salaried Employees	1,138	1.6	1,132	6	5.3	0	–	5.3	2.6	1,121
Intermediate Non-Manual Workers	6,023	8.4	6,003	20	3.3	13	2.2	5.5	3.8	5,917
Other Non-Manual Workers	6,663	9.3	6,643	20	3.0	14	2.1	5.1	3.9	6,539
Skilled Manual Workers	13,686	19.0	13,634	52	3.8	25	1.8	5.6	4.2	13,421
Semi-Skilled Manual Workers	3,368	4.7	3,357	11	3.3	7	2.1	5.3	3.9	3,305
Unskilled Manual Workers	345	0.5	343	2	5.8	1	2.9	8.7	2.9	342
Unemployed	3,441	4.8	3,420	21	6.1	8	2.3	8.4	6.4	3,405
Not Classifiable	1,843	2.6	1,837	6	3.3	2	1.1	4.3	2.7	1,812
Home Duties	134	0.2	132	2	14.9	0	–	14.9	7.5	129
Not Stated/Not Applicable	18,143	25.2	18,055	88	4.9	42	2.3	7.2	5.2	17,892
Total	71,986	100	71,705	281	3.9	143	2.0	5.9	4.3	70,709
Singleton Births										
Farmers & Farm Managers	1,993	2.9	1,985	8	4.0	5	2.5	6.5	4.0	1,993
Other Agricultural Occupations & Fishermen	576	0.8	574	2	3.5	0	–	3.5	3.5	576
Higher Professional	4,916	7.1	4,897	19	3.9	10	2.0	5.9	4.9	4,916
Lower Professional	4,118	5.9	4,110	8	1.9	5	1.2	3.2	2.7	4,118
Employers & Managers	4,854	7.0	4,841	13	2.7	4	0.8	3.5	1.7	4,854
Salaried Employees	1,105	1.6	1,099	6	5.4	0	–	5.4	2.7	1,105
Intermediate Non-Manual Workers	5,815	8.4	5,798	17	2.9	12	2.1	5.0	3.4	5,815
Other Non-Manual Workers	6,411	9.2	6,392	19	3.0	13	2.0	5.0	3.9	6,411
Skilled Manual Workers	13,163	19.0	13,114	49	3.7	23	1.8	5.5	4.1	13,163
Semi-Skilled Manual Workers	3,245	4.7	3,234	11	3.4	4	1.2	4.6	3.4	3,245
Unskilled Manual Workers	339	0.5	337	2	5.9	1	3.0	8.8	3.0	339
Unemployed	3,370	4.9	3,349	21	6.2	8	2.4	8.6	6.5	3,370
Not Classifiable	1,781	2.6	1,776	5	2.8	2	1.1	3.9	2.2	1,781
Home Duties	124	0.2	122	2	16.1	0	–	16.1	8.1	124
Not Stated/Not Applicable	17,642	25.4	17,560	82	4.6	35	2.0	6.6	4.8	17,642
Total	69,452	100	69,188	264	3.8	122	1.8	5.6	4.0	69,452
Multiple Births										
Farmers & Farm Managers	69	2.7	69	0	–	0	–	–	–	35
Other Agricultural Occupations & Fishermen	36	1.4	36	0	–	0	–	–	–	18
Higher Professional	245	9.7	243	2	8.2	3	12.3	20.4	16.4	121
Lower Professional	156	6.2	156	0	–	0	–	–	–	77
Employers & Managers	239	9.4	238	1	4.2	4	16.8	20.9	20.9	118
Salaried Employees	33	1.3	33	0	–	0	–	–	–	16
Intermediate Non-Manual Workers	208	8.2	205	3	14.4	1	4.9	19.2	14.5	102
Other Non-Manual Workers	252	9.9	251	1	4.0	1	4.0	7.9	4.0	128
Skilled Manual Workers	523	20.6	520	3	5.7	2	3.8	9.6	7.7	258
Semi-Skilled Manual Workers	123	4.9	123	0	–	3	24.4	24.4	16.4	60
Unskilled Manual Workers	6	0.2	6	0	–	0	–	–	–	3
Unemployed	71	2.8	71	0	–	0	–	–	–	35
Not Classifiable	62	2.4	61	1	16.1	0	–	16.1	16.1	31
Home Duties	10	0.4	10	0	–	0	–	–	–	5
Not Stated/Not Applicable	501	19.8	495	6	12.0	7	14.1	25.9	20.1	250
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

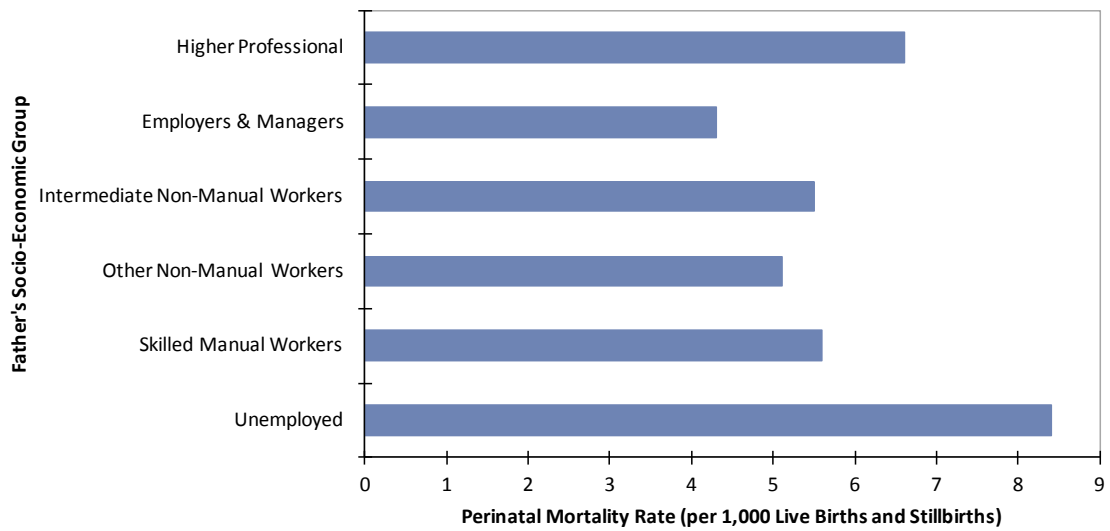
Notes:

Percentage column is subject to rounding.

* Rates are calculated 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 socio-economic group.

FIGURE 3.4
Perinatal Mortality Rate by Father's Socio-economic Group



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 EU27²⁴ at 11.5 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 Ireland (6.2 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 4.2 per 1,000 live births and stillbirths.

²⁴ EU15 to EU27 includes the following countries Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia and Romania. See Appendix F for a description of the classification system for nationality.

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
Total Births										
Ireland	54,690	76.0	54,464	226	4.1	114	2.1	6.2	4.4	53,661
UK	1,712	2.4	1,705	7	4.1	4	2.3	6.4	5.8	1,674
EU15 (excluding Ireland & UK)	1,003	1.4	999	4	4.0	1	1.0	5.0	5.0	982
EU15 to EU27	8,260	11.5	8,237	23	2.8	12	1.5	4.2	3.3	8,158
Rest of Europe	551	0.8	550	1	1.8	0	-	1.8	1.8	542
Africa	1,936	2.7	1,931	5	2.6	6	3.1	5.7	5.2	1,898
Asia	2,875	4.0	2,863	12	4.2	5	1.7	5.9	4.2	2,852
America	618	0.9	617	1	1.6	1	1.6	3.2	3.2	611
Australia	96	0.1	96	0	-	0	-	-	-	93
New Zealand and Other Oceania	36	0.1	35	1	27.8	0	-	27.8	-	36
Multi Nationality	2	0.0	2	0	-	0	-	-	-	2
Other Nationality	4	0.0	4	0	-	0	-	-	-	4
Not Stated	203	0.3	202	1	4.9	0	-	4.9	4.9	196
Total	71,986	100	71,705	281	3.9	143	2.0	5.9	4.3	70,709
Singleton Births										
Ireland	52,655	75.8	52,443	212	4.0	98	1.9	5.9	4.2	52,655
UK	1,635	2.4	1,628	7	4.3	2	1.2	5.5	4.9	1,635
EU15 (excluding Ireland & UK)	961	1.4	957	4	4.2	1	1.0	5.2	5.2	961
EU15 to EU27	8,054	11.6	8,034	20	2.5	11	1.4	3.8	2.9	8,054
Rest of Europe	534	0.8	533	1	1.9	0	-	1.9	1.9	534
Africa	1,860	2.7	1,855	5	2.7	5	2.7	5.4	4.8	1,860
Asia	2,827	4.1	2,815	12	4.2	5	1.8	6.0	4.3	2,827
America	603	0.9	602	1	1.7	0	-	1.7	1.7	603
Australia	90	0.1	90	0	-	0	-	-	-	90
New Zealand and Other Oceania	36	0.1	35	1	27.8	0	-	27.8	-	36
Multi Nationality	2	0.0	2	0	-	0	-	-	-	2
Other Nationality	4	0.0	4	0	-	0	-	-	-	4
Not Stated	191	0.3	190	1	5.2	0	-	5.2	5.2	191
Total	69,452	100	69,188	264	3.8	122	1.8	5.6	4.0	69,452
Multiple Births										
Ireland	2,035	80.3	2,021	14	6.9	16	7.9	14.7	10.9	1,006
UK	77	3.0	77	0	-	2	26.0	26.0	26.0	39
EU15 (excluding Ireland & UK)	42	1.7	42	0	-	0	-	-	-	21
EU15 to EU27	206	8.1	203	3	14.6	1	4.9	19.4	19.4	104
Rest of Europe	17	0.7	17	0	-	0	-	-	-	8
Africa	76	3.0	76	0	-	1	13.2	13.2	13.2	38
Asia	48	1.9	48	0	-	0	-	-	-	25
America	15	0.6	15	0	-	1	66.7	66.7	66.7	8
Australia	6	0.2	6	0	-	0	-	-	-	3
New Zealand and Other Oceania	0	0.0	0	0	-	0	-	-	-	0
Multi Nationality	0	0.0	0	0	-	0	-	-	-	0
Other Nationality	0	0.0	0	0	-	0	-	-	-	0
Not Stated	12	0.5	12	0	-	0	-	-	-	5
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

Notes: Percentage column is subject to rounding.

* Rates are calculated 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.

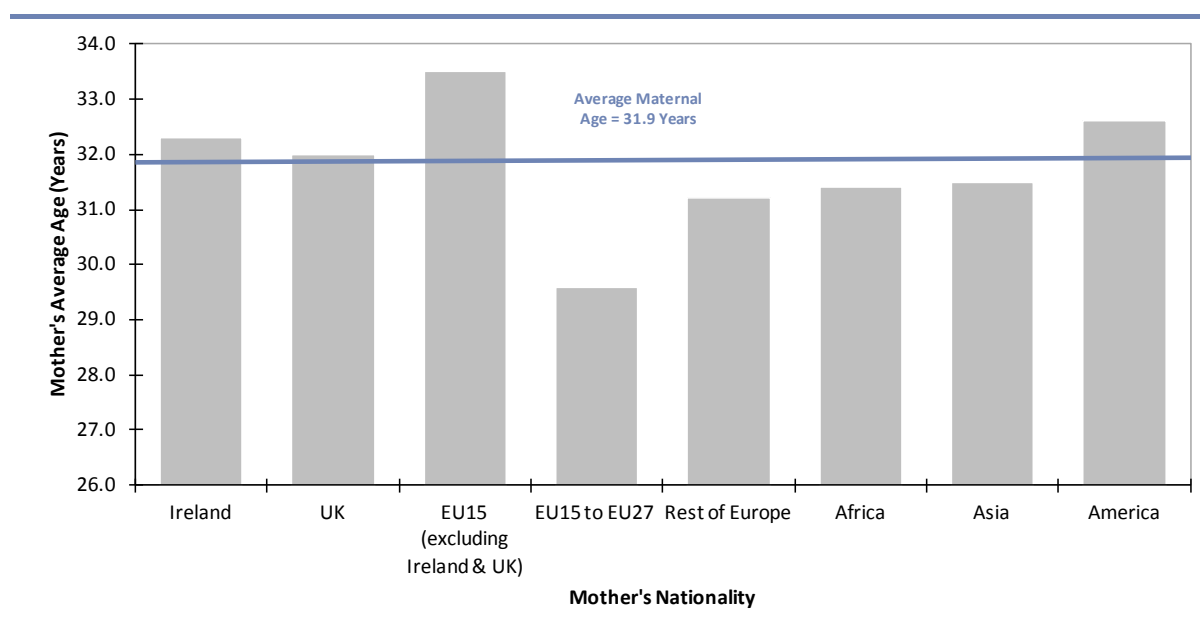
See Appendix F for a description of the classification system for nationality.

Figure 3.5 presents the average age of mother by mother's nationality for 2012.

- The average age of all mothers giving birth was 31.9 years and the average age of mothers from Ireland giving birth was slightly higher at 32.3 years.
- Mothers giving birth from the EU15 to EU27 were on average younger at 29.6 years, while mothers from the EU15 (excluding Ireland and United Kingdom) and America recorded the highest average maternal age at 33.5 years and 32.6 years respectively.

FIGURE 3.5

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



Notes: See Appendix G, Table G2 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, there is a proportion of records for which information is incomplete; these are assigned to the category 'not applicable'. This category is combined with 'not stated' for the purposes of presenting data on father's nationality in this report. The data presented in the following table reports father's nationality where recorded, regardless of mother's marital status.

Table 3.6 presents information on father's nationality.

- Irish fathers accounted for 57.5 per cent of total births.
- Births to fathers from the EU15 to EU27 and Asia accounted for 7.5 and 3.1 per cent of total births respectively.

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
Total Births										
Ireland	41,374	57.5	41,217	157	3.8	81	2.0	5.8	4.1	40,546
UK	1,409	2.0	1,404	5	3.5	3	2.1	5.7	4.3	1,386
EU15 (excluding Ireland & UK)	667	0.9	665	2	3.0	0	–	3.0	3.0	651
EU15 to EU27	5,411	7.5	5,398	13	2.4	7	1.3	3.7	2.6	5,345
Rest of Europe	408	0.6	407	1	2.5	1	2.5	4.9	4.9	403
Africa	1,395	1.9	1,388	7	5.0	7	5.0	10.0	7.9	1,366
Asia	2,231	3.1	2,224	7	3.1	3	1.3	4.5	2.7	2,215
America	398	0.6	398	0	–	0	–	–	–	391
Australia	86	0.1	86	0	–	0	–	–	–	83
New Zealand and Other Oceania	78	0.1	77	1	12.8	0	–	12.8	–	78
Multi Nationality	5	0.0	5	0	–	1	200.0	200.0	200.0	5
Not Stated/ Not Applicable	18,524	25.7	18,436	88	4.8	40	2.2	6.9	5.2	18,240
Total	71,986	100	71,705	281	3.9	143	2.0	5.9	4.3	70,709
Singleton Births										
Ireland	39,738	57.2	39,590	148	3.7	70	1.8	5.5	3.9	39,738
UK	1,364	2.0	1,359	5	3.7	1	0.7	4.4	2.9	1,364
EU15 (excluding Ireland & UK)	635	0.9	633	2	3.1	0	–	3.1	3.1	635
EU15 to EU27	5,276	7.6	5,263	13	2.5	7	1.3	3.8	2.7	5,276
Rest of Europe	398	0.6	397	1	2.5	1	2.5	5.0	5.0	398
Africa	1,337	1.9	1,330	7	5.2	6	4.5	9.7	7.5	1,337
Asia	2,198	3.2	2,191	7	3.2	3	1.4	4.5	2.7	2,198
America	384	0.6	384	0	–	0	–	–	–	384
Australia	80	0.1	80	0	–	0	–	–	–	80
New Zealand and Other Oceania	78	0.1	77	1	12.8	0	–	12.8	–	78
Multi Nationality	5	0.0	5	0	–	1	200.0	200.0	200.0	5
Not Stated/ Not Applicable	17,959	25.9	17,879	80	4.5	33	1.8	6.3	4.7	17,959
Total	69,452	100	69,188	264	3.8	122	1.8	5.6	4.0	69,452
Multiple Births										
Ireland	1,636	64.6	1,627	9	5.5	11	6.8	12.2	9.2	808
UK	45	1.8	45	0	–	2	44.4	44.4	44.4	22
EU15 (excluding Ireland & UK)	32	1.3	32	0	–	0	–	–	–	16
EU15 to EU27	135	5.3	135	0	–	0	–	–	–	69
Rest of Europe	10	0.4	10	0	–	0	–	–	–	5
Africa	58	2.3	58	0	–	1	17.2	17.2	17.2	29
Asia	33	1.3	33	0	–	0	–	–	–	17
America	14	0.6	14	0	–	0	–	–	–	7
Australia	6	0.2	6	0	–	0	–	–	–	3
New Zealand and Other Oceania	0	0.0	0	0	–	0	–	–	–	0
Multi Nationality	0	0.0	0	0	–	0	–	–	–	0
Not Stated/ Not Applicable	565	22.3	557	8	14.2	7	12.6	26.5	21.4	281
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

Notes: Percentage column is subject to rounding.

* Rates are calculated 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.

MATERNAL PARITY

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

- Primiparous mothers accounted for 39.0 per cent of all maternities, with 60.9 per cent of maternities having one or more previous live births or stillbirths.

TABLE 3.7

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

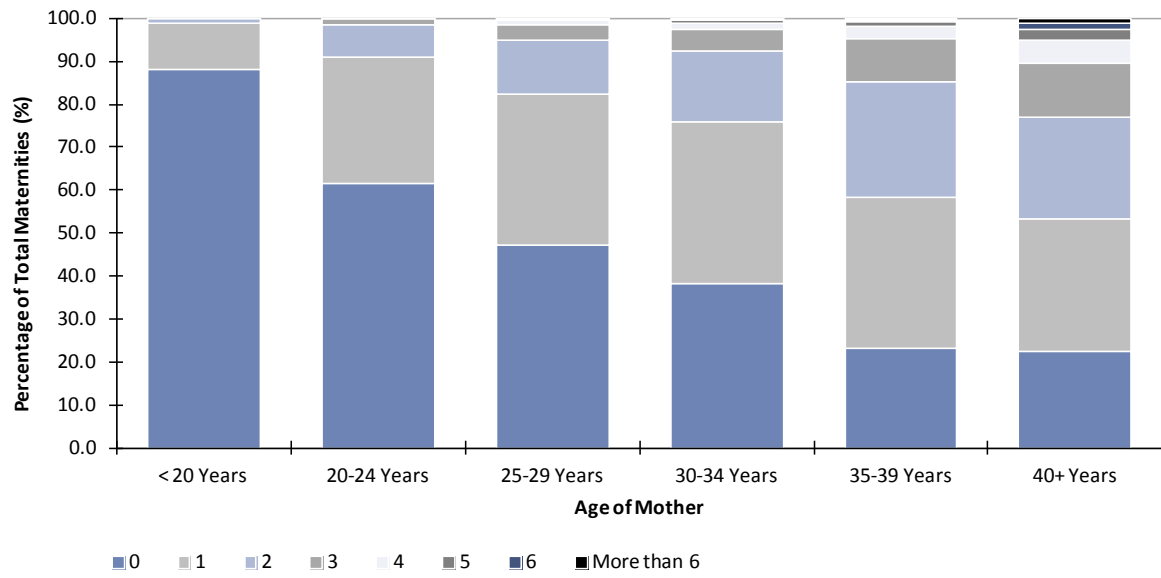
	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
Total Births										
0	28,169	39.1	28,051	118	4.2	64	2.3	6.5	5.0	27,607
1	24,952	34.7	24,874	78	3.1	41	1.6	4.8	3.3	24,541
2	12,394	17.2	12,349	45	3.6	22	1.8	5.4	3.7	12,195
3	4,227	5.9	4,206	21	5.0	9	2.1	7.1	4.5	4,164
4	1,353	1.9	1,339	14	10.3	6	4.5	14.8	12.6	1,325
5	516	0.7	513	3	5.8	0	–	5.8	5.8	509
6	179	0.2	178	1	5.6	1	5.6	11.2	11.2	175
More than 6	189	0.3	188	1	5.3	0	–	5.3	–	186
Not Stated	7	0.0	7	0	0.0	0	–	–	–	7
Total	71,986	100	71,705	281	3.9	143	2.0	5.9	4.3	70,709
Singleton Births										
0	27,054	39.0	26,948	106	3.9	55	2.0	6.0	4.6	27,054
1	24,138	34.8	24,063	75	3.1	37	1.5	4.6	3.1	24,138
2	11,999	17.3	11,955	44	3.7	15	1.3	4.9	3.4	11,999
3	4,101	5.9	4,081	20	4.9	8	2.0	6.8	4.4	4,101
4	1,297	1.9	1,283	14	10.8	6	4.7	15.4	13.1	1,297
5	502	0.7	499	3	6.0	0	–	6.0	6.0	502
6	171	0.2	170	1	5.8	1	5.9	11.7	11.7	171
More than 6	183	0.3	182	1	5.5	0	–	5.5	–	183
Not Stated	7	0.0	7	0	–	0	–	–	–	7
Total	69,452	100	69,188	264	3.8	122	1.8	5.6	4.0	69,452
Multiple Births										
0	1,115	44.0	1,103	12	10.8	9	8.2	18.8	16.2	553
1	814	32.1	811	3	3.7	4	4.9	8.6	7.4	403
2	395	15.6	394	1	2.5	7	17.8	20.3	12.8	196
3	126	5.0	125	1	7.9	1	8.0	15.9	8.0	63
4	56	2.2	56	0	–	0	–	–	–	28
5	14	0.6	14	0	–	0	–	–	–	7
6	8	0.3	8	0	–	0	–	–	–	4
More than 6	6	0.2	6	0	–	0	–	–	–	3
Not Stated	0	0.0	0	0	–	0	–	–	–	0
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

Notes: Percentage column is subject to rounding.

* Rates are calculated 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.

- Of mothers aged less than 20 years, 88.1 per cent gave birth for the first time, with only 10.8 per cent delivering for the second time and 1.1 per cent delivering a third time or more (see Figure 3.6).
- For women aged 30 to 34 years, 38.2 per cent gave birth for the first time and 37.9 per cent delivered for the second time.

FIGURE 3.6
Parity by Age of Mother, Total Maternities



Note: See Appendix G, Table G3 for data.

NUMBER OF PREVIOUS STILLBIRTHS

In 2012, 98.5 per cent of multiparous women giving birth recorded no previous stillbirths while 1.5 per cent recorded one 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
Total Births										
0	43,161	98.5	43,011	150	3.5	75	1.7	5.2	3.6	42,460
1	610	1.4	599	11	18.0	3	5.0	23.0	14.9	596
2	29	0.1	28	1	34.5	0	–	34.5	34.5	29
3 and over	10	0.0	9	1	100.0	1	111.1	200.0	111.1	10
Total	43,810	100	43,647	163	3.7	79	1.8	5.5	3.8	43,095
Singleton Births										
0	41,770	98.5	41,624	146	3.5	64	1.5	5.0	3.5	41,770
1	582	1.4	572	10	17.2	2	3.5	20.6	13.8	582
2	29	0.1	28	1	34.5	0	–	34.5	34.5	29
3 and over	10	0.0	9	1	100.0	1	111.1	200.0	111.1	10
Total	42,391	100	42,233	158	3.7	67	1.6	5.3	3.7	42,391
Multiple Births										
0	1,391	98.0	1,387	4	2.9	11	7.9	10.8	7.9	690
1	28	2.0	27	1	35.7	1	37.0	71.4	37.0	14
2	0	0.0	0	0	–	0	–	–	–	0
3 and over	0	0.0	0	0	–	0	–	–	–	0
Total	1,419	100	1,414	5	3.5	12	8.5	12.0	8.5	704

Notes: Percentage column is subject to rounding.

- * Rates are calculated 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 7 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 52 per cent of all multiparous mothers had their previous birth within the last three years.
- Over 15 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
Total Births										
1 year or less	540	1.2	539	1	1.9	9	16.7	18.5	7.5	527
>1 year to 2 years	10,538	24.1	10,492	46	4.4	18	1.7	6.1	4.2	10,354
>2 years to 3 years	11,591	26.5	11,554	37	3.2	18	1.6	4.7	3.2	11,411
>3 years to 4 years	7,126	16.3	7,097	29	4.1	6	0.8	4.9	3.8	7,017
>4 years to 5 years	4,329	9.9	4,316	13	3.0	10	2.3	5.3	4.2	4,266
>5 years to 6 years	2,640	6.0	2,634	6	2.3	3	1.1	3.4	2.3	2,601
More than 6 years	6,734	15.4	6,706	28	4.2	15	2.2	6.4	4.5	6,612
Not Stated	312	0.7	309	3	9.6	0	–	9.6	6.4	307
Total	43,810	100	43,647	163	3.7	79	1.8	5.5	3.8	43,095
Singleton Births										
1 year or less	515	1.2	514	1	1.9	9	17.5	19.4	7.9	515
>1 year to 2 years	10,173	24.0	10,129	44	4.3	15	1.5	5.8	4.0	10,173
>2 years to 3 years	11,234	26.5	11,197	37	3.3	17	1.5	4.8	3.3	11,234
>3 years to 4 years	6,908	16.3	6,881	27	3.9	5	0.7	4.6	3.5	6,908
>4 years to 5 years	4,205	9.9	4,192	13	3.1	9	2.1	5.2	4.0	4,205
>5 years to 6 years	2,561	6.0	2,555	6	2.3	3	1.2	3.5	2.3	2,561
More than 6 years	6,493	15.3	6,466	27	4.2	9	1.4	5.5	3.9	6,493
Not Stated	302	0.7	299	3	9.9	0	–	9.9	6.6	302
Total	42,391	100	42,233	158	3.7	67	1.6	5.3	3.7	42,391
Multiple Births										
1 year or less	25	1.8	25	0	–	0	–	–	–	12
>1 year to 2 years	365	25.7	363	2	5.5	3	8.3	13.7	8.3	181
>2 years to 3 years	357	25.2	357	0	–	1	2.8	2.8	–	177
>3 years to 4 years	218	15.4	216	2	9.2	1	4.6	13.8	13.8	109
>4 years to 5 years	124	8.7	124	0	–	1	8.1	8.1	8.1	61
>5 years to 6 years	79	5.6	79	0	–	0	–	–	–	40
More than 6 years	241	17.0	240	1	4.1	6	25.0	29.0	20.9	119
Not Stated	10	0.7	10	0	–	0	–	–	–	5
Total	1,419	100	1,414	5	3.5	12	8.5	12.0	8.5	704

Notes: Percentage column is subject to rounding.

- * Rates are calculated 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 7 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.²⁵

- The average birthweight for live births was 3,502.0 grams for singletons, 2,420.2 grams for multiples, and 3,464.0 grams for total live births.
- The average birthweight of live births was 3,524.4 grams for males compared to 3,399.7 grams for females.
- 67.6 per cent of stillbirths were classified as low birthweight, with the average birthweight for total stillbirths at 1,944.4 grams.

Table 3.10 presents data on birthweight.

- The percentage of total live births classified as low birthweight was 5.4 per cent (3.8 per cent of singletons and 49.9 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 8.3 per cent for multiple births (see Figure 3.7).
- 92.1 per cent of total live births were in the healthy birthweight category weighing between 2,500 and 4,499 grams (see Figure 3.8).
- A marginally smaller proportion of male live births were low birthweight 5.0 per cent compared with female live births 5.8 per cent (see Figure 3.9).

²⁵ EURO-PERISTAT Project with SCPE and EUROCAT. *European Perinatal Health Report. The health and care of pregnant women and babies in Europe in 2010*. May 2013. Available www.europeristat.com

TABLE 3.10

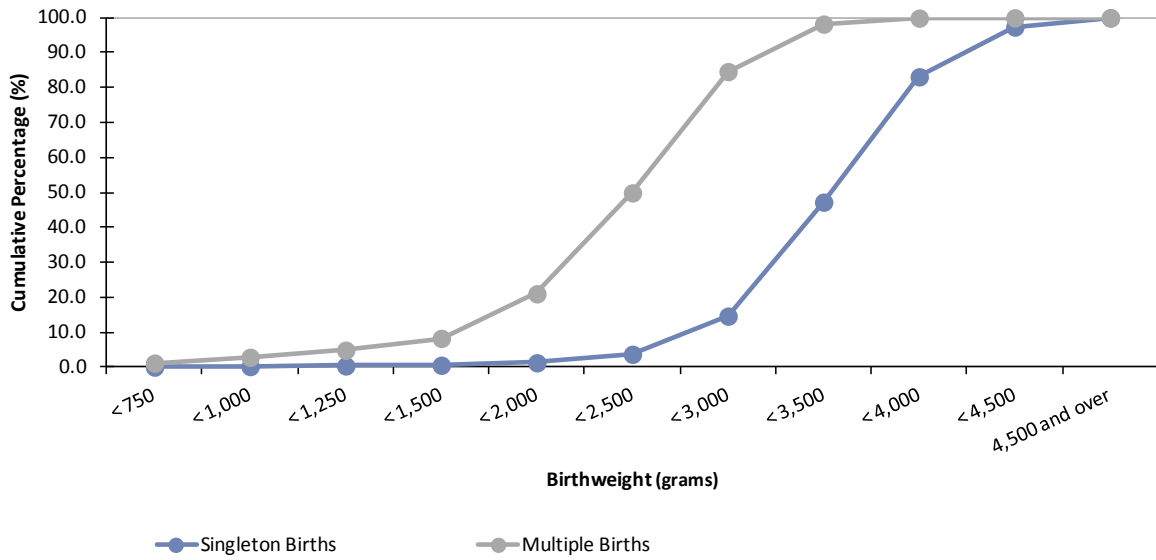
Birthweight (grams): Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
Total Births										
500-749	150	0.2	100	50	333.3	27	270.0	513.3	474.8	131
750-999	170	0.2	144	26	152.9	22	152.8	282.4	222.9	148
1000-1249	202	0.3	177	25	123.8	10	56.5	173.3	121.1	174
1250-1499	233	0.3	216	17	73.0	5	23.1	94.4	58.0	182
1500-1999	848	1.2	810	38	44.8	18	22.2	66.0	38.8	674
2000-2499	2,443	3.4	2,409	34	13.9	21	8.7	22.5	14.4	2,068
2500-2999	8,453	11.7	8,425	28	3.3	21	2.5	5.8	3.8	8,010
3000-3499	22,933	31.9	22,903	30	1.3	6	0.3	1.6	1.4	22,791
3500-3999	24,884	34.6	24,856	28	1.1	8	0.3	1.4	1.3	24,862
4000-4499	9,856	13.7	9,851	5	0.5	5	0.5	1.0	0.9	9,855
4500 and Over	1,814	2.5	1,814	0	-	0	-	-	-	1,814
Total	71,986	100	71,705	281	3.9	143	2.0	5.9	4.3	70,709
Singleton Births										
500-749	113	0.2	69	44	389.4	18	260.9	548.7	500.0	113
750-999	128	0.2	102	26	203.1	17	166.7	335.9	273.5	128
1000-1249	148	0.2	126	22	148.6	8	63.5	202.7	138.7	148
1250-1499	146	0.2	131	15	102.7	5	38.2	137.0	80.3	146
1500-1999	523	0.8	489	34	65.0	16	32.7	95.6	57.8	523
2000-2499	1,716	2.5	1,682	34	19.8	19	11.3	30.9	19.5	1,716
2500-2999	7,578	10.9	7,552	26	3.4	20	2.6	6.1	4.1	7,578
3000-3499	22,591	32.5	22,561	30	1.3	6	0.3	1.6	1.4	22,591
3500-3999	24,841	35.8	24,813	28	1.1	8	0.3	1.4	1.3	24,841
4000-4499	9,854	14.2	9,849	5	0.5	5	0.5	1.0	0.9	9,854
4500 and Over	1,814	2.6	1,814	0	-	0	-	-	-	1,814
Total	69,452	100	69,188	264	3.8	122	1.8	5.6	4.0	69,452
Multiple Births										
500-749	37	1.5	31	6	162.2	9	290.3	405.4	405.4	18
750-999	42	1.7	42	0	-	5	119.0	119.0	75.0	20
1000-1249	54	2.1	51	3	55.6	2	39.2	92.6	75.5	26
1250-1499	87	3.4	85	2	23.0	0	-	23.0	23.0	36
1500-1999	325	12.8	321	4	12.3	2	6.2	18.5	9.3	151
2000-2499	727	28.7	727	0	-	2	2.8	2.8	2.8	352
2500-2999	875	34.5	873	2	2.3	1	1.1	3.4	1.1	432
3000-3499	342	13.5	342	0	-	0	-	-	-	200
3500-3999	43	1.7	43	0	-	0	-	-	-	21
4000-4499	2	0.1	2	0	-	0	-	-	-	1
4500 and Over	0	0.0	0	0	-	0	-	-	-	0
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

Notes: Percentage column is subject to rounding.

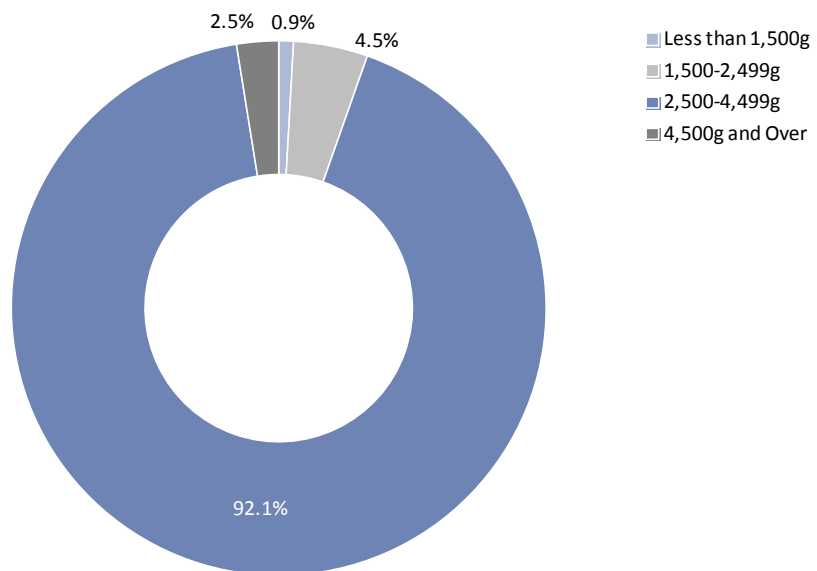
* Rates are calculated per 1,000 births. For stillbirths, perinatal deaths and adjusted perinatal deaths, rates are calculated on total live births and stillbirths. For early neonatal deaths, rates are calculated on total live births. Birthweight tables by primiparous and multiparous women are provided in Appendix G, Tables G4 and G5.

FIGURE 3.7
Birthweight: Cumulative Percentages of Total Live Births



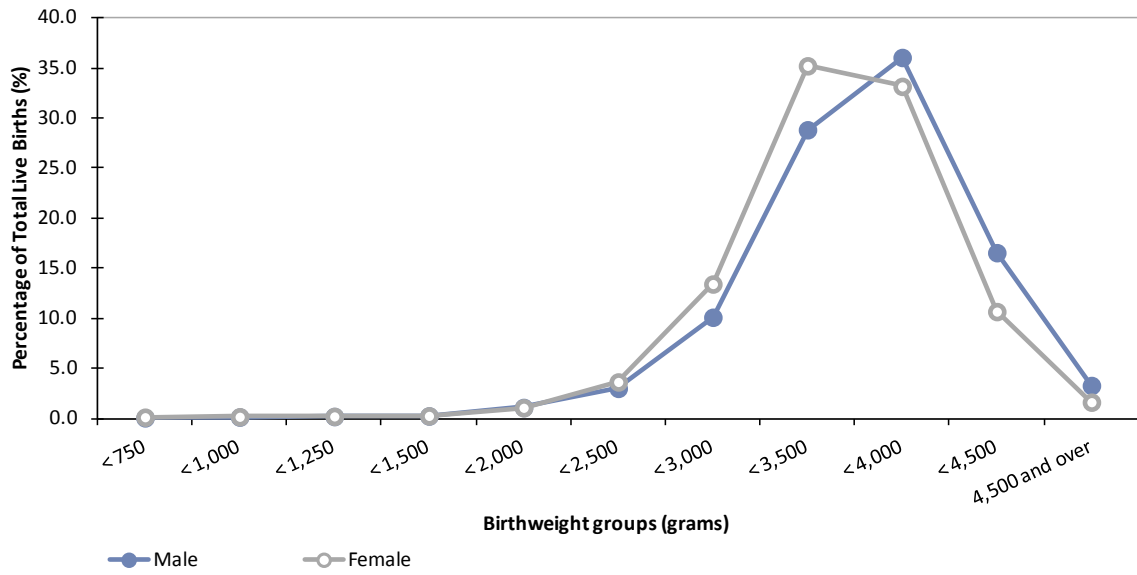
Note: See Table 3.10 for data.

FIGURE 3.8
Percentage of Births by Birthweight Groups, Total Live Births



Note: See Appendix G, Table G6 for data.

FIGURE 3.9
 Percentage Distribution for Males and Females across Birthweight Groups, Total Live Births



Note: See Appendix G, Table G7 for data.

GESTATIONAL AGE

Based on maternities, the average gestational age for total births was 39.3 weeks. Live births reported an average gestational age of 39.3 weeks and stillbirths reported an average gestational age of 32.8 weeks. The average gestational age for singleton live births was 39.4 weeks compared with 35.6 weeks for live twin births and 31.8 weeks for higher-order multiple live births.

Table 3.11 presents data on mother's gestational age.

- 90.9 per cent of all babies were born at term (37 to 41 weeks).
- Preterm birth (born before 37 weeks) occurred in 67.3 per cent of stillbirths and 6.0 per cent of live births.

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
Total Births										
Less than 28	293	0.4	234	59	201.4	47	200.9	361.8	329.7	261
28-31	523	0.7	469	54	103.3	20	42.6	141.5	96.6	436
32-36	3,640	5.1	3,564	76	20.9	38	10.7	31.3	19.7	3,079
37-41	65,468	90.9	65,376	92	1.4	37	0.6	2.0	1.5	64,871
42 and Over	2,057	2.9	2,057	0	-	1	0.5	0.5	0.5	2,057
Not Stated	5	0.0	5	0	-	0	-	-	-	5
Total	71,986	100	71,705	281	3.9	143	2.0	5.9	4.3	70,709
Singleton Births										
Less than 28	226	0.3	171	55	243.4	33	193.0	389.4	352.1	226
28-31	354	0.5	306	48	135.6	19	62.1	189.3	127.7	354
32-36	2,542	3.7	2,473	69	27.1	34	13.7	40.5	26.0	2,542
37-41	64,268	92.5	64,176	92	1.4	35	0.5	2.0	1.5	64,268
42 and Over	2,057	3.0	2,057	0	-	1	0.5	0.5	0.5	2,057
Not Stated	5	0.0	5	0	-	0	-	-	-	5
Total	69,452	100	69,188	264	3.8	122	1.8	5.6	4.0	69,452
Multiple Births										
Less than 28	67	2.6	63	4	59.7	14	222.2	268.7	257.6	35
28-31	169	6.7	163	6	35.5	1	6.1	41.4	35.7	82
32-36	1,098	43.3	1,091	7	6.4	4	3.7	10.0	5.5	537
37-41	1,200	47.4	1,200	0	-	2	1.7	1.7	0.8	603
42 and Over	0	0.0	0	0	-	0	-	-	-	0
Not Stated	0	0.0	0	0	-	0	-	-	-	0
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

Notes: Percentage column is subject to rounding.

* Rates are calculated 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 G8 and G9.

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 December (7.9 per cent) and the highest occurring in July (8.8 per cent).
- July recorded the highest number of singleton births and multiple births, 8.8 per cent and the 10.0 per cent respectively (see Figure 3.10).

TABLE 3.12

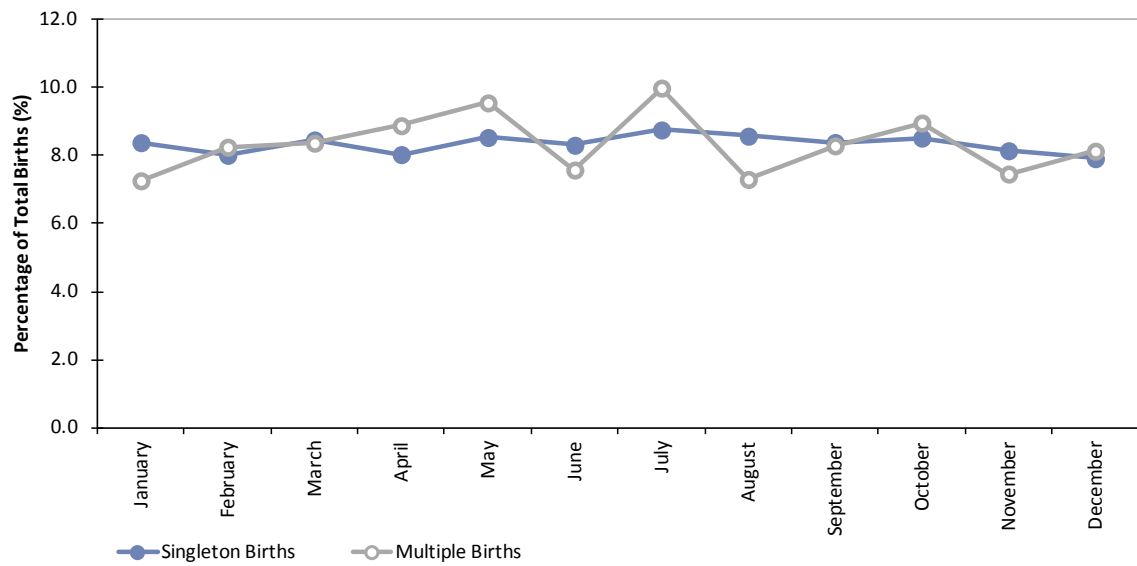
Month of Birth: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
Total Births										
January	6,005	8.3	5,986	19	3.2	19	3.2	6.3	4.2	5,913
February	5,772	8.0	5,754	18	3.1	9	1.6	4.7	3.0	5,665
March	6,088	8.5	6,061	27	4.4	20	3.3	7.7	5.9	5,981
April	5,802	8.1	5,779	23	4.0	7	1.2	5.2	3.3	5,690
May	6,168	8.6	6,137	31	5.0	13	2.1	7.1	5.7	6,044
June	5,960	8.3	5,930	30	5.0	12	2.0	7.0	6.0	5,864
July	6,333	8.8	6,313	20	3.2	16	2.5	5.7	4.4	6,206
August	6,138	8.5	6,109	29	4.7	9	1.5	6.2	3.6	6,045
September	6,034	8.4	6,014	20	3.3	9	1.5	4.8	3.0	5,928
October	6,141	8.5	6,118	23	3.7	9	1.5	5.2	4.6	6,025
November	5,845	8.1	5,821	24	4.1	13	2.2	6.3	4.8	5,751
December	5,700	7.9	5,683	17	3.0	7	1.2	4.2	3.0	5,597
Total	71,986	100	71,705	281	3.9	143	2.0	5.9	4.3	70,709
Singleton Births										
January	5,821	8.4	5,802	19	3.3	18	3.1	6.4	4.1	5,821
February	5,563	8.0	5,546	17	3.1	8	1.4	4.5	2.7	5,563
March	5,876	8.5	5,850	26	4.4	18	3.1	7.5	5.8	5,876
April	5,577	8.0	5,556	21	3.8	5	0.9	4.7	2.7	5,577
May	5,926	8.5	5,896	30	5.1	10	1.7	6.7	5.2	5,926
June	5,768	8.3	5,740	28	4.9	10	1.7	6.6	5.6	5,768
July	6,080	8.8	6,061	19	3.1	10	1.6	4.8	3.8	6,080
August	5,953	8.6	5,928	25	4.2	8	1.3	5.5	3.0	5,953
September	5,824	8.4	5,805	19	3.3	9	1.6	4.8	3.1	5,824
October	5,914	8.5	5,892	22	3.7	8	1.4	5.1	4.6	5,914
November	5,656	8.1	5,633	23	4.1	13	2.3	6.4	4.8	5,656
December	5,494	7.9	5,479	15	2.7	5	0.9	3.6	2.7	5,494
Total	69,452	100	69,188	264	3.8	122	1.8	5.6	4.0	69,452
Multiple Births										
January	184	7.3	184	0	-	1	5.4	5.4	5.4	92
February	209	8.2	208	1	4.8	1	4.8	9.6	9.6	102
March	212	8.4	211	1	4.7	2	9.5	14.2	9.5	105
April	225	8.9	223	2	8.9	2	9.0	17.8	17.8	113
May	242	9.6	241	1	4.1	3	12.4	16.5	16.5	118
June	192	7.6	190	2	10.4	2	10.5	20.8	20.8	96
July	253	10.0	252	1	4.0	6	23.8	27.7	19.9	126
August	185	7.3	181	4	21.6	1	5.5	27.0	21.7	92
September	210	8.3	209	1	4.8	0	-	4.8	-	104
October	227	9.0	226	1	4.4	1	4.4	8.8	4.4	111
November	189	7.5	188	1	5.3	0	-	5.3	5.3	95
December	206	8.1	204	2	9.7	2	9.8	19.4	9.8	103
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

Notes: Percentage column is subject to rounding.

- * Rates are calculated 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 3.10
 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 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 of antenatal care was combined hospital and G.P. which accounted for 77.5 per cent of total maternities.
- Hospital/Obstetrician care was more common for maternities delivering multiple births (36.0 per cent) than those delivering singleton births (21.9 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
Total Births										
Hospital/Obstetrician	16,156	22.4	16,089	67	4.1	49	3.0	7.2	4.8	15,694
General Practitioner only	117	0.2	115	2	17.1	0	–	17.1	8.6	117
Hospital & G.P. combined	55,642	77.3	55,434	208	3.7	92	1.7	5.4	4.0	54,828
None	63	0.1	59	4	63.5	2	33.9	95.2	95.2	62
Not Stated	8	0.0	8	0	–	0	–	–	–	8
Total	71,986	100	71,705	281	3.9	143	2.0	5.9	4.3	70,709
Singleton Births										
Hospital/Obstetrician	15,241	21.9	15,186	55	3.6	35	2.3	5.9	3.7	15,241
General Practitioner only	117	0.2	115	2	17.1	0	0.0	17.1	8.6	117
Hospital & G.P. combined	54,025	77.8	53,822	203	3.8	85	1.6	5.3	4.0	54,025
None	61	0.1	57	4	65.6	2	35.1	98.4	98.4	61
Not Stated	8	0.0	8	0	–	0	–	–	–	8
Total	69,452	100	69,188	264	3.8	122	1.8	5.6	4.0	69,452
Multiple Births										
Hospital/Obstetrician	915	36.1	903	12	13.1	14	15.5	28.4	23.1	453
General Practitioner only	0	0.0	0	0	–	0	–	–	–	0
Hospital & G.P. combined	1,617	63.8	1,612	5	3.1	7	4.3	7.4	5.6	803
None	2	0.1	2	0	–	0	–	–	–	1
Not Stated	0	0.0	0	0	–	0	–	–	–	0
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

Notes: Percentage column is subject to rounding.

- * Rates are calculated 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. These may be assigned hospital and G.P. combined care or Midwife only antenatal care on the Birth Notification Form.

DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT

Table 4.2 presents the time of first antenatal visit.

- Just over two-thirds of total maternities (68.6 per cent) 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
Total Births										
0-12	49,368	68.6	49,190	178	3.6	78	1.6	5.2	3.8	48,488
13-19	18,485	25.7	18,414	71	3.8	39	2.1	6.0	4.3	18,168
20 and over	4,012	5.6	3,983	29	7.2	22	5.5	12.7	8.8	3,936
Not Stated	121	0.2	118	3	24.8	4	33.9	57.9	42.0	117
Total	71,986	100	71,705	281	3.9	143	2.0	5.9	4.3	70,709
Singleton Births										
0-12	47,631	68.6	47,467	164	3.4	65	1.4	4.8	3.6	47,631
13-19	17,850	25.7	17,782	68	3.8	34	1.9	5.7	4.1	17,850
20 and over	3,858	5.6	3,829	29	7.5	19	5.0	12.4	8.3	3,858
Not Stated	113	0.2	110	3	26.5	4	36.4	61.9	45.0	113
Total	69,452	100	69,188	264	3.8	122	1.8	5.6	4.0	69,452
Multiple Births										
0-12	1,737	68.5	1,723	14	8.1	13	7.5	15.5	11.6	857
13-19	635	25.1	632	3	4.7	5	7.9	12.6	11.0	318
20 and over	154	6.1	154	0	–	3	19.5	19.5	19.5	78
Not Stated	8	0.3	8	0	–	0	–	–	–	4
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

Notes: Percentage column is subject to rounding.

- * Rates are calculated 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 77.3 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 33.1 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
Total Births										
Booked	71,315	99.3	71,045	270	3.8	130	1.8	5.6	4.0	70,057
Not Booked	491	0.7	480	11	22.4	13	27.1	48.9	43.0	472
Not Stated	4	0.0	4	0	–	0	–	–	–	4
Total	71,810	100	71,529	281	3.9	143	2.0	5.9	4.3	70,533
Singleton Births										
Booked	68,818	99.3	68,564	254	3.7	110	1.6	5.3	3.8	68,818
Not Booked	454	0.7	444	10	22.0	12	27.0	48.5	42.1	454
Not Stated	4	0.0	4	0	–	0	–	–	–	4
Total	69,276	100	69,012	264	3.8	122	1.8	5.6	4.0	69,276
Multiple Births										
Booked	2,497	98.5	2,481	16	6.4	20	8.1	14.4	11.2	1,239
Not Booked	37	1.5	36	1	27.0	1	27.8	54.1	54.1	18
Not Stated	0	0.0	0	0	–	0	–	–	–	0
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

Notes: Percentage column is subject to rounding.

- * Rates are calculated 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 176, 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 (0.8 days) for singleton births and 2.4 days for multiple births.

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

- Just under 90 per cent of singleton births and 75.5 per cent of multiple births were delivered within a day of mother's admission to hospital.
- For total births, 1.9 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
Total Births										
0-1 Days	63,807	88.9	63,577	230	3.6	114	1.8	5.4	3.9	62,848
2 Days	4,488	6.2	4,460	28	6.2	10	2.2	8.5	4.9	4,395
3-5 Days	2,082	2.9	2,072	10	4.8	8	3.9	8.6	8.2	2,004
6-8 Days	527	0.7	521	6	11.4	3	5.8	17.1	17.1	476
9-11 Days	248	0.3	243	5	20.2	1	4.1	24.2	20.2	226
12-14 Days	145	0.2	145	0	–	0	–	–	–	127
More than 2 Weeks	447	0.6	445	2	4.5	7	15.7	20.1	11.3	392
Not Stated	66	0.1	66	0	–	0	–	–	–	65
Total	71,810	100	71,529	281	3.9	143	2.0	5.9	4.3	70,533
Singleton Births										
0-1 Days	61,894	89.3	61,671	223	3.6	98	1.6	5.2	3.8	61,894
2 Days	4,304	6.2	4,282	22	5.1	9	2.1	7.2	3.7	4,304
3-5 Days	1,928	2.8	1,918	10	5.2	6	3.1	8.3	7.8	1,928
6-8 Days	431	0.6	426	5	11.6	1	2.3	13.9	13.9	431
9-11 Days	204	0.3	200	4	19.6	1	5.0	24.5	19.7	204
12-14 Days	110	0.2	110	0	–	0	–	–	–	110
More than 2 Weeks	341	0.5	341	0	–	7	20.5	20.5	8.9	341
Not Stated	64	0.1	64	0	–	0	–	–	–	64
Total	69,276	100	69,012	264	3.8	122	1.8	5.6	4.0	69,276
Multiple Births										
0-1 Days	1,913	75.5	1,906	7	3.7	16	8.4	12.0	8.4	954
2 Days	184	7.3	178	6	32.6	1	5.6	38.0	32.8	91
3-5 Days	154	6.1	154	0	–	2	13.0	13.0	13.0	76
6-8 Days	96	3.8	95	1	10.4	2	21.1	31.3	31.3	45
9-11 Days	44	1.7	43	1	22.7	0	–	22.7	22.7	22
12-14 Days	35	1.4	35	0	–	0	–	–	–	17
More than 2 Weeks	106	4.2	104	2	18.9	0	–	18.9	18.9	51
Not Stated	2	0.1	2	0	–	0	–	–	–	1
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

Notes: Percentage column is subject to rounding.

* Rates are calculated 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 176, 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 2.6 and 4.2 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 12.0 per cent of maternities delivering multiple births.
- For total maternities 42.7 per cent of singleton births and 73.7 per cent of multiple births were discharged 3 to 5 days post delivery.

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
Total Births										
0-1 Days	16,126	22.5	15,966	160	9.9	53	3.3	13.2	9.8	16,089
2 Days	22,304	31.1	22,239	65	2.9	25	1.1	4.0	3.1	22,190
3-5 Days	31,470	43.8	31,419	51	1.6	53	1.7	3.3	2.2	30,531
6-8 Days	1,600	2.2	1,597	3	1.9	10	6.3	8.1	7.5	1,438
9-11 Days	195	0.3	193	2	10.3	1	5.2	15.4	10.3	179
12-14 Days	48	0.1	48	0	–	1	20.8	20.8	–	44
More than 2 Weeks	43	0.1	43	0	–	0	–	–	–	38
Not Stated	24	0.0	24	0	–	0	–	–	–	24
Total	71,810	100	71,529	281	3.9	143	2.0	5.9	4.3	70,533
Singleton Births										
0-1 Days	16,052	23.2	15,893	159	9.9	46	2.9	12.8	9.4	16,052
2 Days	22,076	31.9	22,014	62	2.8	21	1.0	3.8	2.8	22,076
3-5 Days	29,604	42.7	29,563	41	1.4	47	1.6	3.0	2.0	29,604
6-8 Days	1,285	1.9	1,283	2	1.6	6	4.7	6.2	6.2	1,285
9-11 Days	163	0.2	163	0	–	1	6.1	6.1	–	163
12-14 Days	40	0.1	40	0	–	1	25.0	25.0	–	40
More than 2 Weeks	32	0.0	32	0	–	0	–	–	–	32
Not Stated	24	0.0	24	0	–	0	–	–	–	24
Total	69,276	100	69,012	264	3.8	122	1.8	5.6	4.0	69,276
Multiple Births										
0-1 Days	74	2.9	73	1	13.5	7	95.9	108.1	95.9	37
2 Days	228	9.0	225	3	13.2	4	17.8	30.7	30.7	114
3-5 Days	1,866	73.6	1,856	10	5.4	6	3.2	8.6	5.4	927
6-8 Days	315	12.4	314	1	3.2	4	12.7	15.9	12.7	153
9-11 Days	32	1.3	30	2	62.5	0	–	62.5	62.5	16
12-14 Days	8	0.3	8	0	–	0	–	–	–	4
More than 2 Weeks	11	0.4	11	0	–	0	–	–	–	6
Not Stated	0	0.0	0	0	–	0	–	–	–	0
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

Notes: Percentage column is subject to rounding.

- * Rates are calculated 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 176, 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 by method of delivery 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 78 per cent of singleton spontaneous deliveries compared to 33.1 per cent of multiple spontaneous deliveries.
- For Caesarean section deliveries, mother's postnatal length of stay was 3 to 5 days for 89.5 per cent of singleton deliveries compared to 79.5 per cent for multiple deliveries.

FIGURE 4.1
Mother's Postnatal Length of Stay by Method of Delivery, Singleton Births

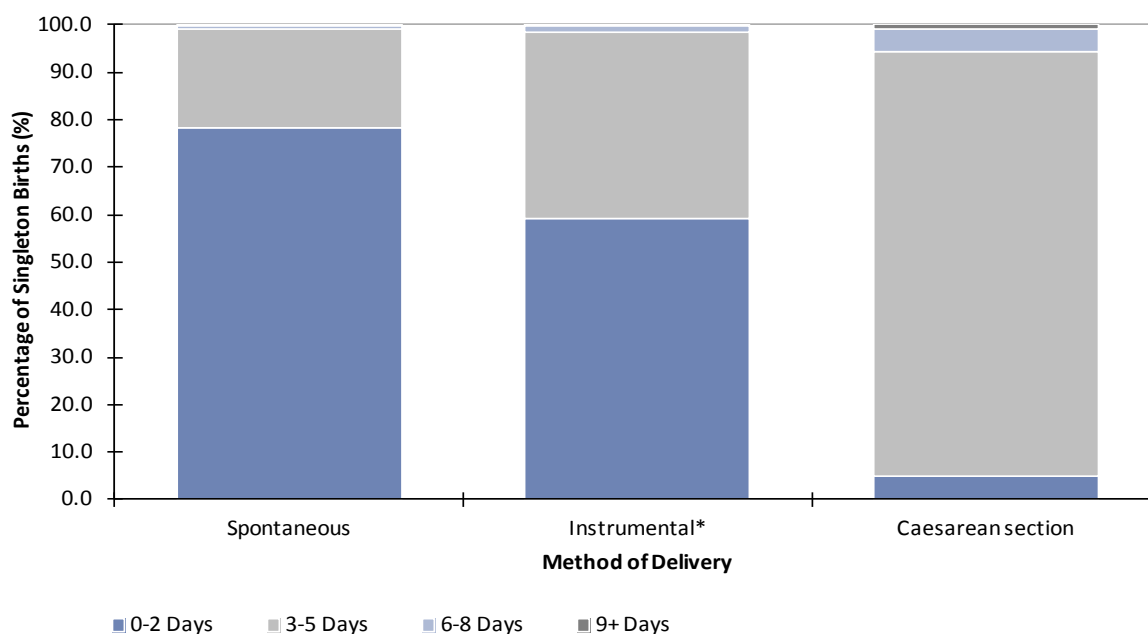
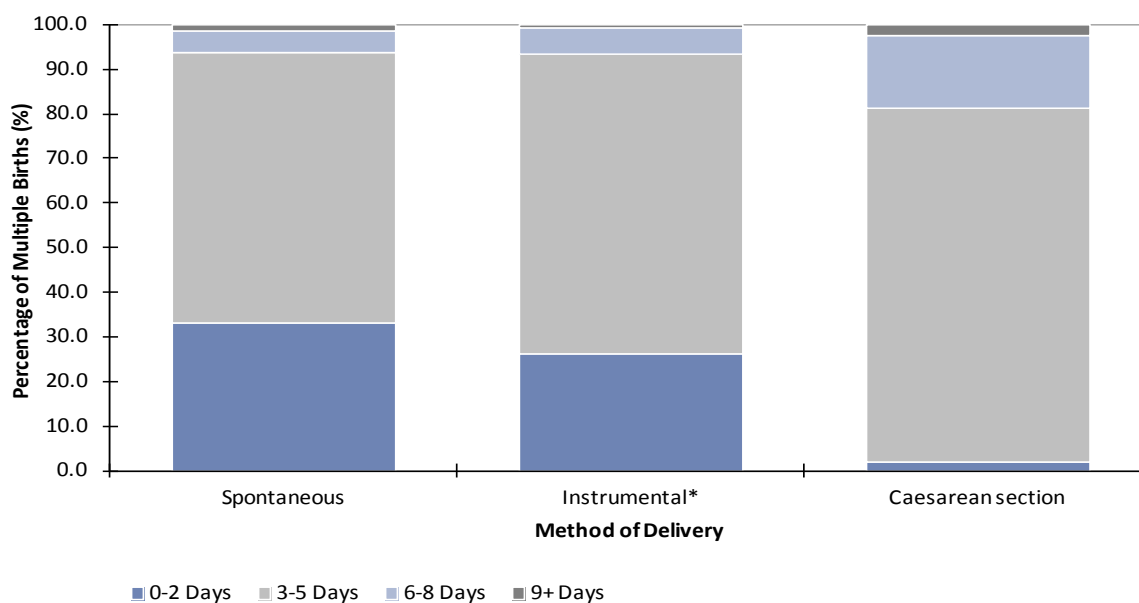


FIGURE 4.2
Mother's Postnatal Length of Stay by Method of Delivery, Multiple Births



Notes: See Appendix G, Table G10 for data.

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

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.²⁶

TABLE 4.6

Rubella: Immune Status of Mother, Numbers and Percentages

Rubella Immunity	Number of Maternities	Per Cent
Total Births		
Immune	66,670	94.3
Not Immune	2,554	3.6
Not known	1,485	2.1
Total	70,709	100
Singleton Births		
Immune	65,479	94.3
Not Immune	2,514	3.6
Not known	1,459	2.1
Total	69,452	100
Multiple Births		
Immune	1,191	94.7
Not Immune	40	3.2
Not known	26	2.1
Total	1,257	100

Note: Percentage column is subject to rounding.

METHOD OF DELIVERY²⁷

METHOD OF DELIVERY BY BIRTHS AND PLURALITY

Table 4.7a presents data on method of delivery for total births.

- Over 55 per cent of total live births delivered spontaneously (56.8 per cent of live singleton births and 23.0 per cent of live multiple births) (see Figure 4.3).
- There were 20,701 live births delivered by Caesarean section, representing 28.9 per cent of total live births, 27.5 per cent of live singleton births, and 65.4 per cent of live multiple births.
- Over 15 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 (15.7 per cent) compared with live multiple births (11.6 per cent).

²⁶ For further discussion and analysis on this issue see O'Dwyer V, Bonham S, Mulligan A, O'Connor C, Farah N, Kennelly MM, Turner MJ. *Antenatal rubella immunity in Ireland*. IMJ 2013;106:232-5

²⁷ 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

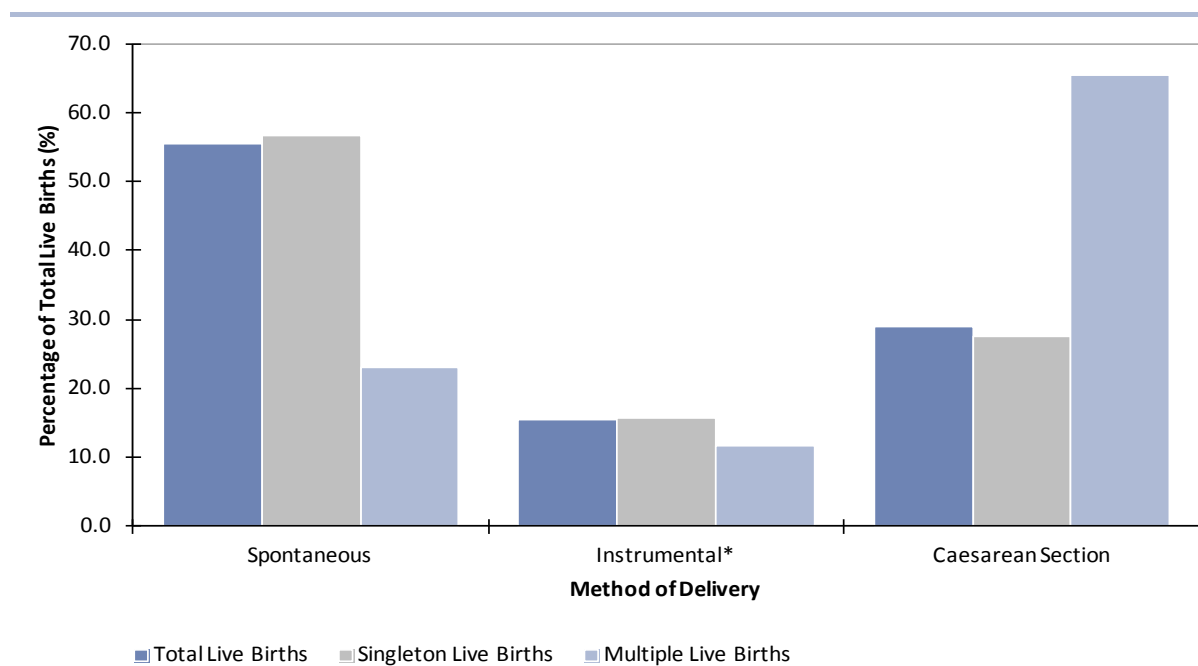
Method of Delivery: Total Births, Live Births, Stillbirths, Early Neonatal Deaths, Mortality Rates, and Maternities

	Total Births	Total Births %	Live Births	Stillbirths	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adjusted PMR*	Maternities
Total Births										
Spontaneous	40,058	55.6	39,850	208	5.2	66	1.7	6.8	5.3	39,811
Breech / Forceps	313	0.4	280	33	105.4	12	42.9	143.8	100.7	234
Forceps	2,792	3.9	2,789	3	1.1	3	1.1	2.1	1.4	2,767
Vacuum extraction	8,069	11.2	8,064	5	0.6	1	0.1	0.7	0.4	7,991
Caesarean section	20,733	28.8	20,701	32	1.5	60	2.9	4.4	2.9	19,885
Other specified & combined	21	0.0	21	0	–	1	47.6	47.6	47.6	21
Total	71,986	100	71,705	281	3.9	143	2.0	5.9	4.3	70,709
Singleton Births										
Spontaneous	39,469	56.8	39,272	197	5.0	56	1.4	6.4	4.8	39,469
Breech / Forceps	228	0.3	196	32	140.4	10	51.0	184.2	130.8	228
Forceps	2,736	3.9	2,733	3	1.1	2	0.7	1.8	1.1	2,736
Vacuum extraction	7,917	11.4	7,912	5	0.6	1	0.1	0.8	0.4	7,917
Caesarean section	19,081	27.5	19,054	27	1.4	52	2.7	4.1	2.9	19,081
Other specified & combined	21	0.0	21	0	–	1	47.6	47.6	47.6	21
Total	69,452	100	69,188	264	3.8	122	1.8	5.6	4.0	69,452
Multiple Births										
Spontaneous	589	23.2	578	11	18.7	10	17.3	35.7	35.7	342
Breech / Forceps	85	3.4	84	1	11.8	2	23.8	35.3	23.8	6
Forceps	56	2.2	56	0	–	1	17.9	17.9	17.9	31
Vacuum extraction	152	6.0	152	0	–	0	–	–	–	74
Caesarean section	1,652	65.2	1,647	5	3.0	8	4.9	7.9	3.6	804
Other specified & combined	0	0.0	0	0	–	0	–	–	–	0
Total	2,534	100	2,517	17	6.7	21	8.3	15.0	11.9	1,257

Notes: Percentage column is subject to rounding.

* Rates are calculated 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 4.3
Percentage Distribution of Total Live Births by Method of Delivery



Notes: See Table 4.7a for data.
* Instrumental delivery includes breech/forceps, forceps or vacuum extraction.

METHOD OF DELIVERY BY MATERNAL AGE

Table 4.7b presents method of delivery by maternal age.

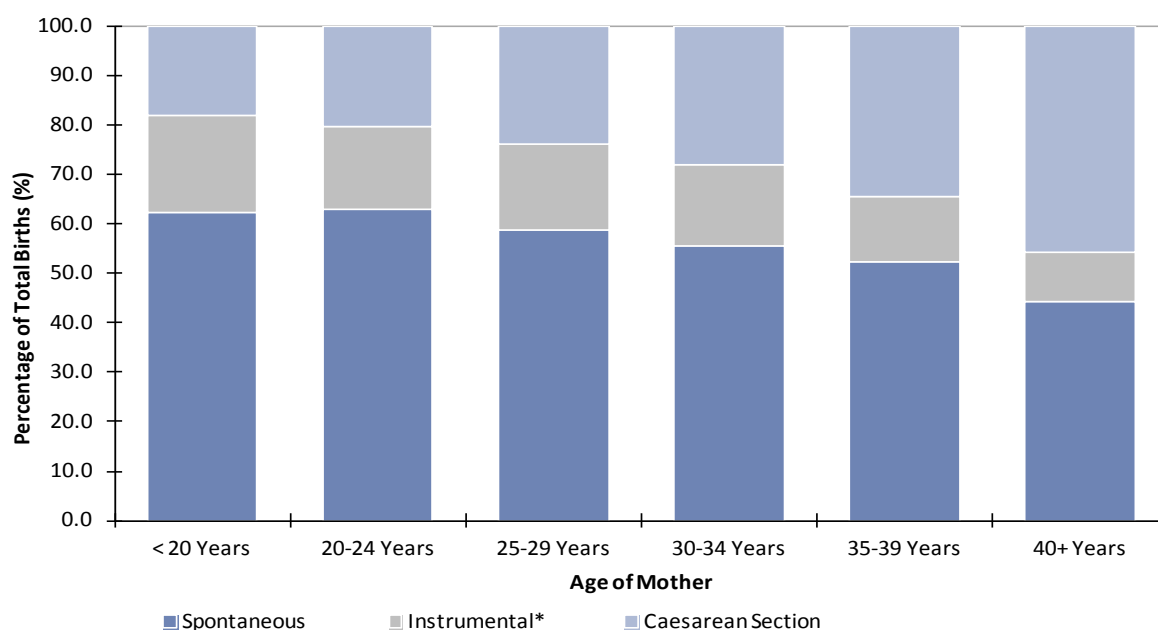
- The percentage of babies delivered by spontaneous delivery declined with age and was reported at 62.1 per cent for mothers aged less than 20 years compared to 44.1 per cent to mothers aged 40 years and older (see Figure 4.4).
- Caesarean section rates ranged from 17.8 per cent for mothers aged less than 20 years to 45.9 per cent for mothers aged 40 years and over.

TABLE 4.7b
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	1,002 62.1	4,347 62.8	9,033 58.8	14,515 55.6	9,367 52.3	1,793 44.1	1 33.3	40,058 55.6
Breech/Forceps	4 0.2	23 0.3	67 0.4	121 0.5	86 0.5	12 0.3	0 0.0	313 0.4
Forceps	80 5.0	264 3.8	673 4.4	1,098 4.2	580 3.2	97 2.4	0 0.0	2,792 3.9
Vacuum extraction	237 14.7	871 12.6	1,933 12.6	3,048 11.7	1,683 9.4	296 7.3	1 33.3	8,069 11.2
Caesarean section	287 17.8	1,417 20.5	3,646 23.7	7,339 28.1	6,180 34.5	1,863 45.9	1 33.3	20,733 28.8
Other specified & combined	3 0.2	1 0.0	4 0.0	5 0.0	7 0.0	1 0.0	0 0.0	21 0.0
Total	1,613 100	6,923 100	15,356 100	26,126 100	17,903 100	4,062 100	3 100	71,986 100

Note: Percentage columns are subject to rounding.

FIGURE 4.4
Percentage of Total Births by Method of Delivery and Age of Mother



Notes: See Table 4.7b 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 4.8 presents data on the size of maternity units.

- Just over one third (34.2 per cent) of total births took place in 13 maternity units accommodating between 1,000 and 2,999 births each annually.
- Four maternity units each accommodated 8,000 or more births accounting for almost half (49.2 per cent) of total births (see Figure 4.5).

TABLE 4.8

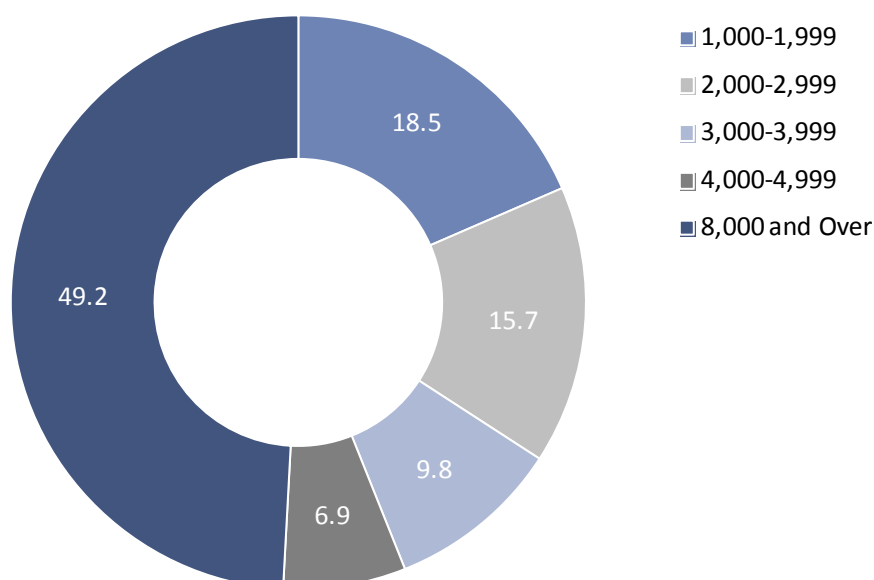
Size of Maternity Unit (Number of Live Births and Stillbirths Annually) by Number of Units: Total Births, Live Births, Stillbirths, Early Neonatal Deaths and Mortality Rates

	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	8	13,286	18.5	13,229	57	4.3	31	2.3	6.6	5.0
2000-2999	5	11,250	15.7	11,210	40	3.6	18	1.6	5.2	3.7
3000-3999	2	7,030	9.8	6,999	31	4.4	12	1.7	6.1	4.3
4000-4999	1	4,920	6.9	4,899	21	4.3	7	1.4	5.7	4.3
8000 and Over	4	35,324	49.2	35,192	132	3.7	75	2.1	5.9	4.3
Total	20	71,810	100	71,529	281	3.9	143	2.0	5.9	4.3

Notes: Percentage column is subject to rounding.

* Rates are calculated 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 2012, each of which delivered over 1,000 births per annum. No unit delivered between 5,000 and 7,999 births. Domiciliary births, of which there were 176, are excluded from this table. See Appendix H for detailed analysis.

FIGURE 4.5
Percentage Distribution of Births by Size of Maternity Unit, Total Births



Notes: See Table 4.8 for data.
The size of the maternity unit refers to the number of live births and stillbirths occurring in 2012.

INTER-HOSPITAL TRANSFER OF INFANTS

Table 4.9 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 3.6 per cent of multiple births being transferred for medical reasons.

TABLE 4.9
Inter-Hospital Transfer of Infants

	Live Births	Per Cent Live Births	Early Neonatal Deaths	Early Neonatal Mortality Rate*
Total Births				
Transferred	501	0.7	20	39.9
Not Transferred	71,020	99.3	123	1.7
Not Stated	8	0.0	0	0.0
Total	71,529	100	143	2.0
Singleton Births				
Transferred	411	0.6	18	43.8
Not Transferred	68,593	99.4	104	1.5
Not Stated	8	0.0	0	0.0
Total	69,012	100	122	1.8
Multiple Births				
Transferred	90	3.6	2	22.2
Not Transferred	2,427	96.4	19	7.8
Not Stated	0	0.0	0	0.0
Total	2,517	100	21	8.3

Notes: Percentage column is subject to rounding.
* Rate is calculated per 1,000 births. For early neonatal deaths, rates are calculated on total live births. Domiciliary births, of which there were 176 live births, are excluded from this table. See Appendix H for detailed analysis.

INFANT'S LENGTH OF STAY

The mean length of stay for infants was 3.2 days. When analysed by birth weight, low birthweight babies (weighing less than 2,500 grams) recorded a mean length of stay of 13.9 days, while babies weighing 2,500 grams and over reported a mean length of stay of 2.7 days. Preterm births (born before 37 weeks) reported a mean length of stay of 13.4 days while babies born at term reported a mean length of stay of 2.6 days. 95.6 per cent of infants were discharged home within the perinatal period (before the 7th day of life).

Table 4.10 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 8.6 per cent of multiple births (see Figure 4.6).
- Over 95 per cent of singleton live births were discharged from hospital within 5 days of birth, compared to 61.8 per cent of multiple live births.
- 5.7 per cent of total live births had a length of stay of 6 or more days.

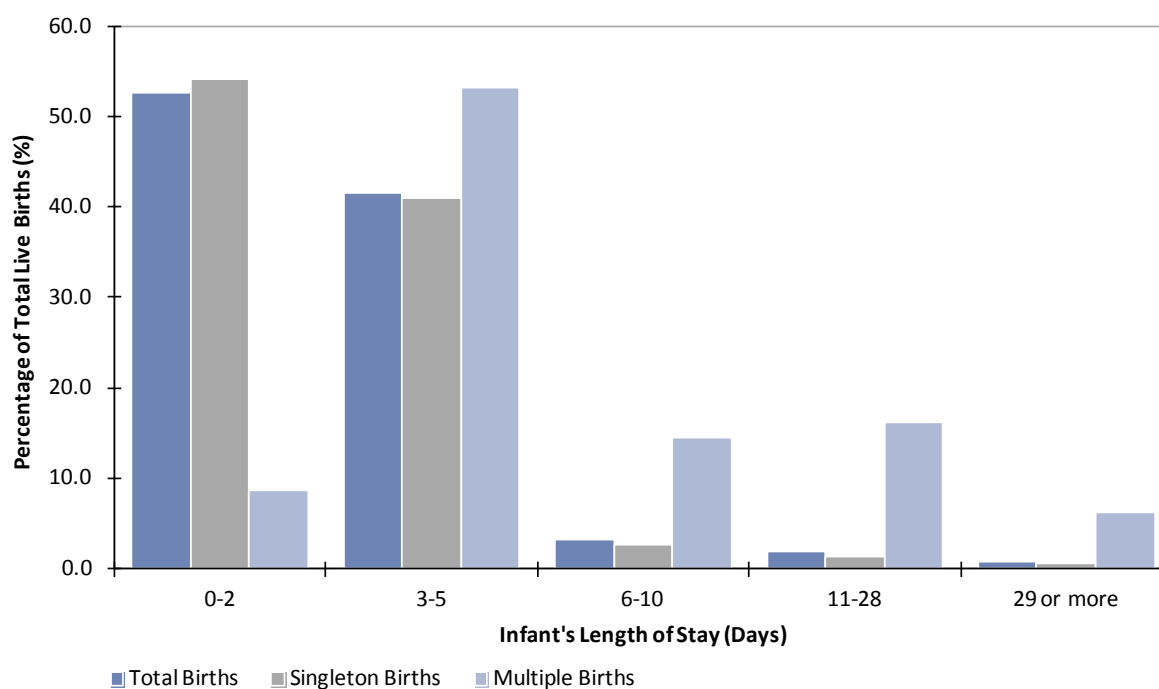
TABLE 4.10

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

	Live Births	Per Cent Live Births
Total Births		
0-2 Days	37,581	52.6
3-5 Days	29,621	41.5
6-10 Days	2,237	3.1
11-28 Days	1,312	1.8
29 Days or more	532	0.7
Not Stated	103	0.1
Total	71,386	100
Singleton Births		
0-2 Days	37,367	54.2
3-5 Days	28,292	41.1
6-10 Days	1,874	2.7
11-28 Days	909	1.3
29 Days or more	375	0.5
Not Stated	73	0.1
Total	68,890	100
Multiple Births		
0-2 Days	214	8.6
3-5 Days	1,329	53.2
6-10 Days	363	14.5
11-28 Days	403	16.1
29 Days or more	157	6.3
Not Stated	30	1.2
Total	2,496	100

Notes: Percentage column is subject to rounding.
This table does not include domiciliary births and early neonatal deaths.

FIGURE 4.6
Percentage Distribution of Total Live Births by Infant's Length of Stay



Note: See Table 4.10 for data.

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 4.11 presents type of feeding by age of mother.

- At 46.6 per cent, a slightly higher proportion of total births were breastfed²⁸ compared to 44.7 per cent reporting artificial feeding.
- Artificial feeding is more common for multiple births (51.7 per cent for multiple births compared to 44.5 per cent for singleton births), while breastfeeding is more common for singleton births (47.3 per cent for singleton births compared to 28.0 per cent for multiple births).
- Breastfeeding was more common than artificial feeding among mothers aged 25 years or more. Mothers in the 30–34 year age group reported the highest breastfeeding rate at 50.5 per cent (see Figure 4.7).
- One-fifth (20.4 per cent) of infants born to mothers aged under 20 years were exclusively breastfed.

²⁸ Throughout this section, discussion of breastfeeding refers to exclusive breastfeeding only.

TABLE 4.11

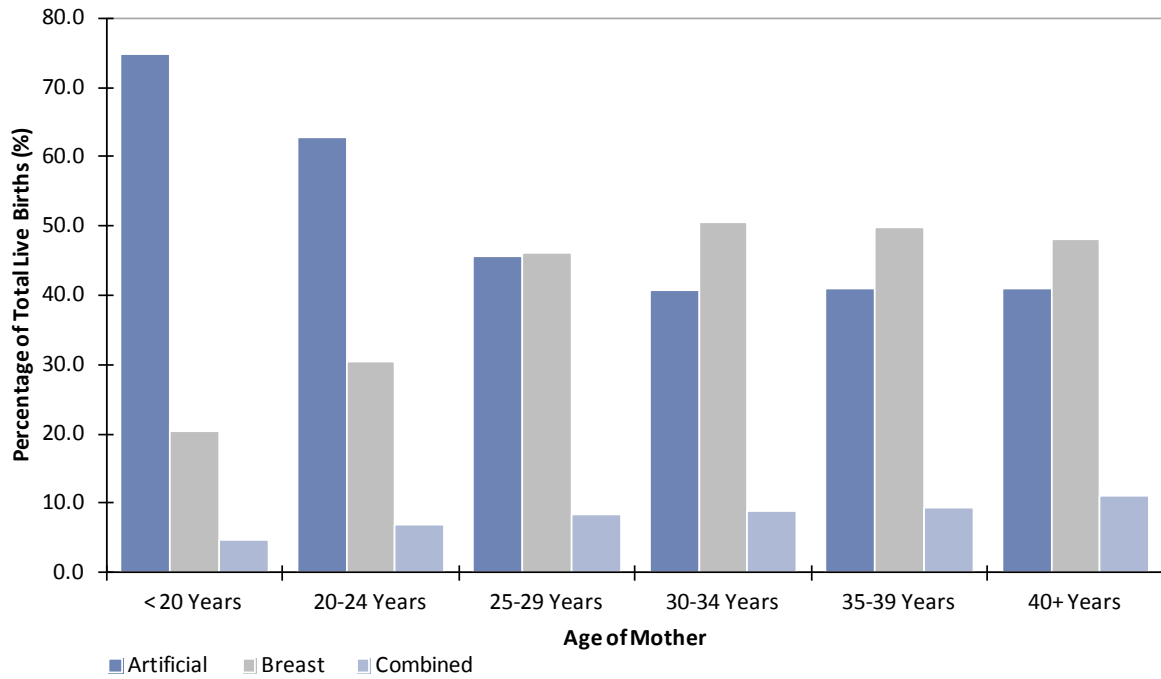
Age of Mother by Infant's Type of Feeding, Numbers and Percentages, Total Live Births

Frequency Row Per Cent Col. Per Cent	Type of Feeding											
	Total Births				Singleton Births				Multiple Births			
	Artificial	Breast	Combined	Total	Artificial	Breast	Combined	Total	Artificial	Breast	Combined	Total
Under 20 Years	1,200 74.9 3.7	327 20.4 1.0	75 4.7 1.2	1,602 100.0 2.2	1,181 75.0 3.8	322 20.5 1.0	71 4.5 1.2	1,574 100.0 2.3	19 67.9 1.5	5 17.9 0.7	4 14.3 0.8	28 100 1.1
20-24 Years	4,318 62.8 13.5	2,090 30.4 6.3	473 6.9 7.6	6,881 100.0 9.6	4,256 63.0 13.9	2,048 30.3 6.3	454 6.7 8.0	6,758 100.0 9.8	62 50.4 4.8	42 34.1 6.0	19 15.4 3.7	123 100 4.9
25-29 Years	6,975 45.7 21.8	7,037 46.1 21.1	1,265 8.3 20.4	15,277 100.0 21.3	6,807 45.5 22.2	6,940 46.4 21.3	1,203 8.0 21.1	14,950 100.0 21.6	168 51.4 13.0	97 29.7 13.9	62 19.0 12.2	327 100 13.1
30-34 Years	10,556 40.6 33.0	13,126 50.5 39.4	2,308 8.9 37.2	25,990 100.0 36.3	10,133 40.3 33.0	12,875 51.2 39.4	2,138 8.5 37.5	25,146 100.0 36.4	423 50.1 32.8	251 29.7 35.9	170 20.1 33.5	844 100 33.8
35-39 Years	7,309 41.1 22.8	8,836 49.7 26.5	1,642 9.2 26.5	17,787 100.0 24.9	6,864 40.5 22.3	8,628 50.9 26.4	1,465 8.6 25.7	16,957 100.0 24.6	445 53.6 34.5	208 25.1 29.8	177 21.3 34.9	830 100 33.3
40-44 Years	1,564 41.0 4.9	1,843 48.3 5.5	406 10.6 6.5	3,813 100.0 5.3	1,416 40.2 4.6	1,762 50.0 5.4	345 9.8 6.1	3,523 100.0 5.1	148 51.0 11.5	81 27.9 11.6	61 21.0 12.0	290 100 11.6
45 Years and Over	81 38.8 0.3	91 43.5 0.3	37 17.7 0.6	209 100.0 0.3	56 36.1 0.2	76 49.0 0.2	23 14.8 0.4	155 100.0 0.2	25 46.3 1.9	15 27.8 2.1	14 25.9 2.8	54 100 2.2
Not Stated	2 66.7 0.0	1 33.3 0.0	0 0.0 0.0	3 100.0 0.0	2 66.7 0.0	1 33.3 0.0	0 0.0 0.0	3 100.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0
Total	32,005 44.7 100	33,351 46.6 100	6,206 8.7 100	71,562 100.0 100	30,715 44.5 100	32,652 47.3 100	5,699 8.3 100	69,066 100.0 100	1,290 51.7 100	699 28.0 100	507 20.3 100	2,496 100 100

Notes: Percentage rows and columns are subject to rounding.
This table excludes early neonatal deaths.

FIGURE 4.7

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



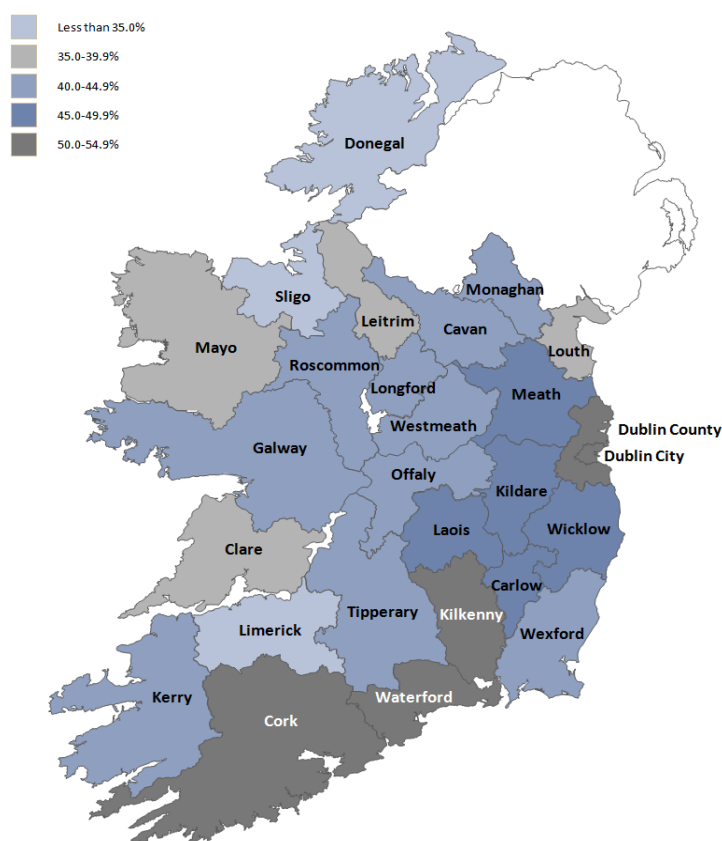
Note: See Table 4.11 for data.

Figure 4.8 presents the rate of exclusive breastfeeding by geographic location.

- Infants born to mothers resident in Cork recorded the highest rate of breastfeeding at 54.4 per cent, with Dublin County and Waterford reporting rates at 53.7 per cent and 53.3 per cent respectively.
- Other counties reporting exclusive breastfeeding rates of over 50 per cent included Kilkenny and Dublin City.

FIGURE 4.8

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



Notes: See Appendix G, Table G11 for data.

Example: Of all live births to mothers resident in Carlow, 47.9 per cent were breastfed.

Table 4.12 and Figure 4.9 present data on type of feeding by mother's socio-economic group²⁹.

- Breastfeeding was most common among mothers in 'higher professional' socio-economic groups (63.5 per cent) and 'skilled manual workers' (61.5 per cent). Breastfeeding was least common among 'unemployed' mothers (28.5 per cent).
- Artificial feeding was most common among 'unemployed' mothers with a rate of 64.5 per cent, and mothers whose socio-economic group was recorded as 'home duties' (53.2 per cent).

²⁹ In previous NPRS reports data on mother's and father's Socio-economic Group were reported as Occupation, in this report these data are reported as Socio-economic Group. The classification for grouping occupations into socio-economic groups used in this and previous reports has not changed, for further details see Appendix C Classification of socio-economic group.

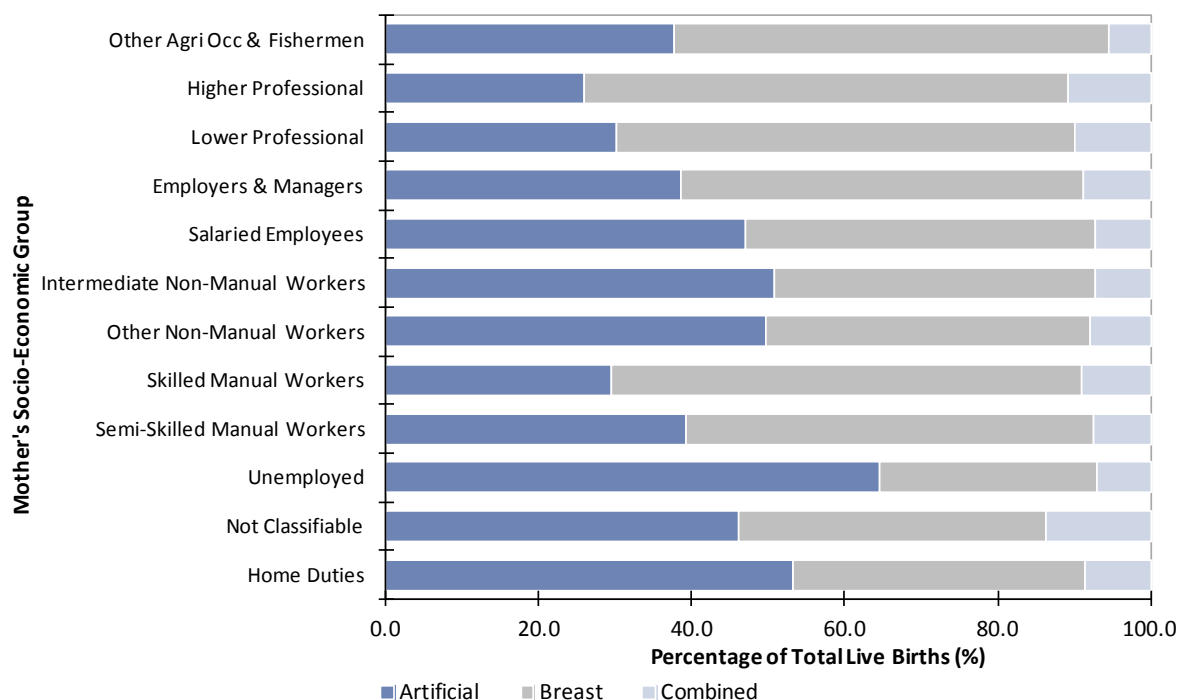
TABLE 4.12
Mother's Socio-economic Group by Infant's Type of Feeding, Total Live Births

Frequency Row Per Cent Col. Per Cent	Type of Feeding			
	Artificial	Breast	Combined	Total
Farmers & Farm Managers	31	42	3	76
	40.8	55.3	3.9	100
	0.1	0.1	0.0	0.1
Other Agricultural Occupations & Fishermen	41	62	6	109
	37.6	56.9	5.5	100
	0.1	0.2	0.1	0.2
Higher Professional	1,269	3,121	526	4,916
	25.8	63.5	10.7	100
	4.0	9.4	8.5	6.9
Lower Professional	3,582	7,143	1,180	11,905
	30.1	60.0	9.9	100
	11.2	21.4	19.0	16.6
Employers & Managers	2,001	2,737	458	5,196
	38.5	52.7	8.8	100
	6.3	8.2	7.4	7.3
Salaried Employees	468	456	72	996
	47.0	45.8	7.2	100
	1.5	1.4	1.2	1.4
Intermediate Non-Manual Workers	7,608	6,271	1,084	14,963
	50.8	41.9	7.2	100
	23.8	18.8	17.5	20.9
Other Non-Manual Workers	4,970	4,269	785	10,024
	49.6	42.6	7.8	100
	15.5	12.8	12.6	14.0
Skilled Manual Workers	294	612	89	995
	29.5	61.5	8.9	100
	0.9	1.8	1.4	1.4
Semi-Skilled Manual Workers	865	1,172	162	2,199
	39.3	53.3	7.4	100
	2.7	3.5	2.6	3.1
Unskilled Manual Workers	4	7	0	11
	36.4	63.6	0.0	100
	0.0	0.0	0.0	0.0
Unemployed	2,093	924	226	3,243
	64.5	28.5	7.0	100
	6.5	2.8	3.6	4.5
Not Classifiable	1,358	1,181	399	2,938
	46.2	40.2	13.6	100
	4.2	3.5	6.4	4.1
Home Duties	7,292	5,220	1,188	13,700
	53.2	38.1	8.7	100
	22.8	15.7	19.1	19.1
Not Stated	129	134	28	291
	44.3	46.0	9.6	100
	0.4	0.4	0.5	0.4
Total	32,005	33,351	6,206	71,562
	44.7	46.6	8.7	100.0
	100	100	100	100

Notes: Percentage rows and columns are subject to rounding.
 See Appendix C for a description of the classification system for socio-economic group.
 This table excludes early neonatal deaths.

FIGURE 4.9

Percentage Distribution of Infant's Type of Feeding by Mother's Socio-economic Group, Total Live Births



Notes: See Table 4.12 for data.
Categories where percentages would be based on <100 births are not included.

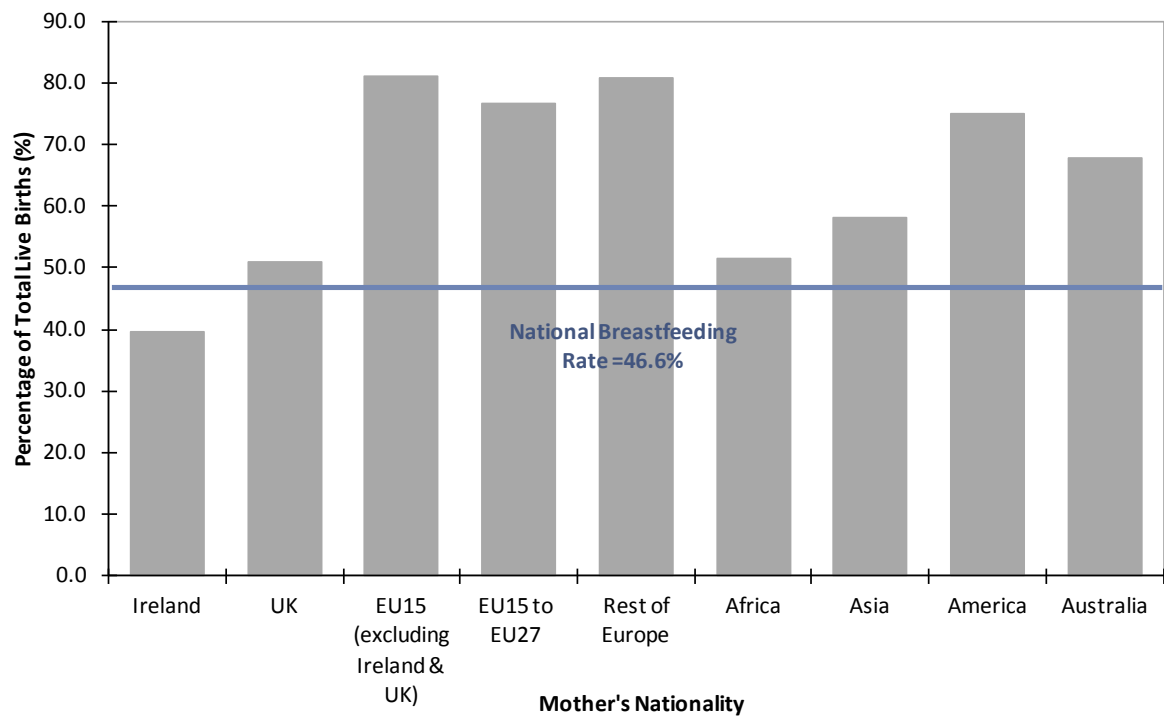
Figure 4.10 presents the rate of exclusive breastfeeding by mother's nationality.³⁰

- At 39.7 per cent, births to mothers from Ireland recorded the lowest proportion of breastfeeding, while births to mothers from the EU15 (excluding Ireland & UK) reported the highest proportion of breastfeeding at 81.0 per cent.
- Births to mothers from the Rest of Europe, America and the EU15 to EU27 each record breastfeeding percentages of 75 per cent or higher.
- Similar breastfeeding rates are reported for mothers from Africa and the UK at just over 50 per cent. Mothers from Asia reported a breastfeeding rate of 58.3 per cent, while mothers from Australia reported a breastfeeding rate of 67.7 per cent.

³⁰ For further discussion and analysis on this issue see Brick A, Nolan A. *Explaining the Increase in Breastfeeding at Hospital Discharge in Ireland, 2004–2010*. Irish Journal of Medical Science, September 2013. 10.1007/s11845-013-1012-0

FIGURE 4.10

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



Notes: See Appendix G, Table G12 for data.
 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 infants. Cause of death is examined according to the guidelines set out by the WHO in the International Classification of Diseases (ICD-10).³¹ A detailed description of the cause of death classification and the coding rules applied is available in Appendix D.

Of the 71,986 births recorded by the NPRS in 2012, 281 were stillbirths and 143 were early neonatal deaths, giving a total of 424 perinatal deaths and a perinatal mortality rate of 5.9 per 1,000 live births and stillbirths.

The number of perinatal deaths is 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.³²

- Approximately 69 per cent of total perinatal deaths weighed less than 2,500 grams, 69.8 per cent for primiparous women and 68.6 per cent for multiparous women (see Figure 5.1).
- The perinatal mortality rate for low birthweight babies (weighing less than 2,500 grams) was 72.4 per 1,000 live births and stillbirths (64.4 per 1,000 for primiparous women and 80.2 per 1,000 for multiparous women).
- For births weighing 2,500 grams or more, the perinatal mortality rate was 1.9 per 1,000 live births and stillbirths (2.1 for primiparous women and 1.8 for multiparous women).
- The highest perinatal mortality rate for all births was recorded for births weighing between 500–749 grams at 513.3 per 1,000 live births and stillbirths (see Figure 5.2).

³¹ World Health Organisation, 2005, *International Statistical Classification of Diseases and Related Health Problems, 10th Revision*, Vols. 1-3. Geneva: World Health Organisation

³² For details of birthweight by plurality for total births, antepartum and intrapartum stillbirths, early neonatal deaths and associated rates see Appendix G, Table G13.

TABLE 5.1

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

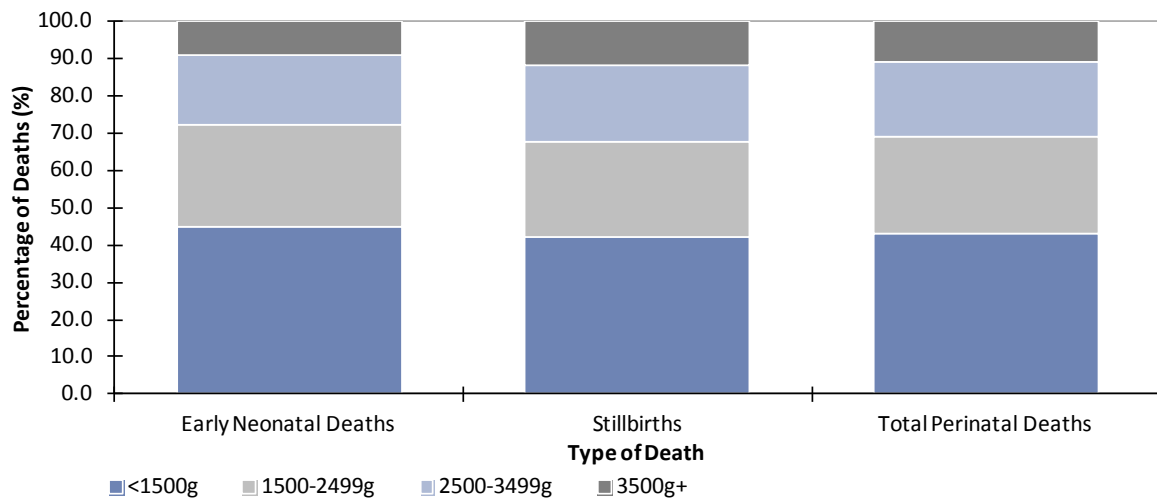
	Total Perinatal Deaths	Total Perinatal Deaths %	Ante-partum Stillbirths	Intra-Partum Stillbirths	Not Stated	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adj. PMR*
Total										
500-749	77	18.2	45	4	1	333.3	27	270.0	513.3	474.8
750-999	48	11.3	25	0	1	152.9	22	152.8	282.4	222.9
1000-1249	35	8.3	24	1	0	123.8	10	56.5	173.3	121.1
1250-1499	22	5.2	16	1	0	73.0	5	23.1	94.4	58.0
1500-1999	56	13.2	34	3	1	44.8	18	22.2	66.0	38.8
2000-2499	55	13.0	31	2	1	13.9	21	8.7	22.5	14.4
2500-2999	49	11.6	25	0	3	3.3	21	2.5	5.8	3.8
3000-3499	36	8.5	28	2	0	1.3	6	0.3	1.6	1.4
3500-3999	36	8.5	25	3	0	1.1	8	0.3	1.4	1.3
4000-4499	10	2.4	5	0	0	0.5	5	0.5	1.0	0.9
Total	424	100	258	16	7	3.9	143	2.0	5.9	4.3
Primiparous Women										
500-749	36	19.8	19	3	0	278.5	14	245.6	455.7	448.7
750-999	25	13.7	13	0	0	147.7	12	160.0	284.1	222.2
1000-1249	15	8.2	11	0	0	108.9	4	44.4	148.5	104.2
1250-1499	11	6.0	8	0	0	62.0	3	24.8	85.3	48.4
1500-1999	16	8.8	11	0	0	26.4	5	12.3	38.4	26.7
2000-2499	24	13.2	16	0	1	14.7	7	6.1	20.7	13.0
2500-2999	22	12.1	11	0	1	3.2	10	2.6	5.8	4.2
3000-3499	15	8.2	12	1	0	1.3	2	0.2	1.5	1.4
3500-3999	13	7.1	8	1	0	1.0	4	0.4	1.4	1.3
4000-4499	5	2.7	2	0	0	0.6	3	1.0	1.6	1.3
Total	182	100.0	111	5	2	4.2	64	2.3	6.5	5.0
Multiparous Women										
500-749	41	16.9	26	1	1	394.4	13	302.3	577.5	508.2
750-999	23	9.5	12	0	1	158.5	10	144.9	280.5	223.7
1000-1249	20	8.3	13	1	0	138.6	6	69.0	198.0	138.3
1250-1499	11	4.5	8	1	0	86.5	2	21.1	105.8	70.0
1500-1999	40	16.5	23	3	1	62.8	13	32.3	93.0	51.1
2000-2499	31	12.8	15	2	0	13.3	14	11.1	24.2	15.7
2500-2999	27	11.2	14	0	2	3.4	11	2.4	5.8	3.5
3000-3499	21	8.7	16	1	0	1.3	4	0.3	1.6	1.3
3500-3999	23	9.5	17	2	0	1.2	4	0.3	1.5	1.3
4000-4499	5	2.1	3	0	0	0.4	2	0.3	0.7	0.7
Total	242	100.0	147	11	5	3.7	79	1.8	5.5	3.8

Notes: Percentage column is subject to rounding.

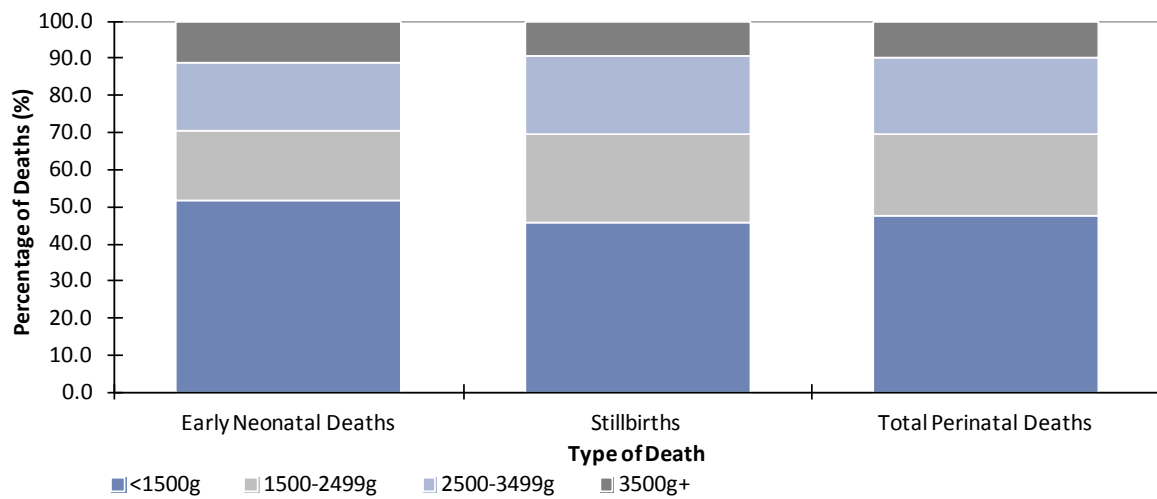
* Rates are calculated per 1,000 births. For stillbirths, perinatal deaths and adjusted perinatal deaths, rates are calculated on total live births and stillbirths. For early neonatal deaths, rates are calculated on total live births.

FIGURE 5.1
Perinatal Deaths by Birthweight Groups and Parity

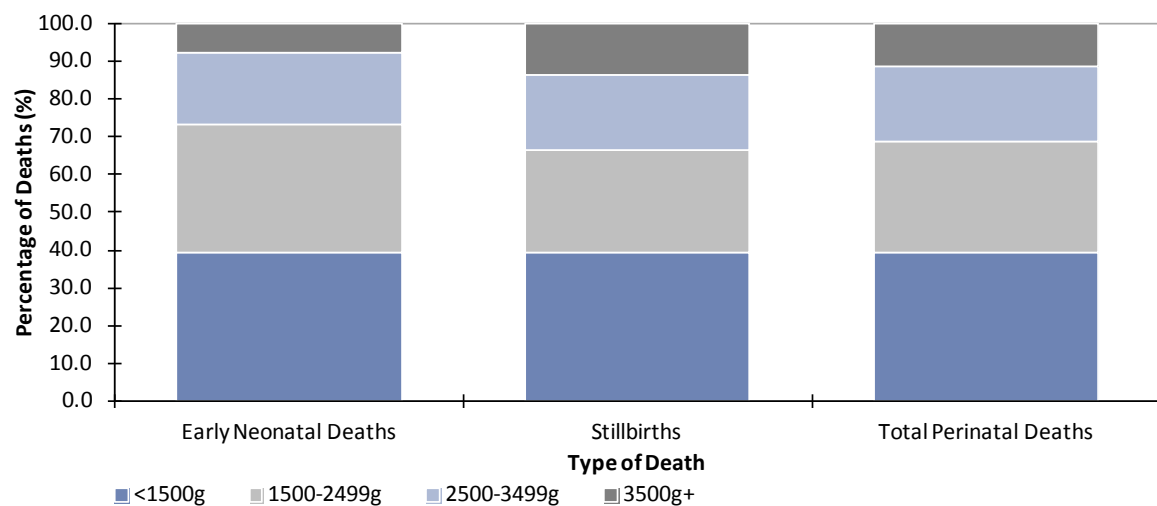
Total Perinatal Deaths



Perinatal Deaths: Primiparous Women

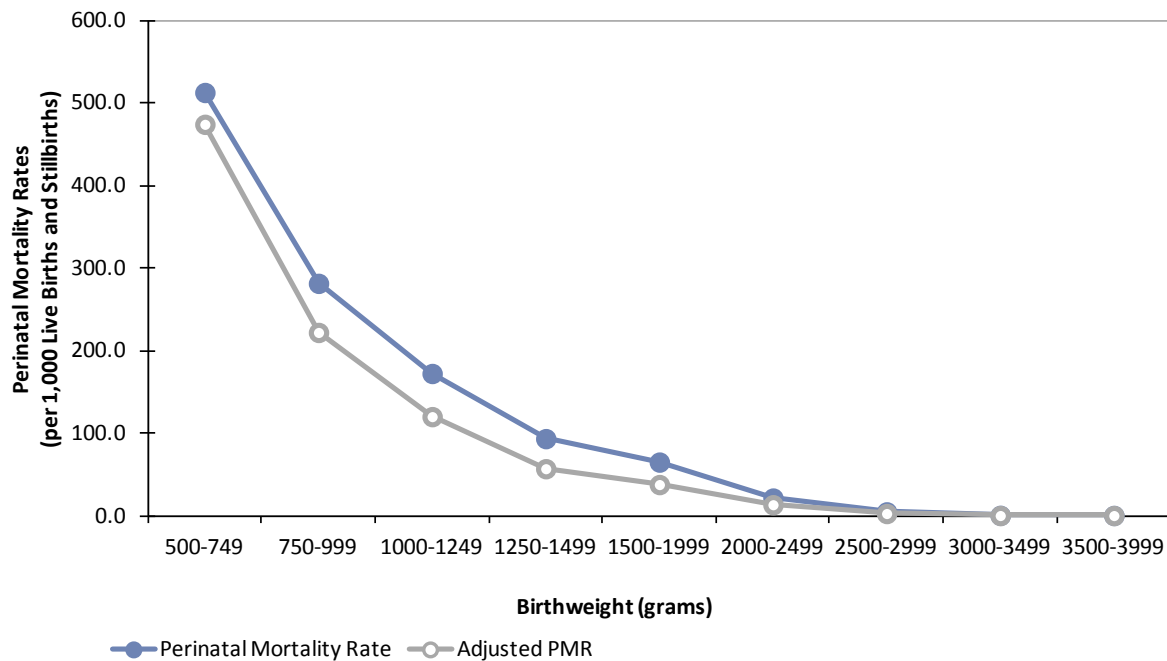


Perinatal Deaths: Multiparous Women



Note: See Table 5.1 for data.

FIGURE 5.2
Perinatal Mortality Rates by Birthweight



Notes: 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.³³ 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.³⁴

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 (20.5 per cent).
- Approximately seven in ten perinatal deaths weighed <2,500 grams, and of these 30.4 per cent were due to congenital malformations (Q00-Q99), followed by maternal factors (P00-P04) accounting for 17.4 per cent (see Figure 5.3).
- Of the 30.9 per cent of perinatal deaths weighing $\geq 2,500$ grams, 27.5 per cent recorded cause of death due to maternal factors (P00-P04) and 22.1 per cent were due to unspecified/unexplained (P95, P96.9) factors (see Figure 5.4).

³³ World Health Organisation, *op. cit.*

³⁴ See Appendix D for more detail.

TABLE 5.2

Total Perinatal Deaths: 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	
Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery	P00-P04	13	7	2	6	14	9	9	9	14	4	87
		86.7	41.2	9.9	25.8	16.5	3.7	1.1	0.4	0.6	0.4	1.2
Disorders related to length of gestation and foetal growth	P05-P08	28	8	4	2	3	3	2	0	0	0	50
		186.7	47.1	19.8	8.6	3.5	1.2	0.2	-	-	-	0.7
Respiratory and cardiovascular disorders specific to the perinatal period	P20-P29	8	8	7	0	7	8	8	8	6	0	60
		53.3	47.1	34.7	-	8.3	3.3	0.9	0.3	0.2	-	0.8
Infections specific to the perinatal period	P35-P39	5	0	0	0	0	0	4	1	1	0	11
		33.3	-	-	-	-	-	0.5	0.0	0.0	-	0.2
Haemorrhagic and haematological disorders of foetus and newborn	P50-P61	2	1	1	0	2	2	1	0	0	0	9
		13.3	5.9	5.0	-	2.4	0.8	0.1	-	-	-	0.1
Transitory endocrine and metabolic disorders specific to foetus and newborn	P70-P74	0	1	0	1	0	1	0	0	1	0	4
		-	5.9	-	4.3	-	0.4	-	-	0.0	-	0.1
Digestive system disorders of foetus and newborn	P75-P78	1	1	1	0	0	1	0	1	0	0	5
		6.7	5.9	5.0	-	-	0.4	-	0.0	-	-	0.1
Conditions involving the integument and temperature regulation of foetus and newborn	P80-P83	3	1	1	1	0	1	1	0	0	0	8
Other disorders originating in the perinatal period	P90.0-P94.9, P96.0-P96.8	0	1	0	0	0	0	0	0	2	1	4
		-	5.9	-	-	-	-	-	-	0.1	0.1	0.1
Foetal death of unspecified cause, Condition originating in the perinatal period, unspecified	P95, P96.9	6	7	7	3	6	9	7	10	9	3	67
		40.0	41.2	34.7	12.9	7.1	3.7	0.8	0.4	0.4	0.3	0.9
Congenital malformations of the nervous system	Q00-Q07	2	3	2	0	5	5	4	0	0	0	21
		13.3	17.6	9.9	-	5.9	2.0	0.5	-	-	-	0.3
Congenital malformations of eye, ear, face and neck	Q10-Q18	0	0	0	1	0	0	0	0	0	0	1
		-	-	-	4.3	-	-	-	-	-	-	0.0
Congenital malformations of the circulatory system	Q20-Q28	1	2	3	0	0	3	3	0	1	0	13
		6.7	11.8	14.9	-	-	1.2	0.4	-	0.0	-	0.2
Congenital malformations of the respiratory system	Q30-Q34	0	1	1	0	0	0	0	0	1	0	3
		-	5.9	5.0	-	-	-	-	-	0.0	-	0.0
Other congenital malformations of the digestive system	Q38-Q45	0	0	0	0	0	1	1	0	0	0	2
		-	-	-	-	-	0.4	0.1	-	-	-	0.0
Congenital malformations of the urinary system	Q60-Q64	0	1	0	2	3	4	1	1	1	0	13
		-	5.9	-	8.6	3.5	1.6	0.1	0.0	0.0	-	0.2
Congenital malformations and deformations of the musculoskeletal system	Q65-Q79	2	1	1	1	2	0	2	0	0	1	10
		13.3	5.9	5.0	4.3	2.4	-	0.2	-	-	0.1	0.1
Other congenital malformations	Q80-Q89	0	1	2	3	0	1	2	1	0	0	10
		-	5.9	9.9	12.9	-	0.4	0.2	0.0	-	-	0.1
Chromosomal abnormalities, not elsewhere classified	Q90-Q99	6	4	3	2	14	6	4	3	0	0	42
		40.0	23.5	14.9	8.6	16.5	2.5	0.5	0.1	-	-	0.6
All other causes	A000-Q999, R000-Z999	0	0	0	0	0	1	0	2	0	1	4
		-	-	-	-	-	0.4	-	0.1	-	0.1	0.1
Total		77	48	35	22	56	55	49	36	36	10	424
		513.3	282.4	173.3	94.4	66.0	22.5	5.8	1.6	1.4	1.0	5.9

TABLE 5.2

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

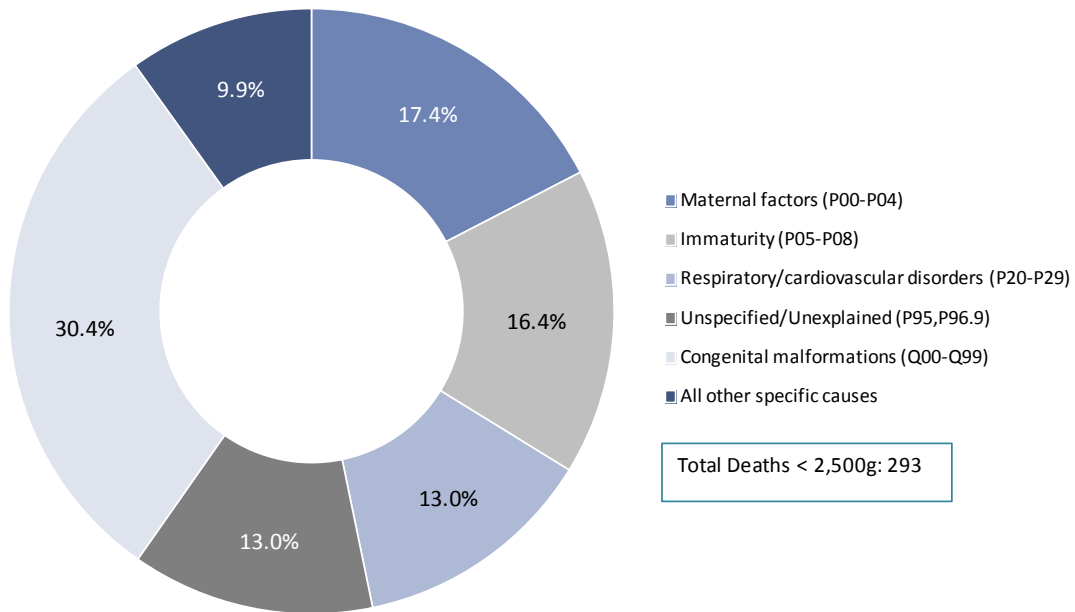
Number Rate per 1,000 Live Births and Stillbirths	ICD-10 Code	Birthweight (grams)										Total
		500 - 749	750 - 999	1000 - 1249	1250 - 1499	1500 - 1999	2000 - 2499	2500 - 2999	3000 - 3499	3500 - 3999	4000 - 4499	
Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery	P00-P04	10	7	2	6	14	9	9	9	14	4	84
		88.5	54.7	13.5	41.1	26.8	5.2	1.2	0.4	0.6	0.4	1.2
Disorders related to length of gestation and foetal growth	P05-P08	20	7	3	2	3	3	2	0	0	0	40
		177.0	54.7	20.3	13.7	5.7	1.7	0.3	-	-	-	0.6
Respiratory and cardiovascular disorders specific to the perinatal period	P20-P29	7	8	5	0	6	7	7	8	6	0	54
		61.9	62.5	33.8	0.0	11.5	4.1	0.9	0.4	0.2	-	0.8
Infections specific to the perinatal period	P35-P39	2	0	0	0	0	0	4	1	1	0	8
		17.7	-	-	-	-	-	0.5	0.0	0.0	-	0.1
Haemorrhagic and haematological disorders of foetus and newborn	P50-P61	2	1	1	0	0	2	1	0	0	0	7
		17.7	7.8	6.8	-	-	1.2	0.1	-	-	-	0.1
Transitory endocrine and metabolic disorders specific to foetus and newborn	P70-P74	0	0	0	0	0	1	0	0	1	0	2
		-	-	-	-	-	0.6	-	-	0.0	-	0.0
Digestive system disorders of foetus and newborn	P75-P78	1	1	1	0	0	1	0	1	0	0	5
		8.8	7.8	6.8	-	-	0.6	-	0.0	-	-	0.1
Conditions involving the integument and temperature regulation of foetus and newborn	P80-P83	3	1	1	1	0	1	1	0	0	0	8
		26.5	7.8	6.8	6.8	-	0.6	0.1	-	-	-	0.1
Other disorders originating in the perinatal period	P90.0-P94.9, P96.0-P96.8	0	0	0	0	0	0	0	0	2	1	3
		-	-	-	-	-	-	-	-	0.1	0.1	0.0
Foetal death of unspecified cause, Condition originating in the perinatal period, unspecified	P95, P96.9	6	7	6	2	6	8	7	10	9	3	64
		53.1	54.7	40.5	13.7	11.5	4.7	0.9	0.4	0.4	0.3	0.9
Congenital malformations of the nervous system	Q00-Q07	2	3	2	0	3	5	4	0	0	0	19
		17.7	23.4	13.5	-	5.7	2.9	0.5	-	-	-	0.3
Congenital malformations of eye, ear, face and neck	Q10-Q18	0	0	0	1	0	0	0	0	0	0	1
		-	-	-	6.8	-	-	-	-	-	-	0.0
Congenital malformations of the circulatory system	Q20-Q28	1	1	3	0	0	3	3	0	1	0	12
		8.8	7.8	20.3	-	-	1.7	0.4	-	0.0	-	0.2
Congenital malformations of the respiratory system	Q30-Q34	0	1	1	0	0	0	0	0	1	0	3
		-	7.8	6.8	-	-	-	-	-	0.0	-	0.0
Other congenital malformations of the digestive system	Q38-Q45	0	0	0	0	0	1	1	0	0	0	2
		-	-	-	-	-	0.6	0.1	-	-	-	0.0
Congenital malformations of the urinary system	Q60-Q64	0	1	0	2	3	4	1	1	1	0	13
		-	7.8	-	13.7	5.7	2.3	0.1	0.0	0.0	-	0.2
Congenital malformations and deformations of the musculoskeletal system	Q65-Q79	2	1	1	1	2	0	2	0	0	1	10
		17.7	7.8	6.8	6.8	3.8	-	0.3	-	-	0.1	0.1
Other congenital malformations	Q80-Q89	0	0	2	3	0	1	2	1	0	0	9
		-	-	13.5	20.5	-	0.6	0.3	0.0	-	-	0.1
Chromosomal abnormalities, not elsewhere classified	Q90-Q99	6	4	2	2	13	6	2	3	0	0	38
		53.1	31.3	13.5	13.7	24.9	3.5	0.3	0.1	-	-	0.5
All other causes	A000-O999, R000-Z999	0	0	0	0	0	1	0	2	0	1	4
		-	-	-	-	-	0.6	-	0.1	-	0.1	0.1
Total		62	43	30	20	50	53	46	36	36	10	386
		548.7	335.9	202.7	137.0	95.6	30.9	6.1	1.6	1.4	1.0	5.6

TABLE 5.2

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

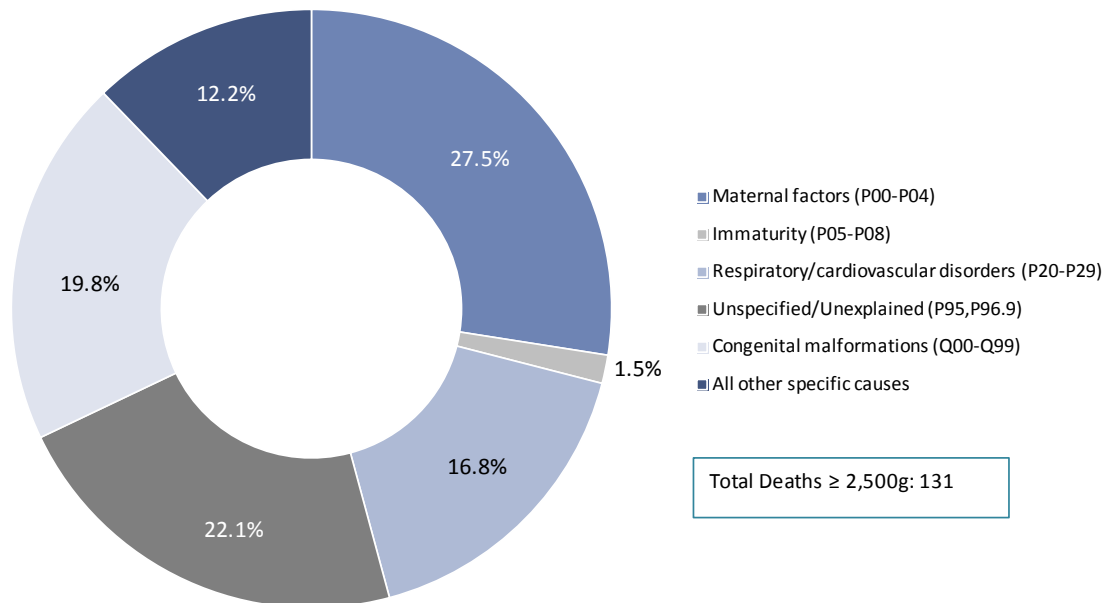
Number Rate per 1,000 Live Births and Stillbirths	ICD-10 Code	Birthweight (grams)										Total	
		500 - 749	750 - 999	1000 - 1249	1250 - 1499	1500 - 1999	2000 - 2499	2500 - 2999	3000 - 3499	3500 - 3999	4000 - 4499		
Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery	P00-P04	3	0	0	0	0	0	0	0	0	0	0	3
		81.1	-	-	-	-	-	-	-	-	-	-	1.2
Disorders related to length of gestation and foetal growth	P05-P08	8	1	1	0	0	0	0	0	0	0	0	10
		216.2	23.8	18.5	-	-	-	-	-	-	-	-	3.9
Respiratory and cardiovascular disorders specific to the perinatal period	P20-P29	1	0	2	0	1	1	1	0	0	0	0	6
		27.0	-	37.0	-	3.1	1.4	1.1	-	-	-	-	2.4
Infections specific to the perinatal period	P35-P39	3	0	0	0	0	0	0	0	0	0	0	3
		81.1	-	-	-	-	-	-	-	-	-	-	1.2
Haemorrhagic and haematological disorders of foetus and newborn	P50-P61	0	0	0	0	2	0	0	0	0	0	0	2
		-	-	-	-	6.2	-	-	-	-	-	-	0.8
Transitory endocrine and metabolic disorders specific to foetus and newborn	P70-P74	0	1	0	1	0	0	0	0	0	0	0	2
		-	23.8	-	11.5	-	-	-	-	-	-	-	0.8
Other disorders originating in the perinatal period	P90.0-P94.9, P96.0-P96.8	0	1	0	0	0	0	0	0	0	0	0	1
		-	23.8	-	-	-	-	-	-	-	-	-	0.4
Foetal death of unspecified cause, Condition originating in the perinatal period, unspecified	P95, P96.9	0	0	1	1	0	1	0	0	0	0	0	3
		-	-	18.5	11.5	-	1.4	-	-	-	-	-	1.2
Congenital malformations of the nervous system	Q00-Q07	0	0	0	0	2	0	0	0	0	0	0	2
		-	-	-	-	6.2	-	-	-	-	-	-	0.8
Congenital malformations of the circulatory system	Q20-Q28	0	1	0	0	0	0	0	0	0	0	0	1
		-	23.8	-	-	-	-	-	-	-	-	-	0.4
Other congenital malformations	Q80-Q89	0	1	0	0	0	0	0	0	0	0	0	1
		-	23.8	-	-	-	-	-	-	-	-	-	0.4
Chromosomal abnormalities, not elsewhere classified	Q90-Q99	0	0	1	0	1	0	2	0	0	0	0	4
		-	-	18.5	-	3.1	-	2.3	-	-	-	-	1.6
Total		15	5	5	2	6	2	3	0	0	0	38	
		405.4	119.0	92.6	23.0	18.5	2.8	3.4	-	-	-	15.0	

FIGURE 5.3
Total Perinatal Deaths with Birthweight < 2,500 grams by Cause of Death



Note: See Table 5.2 for data.

FIGURE 5.4
Total Perinatal Deaths with Birthweight ≥ 2,500 grams by Cause of Death



Note: See note to Figure 5.2.

MORTALITY BY GESTATIONAL AGE

Table 5.3 presents data on mortality by gestational age.

- Prematurity³⁵ has a significant impact on stillbirth and early neonatal mortality rates with over two-thirds of total perinatal deaths born preterm.³⁶
- 66.9 per cent of singleton perinatal deaths and 94.7 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 66.0 per 1,000 live births and stillbirths (82.6 per 1,000 singleton births and 27.0 per 1,000 multiple births).
- For babies born at 37 or more completed weeks of gestation, perinatal mortality rate was 1.9 per 1,000 live births and stillbirths (1.9 for singleton births and 1.7 per 1,000 multiple births).

TABLE 5.3

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

	Total Perinatal Deaths	Total Perinatal Deaths %	Ante-Partum Stillbirths	Intra-Partum Stillbirths	Not Stated	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adj. PMR*
Total Births										
Less than 28	106	25.0	53	4	2	201.4	47	200.9	361.8	329.7
28-31	74	17.5	54	0	0	103.3	20	42.6	141.5	96.6
32-36	114	26.9	65	7	4	20.9	38	10.7	31.3	19.7
37-41	129	30.4	86	5	1	1.4	37	0.6	2.0	1.5
42 and Over	1	0.2	0	0	0	-	1	0.5	0.5	0.5
Total	424	100	258	16	7	3.9	143	2.0	5.9	4.3
Singleton Births										
Less than 28	88	22.8	50	4	1	243.4	33	193.0	389.4	352.1
28-31	67	17.4	48	0	0	135.6	19	62.1	189.3	127.7
32-36	103	26.7	58	7	4	27.1	34	13.7	40.5	26.0
37-41	127	32.9	86	5	1	1.4	35	0.5	2.0	1.5
42 and Over	1	0.3	0	0	0	-	1	0.5	0.5	0.5
Total	386	100	242	16	6	3.8	122	1.8	5.6	4.0
Multiple Births										
Less than 28	18	47.4	3	0	1	59.7	14	222.2	268.7	257.6
28-31	7	18.4	6	0	0	35.5	1	6.1	41.4	35.7
32-36	11	28.9	7	0	0	6.4	4	3.7	10.0	5.5
37-41	2	5.3	0	0	0	-	2	1.7	1.7	0.8
42 and Over	0	0.0	0	0	0	-	0	-	-	-
Total	38	100	16	0	1	6.7	21	8.3	15.0	11.9

Notes: Percentage column is subject to rounding.

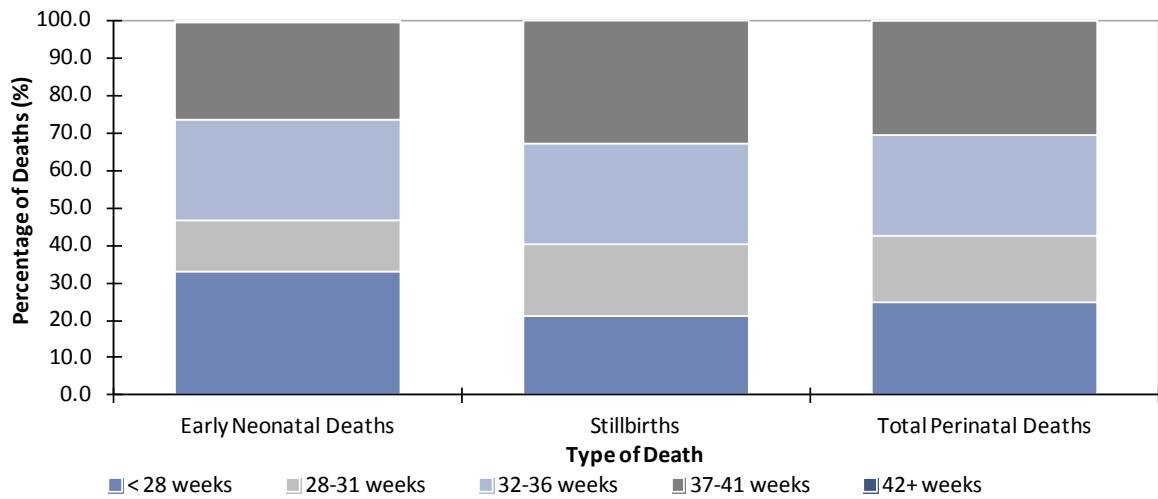
* Rates are calculated per 1,000 births. For stillbirths, perinatal deaths and adjusted perinatal deaths, rates are calculated on total live births and stillbirths. For early neonatal deaths, rates are calculated on total live births.

³⁵ Defined as less than 37 completed weeks of gestation.

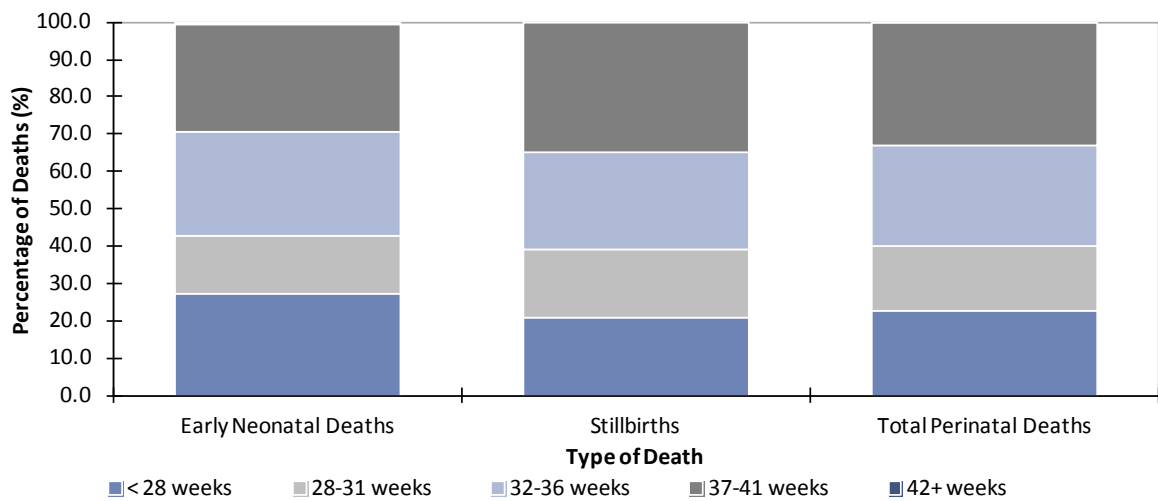
³⁶ In 2012, 6.2 per cent of total births were preterm.

FIGURE 5.5
Perinatal Deaths by Gestational Age (weeks)

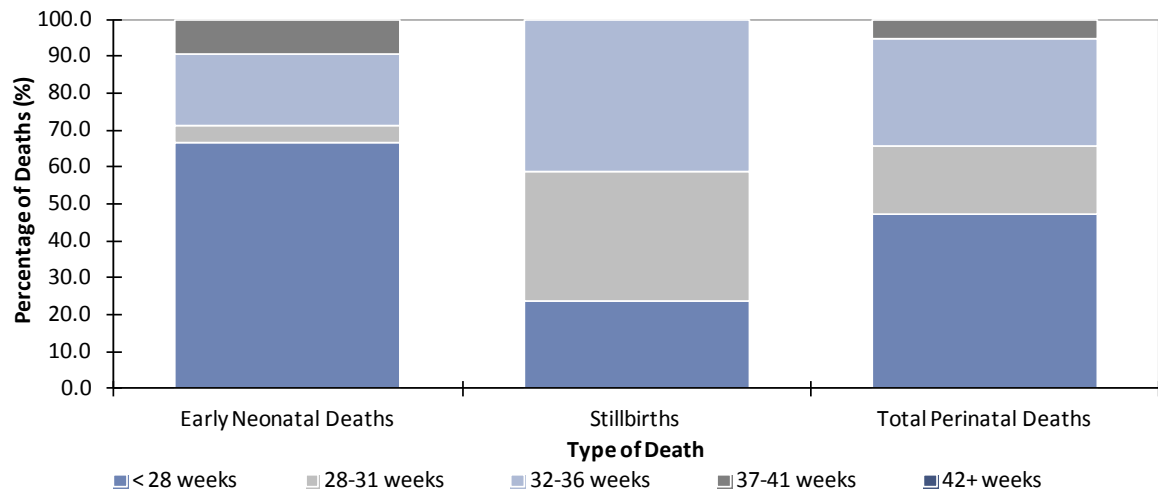
Total Perinatal Deaths



Singleton Perinatal Deaths



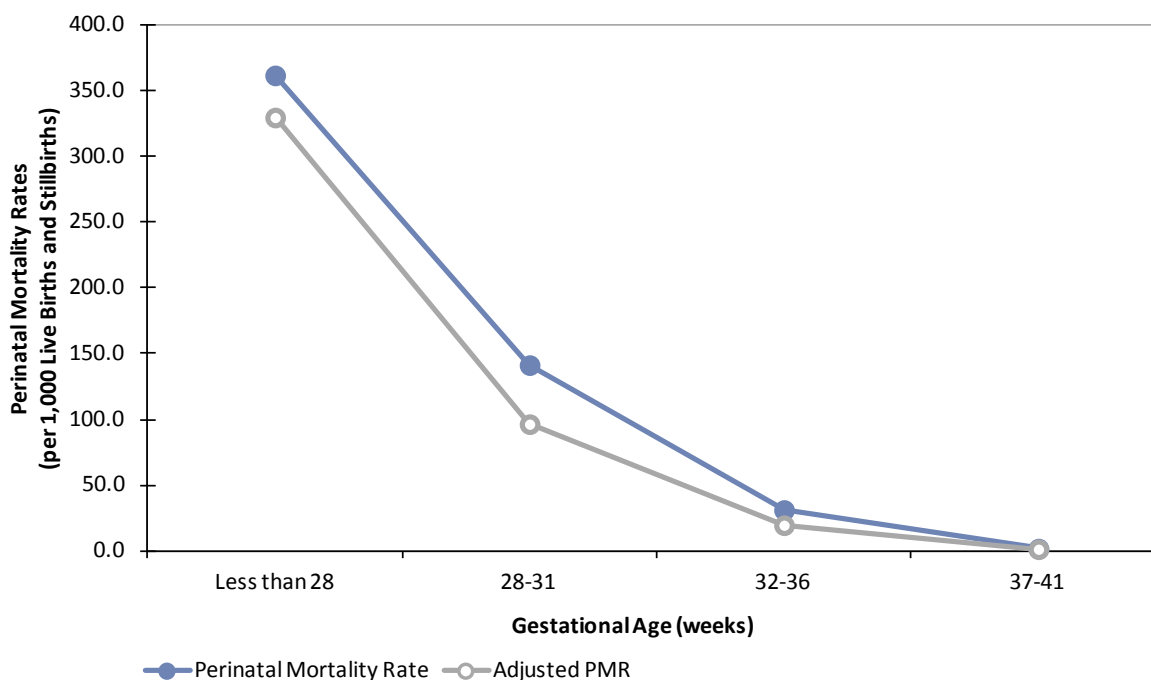
Multiple Perinatal Deaths



Note: See Table 5.3 for data.

Figure 5.6 shows the perinatal mortality rates by gestational age at delivery, illustrating the higher rates associated with lower gestational age.

FIGURE 5.6
Perinatal Mortality Rates by Gestational Age (weeks) at Delivery



Notes: 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 2012, 15.8 per cent of total perinatal deaths were classified as 'unspecified/unexplained' (P95, P96.9). The fact that almost 62 per cent of all perinatal deaths in Ireland do not undergo post-mortem examinations 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
Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery	P00-P04	83	1.2	4	0.1	87	1.2	81	1.2	3	0.0	84	1.2	2	0.8	1	0.4	3	1.2
Foetus and newborn affected by maternal conditions that may be unrelated to present pregnancy	P000 - P009	1	0.0	0	-	1	0.0	1	0.0	0	-	1	0.0	0	-	0	-	0	-
Foetus and newborn affected by maternal complications of pregnancy	P010 - P019	3	0.0	2	0.0	5	0.1	1	0.0	1	0.0	2	0.0	2	0.8	1	0.4	3	1.2
Foetus and newborn affected by complications of placenta, cord and membranes	P020 - P029	79	1.1	2	0.0	81	1.1	79	1.1	2	0.0	81	1.2	0	-	0	-	0	-
Disorders related to length of gestation and foetal growth	P05-P08	28	0.4	22	0.3	50	0.7	24	0.3	16	0.2	40	0.6	4	1.6	6	2.4	10	3.9
Slow foetal growth and foetal malnutrition	P050 - P059	11	0.2	2	0.0	13	0.2	8	0.1	2	0.0	10	0.1	3	1.2	0	-	3	1.2
Disorders related to short gestation and low birth weight, not elsewhere classified	P070 - P073	17	0.2	20	0.3	37	0.5	16	0.2	14	0.2	30	0.4	1	0.4	6	2.4	7	2.8
Respiratory and cardiovascular disorders specific to the perinatal period	P20-P29	30	0.4	30	0.4	60	0.8	27	0.4	27	0.4	54	0.8	3	1.2	3	1.2	6	2.4
Intrauterine hypoxia	P200 - P209	22	0.3	2	0.0	24	0.3	21	0.3	2	0.0	23	0.3	1	0.4	0	-	1	0.4
Birth asphyxia	P210 - P219	0	-	1	0.0	1	0.0	0	-	1	0.0	1	0.0	0	-	0	-	0	-
Respiratory distress of newborn	P220 - P229	0	-	3	0.0	3	0.0	0	-	3	0.0	3	0.0	0	-	0	-	0	-
Congenital pneumonia	P230 - P239	1	0.0	1	0.0	2	0.0	1	0.0	1	0.0	2	0.0	0	-	0	-	0	-
Neonatal aspiration syndromes	P240 - P249	2	0.0	3	0.0	5	0.1	2	0.0	2	0.0	4	0.1	0	-	1	0.4	1	0.4
Pulmonary haemorrhage originating in the perinatal period	P260 - P269	1	0.0	2	0.0	3	0.0	1	0.0	2	0.0	3	0.0	0	-	0	-	0	-
Other respiratory conditions originating in the perinatal period	P280 - P289	0	-	15	0.2	15	0.2	0	-	15	0.2	15	0.2	0	-	0	-	0	-
Cardiovascular disorders originating in the perinatal period	P290 - P299	4	0.0	3	0.0	7	0.1	2	0.0	1	0.0	3	0.0	2	0.8	2	0.8	4	1.6
Infections specific to the perinatal period	P35-P39	8	0.1	3	0.0	11	0.2	7	0.1	1	0.0	8	0.1	1	0.4	2	0.8	3	1.2
Bacterial sepsis of newborn	P360 - P369	1	0.0	1	0.0	2	0.0	0	-	0	-	0	-	1	0.4	1	0.4	2	0.8
Other infections specific to the perinatal period	P390 - P399	7	0.1	2	0.0	9	0.1	7	0.1	1	0.0	8	0.1	0	-	1	0.4	1	0.4
Haemorrhagic and haematological disorders of foetus and newborn	P50-P61	5	0.1	4	0.1	9	0.1	3	0.0	4	0.1	7	0.1	2	0.8	0	-	2	0.8
Foetal blood loss	P500 - P509	2	0.0	0	-	2	0.0	2	0.0	0	-	2	0.0	0	-	0	-	0	-
Intracranial nontraumatic haemorrhage of foetus and newborn	P520 - P529	1	0.0	2	0.0	3	0.0	1	0.0	2	0.0	3	0.0	0	-	0	-	0	-
Haemolytic disease of foetus and newborn	P550 - P559	0	-	1	0.0	1	0.0	0	-	1	0.0	1	0.0	0	-	0	-	0	-
Other perinatal haematological disorders	P610 - P619	2	0.0	1	0.0	3	0.0	0	-	1	0.0	1	0.0	2	0.8	0	-	2	0.8

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
Transitory endocrine and metabolic disorders specific to foetus and newborn	P70-P74	2	0.0	2	0.0	4	0.1	1	0.0	1	0.0	2	0.0	1	0.4	1	0.4	2	0.8
Transitory disorders of carbohydrate metabolism specific to foetus and newborn	P700 - P709	2	0.0	0	-	2	0.0	1	0.0	0	-	1	0.0	1	0.4	0	-	1	0.4
Other transitory neonatal electrolyte and metabolic disturbances	P740-P749	0	-	2	0.0	2	0.0	0	-	1	0.0	1	0.0	0	-	1	0.4	1	0.4
Digestive system disorders of foetus and newborn	P75 - P78	2	0.0	3	0.0	5	0.1	2	0.0	3	0.0	5	0.1	0	-	0	-	0	-
Necrotizing enterocolitis of foetus and newborn	P77	0	-	1	0.0	1	0.0	0	-	1	0.0	1	0.0	0	-	0	-	0	-
Other perinatal digestive system disorders	P780 - P789	2	0.0	2	0.0	4	0.1	2	0.0	2	0.0	4	0.1	0	-	0	-	0	-
Conditions involving the integument and temperature regulation of foetus and newborn	P80-P83	6	0.1	2	0.0	8	0.1	6	0.1	2	0.0	8	0.1	0	-	0	-	0	-
Other conditions of integument specific to foetus and newborn	P830 - P839	6	0.0	2	0.0	8	0.1	6	0.1	2	0.0	8	0.1	0	-	0	-	0	-
Other disorders originating in the perinatal period	P90-P96	55	0.8	16	0.2	71	1.0	54	0.8	13	0.2	67	1.0	1	0.4	3	1.2	4	1.6
Other disturbances of cerebral status of newborn	P910 - P919	0	-	2	0.0	2	0.0	0	-	2	0.0	2	0.0	0	-	0	-	0	-
Other conditions originating in the perinatal period	P960 - P968	0	-	2	0.0	2	0.0	0	-	1	0.0	1	0.0	0	-	1	0.4	1	0.4
Foetal death of unspecified cause, Condition origination in the perinatal period, unspecified	P95, P969	55	0.8	12	0.2	67	0.9	54	0.8	10	0.1	64	0.9	1	0.4	2	0.8	3	1.2
Congenital malformations of the nervous system	Q00-Q07	11	0.2	10	0.1	21	0.3	11	0.2	8	0.1	19	0.3	0	-	2	0.8	2	0.8
Anencephaly and similar malformations	Q000 - Q002	5	0.1	7	0.1	12	0.2	5	0.1	6	0.1	11	0.2	0	-	1	0.4	1	0.4
Encephalocele	Q010 - Q019	1	0.0	0	-	1	0.0	1	0.0	0	-	1	0.0	0	-	0	-	0	-
Congenital hydrocephalus	Q030 - Q039	2	0.0	0	-	2	0.0	2	0.0	0	-	2	0.0	0	-	0	-	0	-
Other congenital malformations of the brain	Q040 - Q049	0	-	2	0.0	2	0.0	0	-	2	0.0	2	0.0	0	-	0	-	0	-
Spina bifida	Q050 - Q059	2	0.0	0	-	2	0.0	2	0.0	0	-	2	0.0	0	-	0	-	0	-
Other congenital malformations of nervous system	Q070 - Q079	1	0.0	1	0.0	2	0.0	1	0.0	0	-	1	0.0	0	-	1	0.4	1	0.4
Congenital malformations of eye, ear, face and neck	Q10-Q18	1	0.0	0	-	1	0.0	1	0.0	0	-	1	0.0	0	-	0	-	0	-
Other congenital malformations of face and neck	Q180 - Q189	1	0.0	0	-	1	0.0	1	0.0	0	-	1	0.0	0	-	0	-	0	-
Congenital malformations of the circulatory system	Q20-Q28	5	0.1	8	0.1	13	0.2	5	0.1	7	0.1	12	0.2	0	-	1	0.4	1	0.4
Congenital malformations of cardiac septa	Q210 - Q219	0	-	1	0.0	1	0.0	0	-	1	0.0	1	0.0	0	-	0	-	0	-
Congenital malformations of aortic and mitral valves	Q230 - Q239	0	-	2	0.0	2	0.0	0	-	1	0.0	1	0.0	0	-	1	0.4	1	0.4
Other congenital malformations of heart	Q240 - Q249	4	0.1	5	0.1	9	0.1	4	0.1	5	0.1	9	0.1	0	-	0	-	0	-
Other congenital malformations of peripheral vascular system	Q270 - Q279	1	0.0	0	-	1	0.0	1	0.0	0	-	1	0.0	0	-	0	-	0	-
Congenital malformations of the respiratory system	Q30-Q34	0	-	3	0.0	3	0.0	0	-	3	0.0	3	0.0	0	-	0	-	0	-
Congenital malformations of lung	Q330 - Q339	0	-	2	0.0	2	0.0	0	-	2	0.0	2	0.0	0	-	0	-	0	-
Other congenital malformations of respiratory system	Q340 - Q349	0	-	1	0.0	1	0.0	0	-	1	0.0	1	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
Other congenital malformations of the digestive system	Q38-Q45	0	-	2	0.0	2	0.0	0	-	2	0.0	2	0.0	0	-	0	-	0	-
Congenital malformations of oesophagus	Q390 - Q399	0	-	1	0.0	1	0.0	0	-	1	0.0	1	0.0	0	-	0	-	0	-
Congenital absence, atresia and stenosis of large intestine	Q420-Q429	0	-	1	0.0	1	0.0	0	-	1	0.0	1	0.0	0	-	0	-	0	-
Congenital malformations of the urinary system	Q60-Q64	2	0.0	11	0.2	13	0.2	2	0.0	11	0.2	13	0.2	0	-	0	-	0	-
Renal agenesis and other reduction defects of kidney	Q600 - Q606	2	0.0	6	0.1	8	0.1	2	0.0	6	0.1	8	0.1	0	-	0	-	0	-
Cystic kidney disease	Q610 - Q619	0	-	3	0.0	3	0.0	0	-	3	0.0	3	0.0	0	-	0	-	0	-
Congenital obstructive defects of renal pelvis and congenital malformations of ureter	Q620 - Q628	0	-	1	0.0	1	0.0	0	-	1	0.0	1	0.0	0	-	0	-	0	-
Other congenital malformations of urinary system	Q640 - Q649	0	-	1	0.0	1	0.0	0	-	1	0.0	1	0.0	0	-	0	-	0	-
Congenital malformations and deformations of the musculoskeletal system	Q65-Q79	6	0.1	4	0.1	10	0.1	6	0.1	4	0.1	10	0.1	0	-	0	-	0	-
Congenital musculoskeletal deformities of head, face, spine and chest	Q670 - Q678	1	0.0	1	0.0	2	0.0	1	0.0	1	0.0	2	0.0	0	-	0	-	0	-
Other congenital malformations of limbs	Q740 - Q749	1	0.0	1	0.0	2	0.0	1	0.0	1	0.0	2	0.0	0	-	0	-	0	-
Osteochondrodysplasia with defects of growth of tubular bones and spine	Q770 - Q779	0	-	1	0.0	1	0.0	0	-	1	0.0	1	0.0	0	-	0	-	0	-
Other osteochondrodysplasias	Q780 - Q789	1	0.0	0	-	1	0.0	1	0.0	0	-	1	0.0	0	-	0	-	0	-
Congenital malformations of musculoskeletal system, not elsewhere classified	Q790 - Q799	3	0.0	1	0.0	4	0.1	3	0.0	1	0.0	4	0.1	0	-	0	-	0	-
Other congenital malformations	Q80-Q89	5	0.1	5	0.1	10	0.1	5	0.1	4	0.1	9	0.1	0	-	1	0.4	1	0.4
Other specified congenital malformation syndromes affecting multiple systems	Q870 - Q878	2	0.0	0	-	2	0.0	2	0.0	0	-	2	0.0	0	-	0	-	0	-
Other congenital malformations, not elsewhere classified	Q890 - Q899	3	0.0	5	0.1	8	0.1	3	0.0	4	0.1	7	0.1	0	-	1	0.4	1	0.4
Chromosomal abnormalities, not elsewhere classified	Q90-Q99	29	0.4	13	0.2	42	0.6	26	0.4	12	0.2	38	0.5	3	1.2	1	0.4	4	1.6
Downs syndrome	Q900 - Q909	9	0.1	1	0.0	10	0.1	8	0.1	1	0.0	9	0.1	1	0.4	0	-	1	0.4
Edwards syndrome and Patau syndrome	Q910 - Q917	17	0.2	11	0.2	28	0.4	16	0.2	10	0.1	26	0.4	1	0.4	1	0.4	2	0.8
Monosomies and deletions from the autosomes, not elsewhere classified	Q930 - Q939	1	0.0	0	-	1	0.0	0	-	0	-	0	-	1	0.4	0	-	1	0.4
Turners syndrome	Q960 - Q969	2	0.0	0	-	2	0.0	2	0.0	0	-	2	0.0	0	-	0	-	0	-
Other chromosome abnormalities, not elsewhere classified	Q990 - Q999	0	-	1	0.0	1	0.0	0	-	1	0.0	1	0.0	0	-	0	-	0	-
All other causes	A00.0-099.9, R00.0-Z99.9	3	0.0	1	0.0	4	0.1	3	0.0	1	0.0	4	0.1	0	-	0	-	0	-
Total		281	3.9	143	2.0	424	5.9	264	3.8	122	1.8	386	5.6	17	6.7	21	8.3	38	15.0

Notes: N denotes the number of deaths.

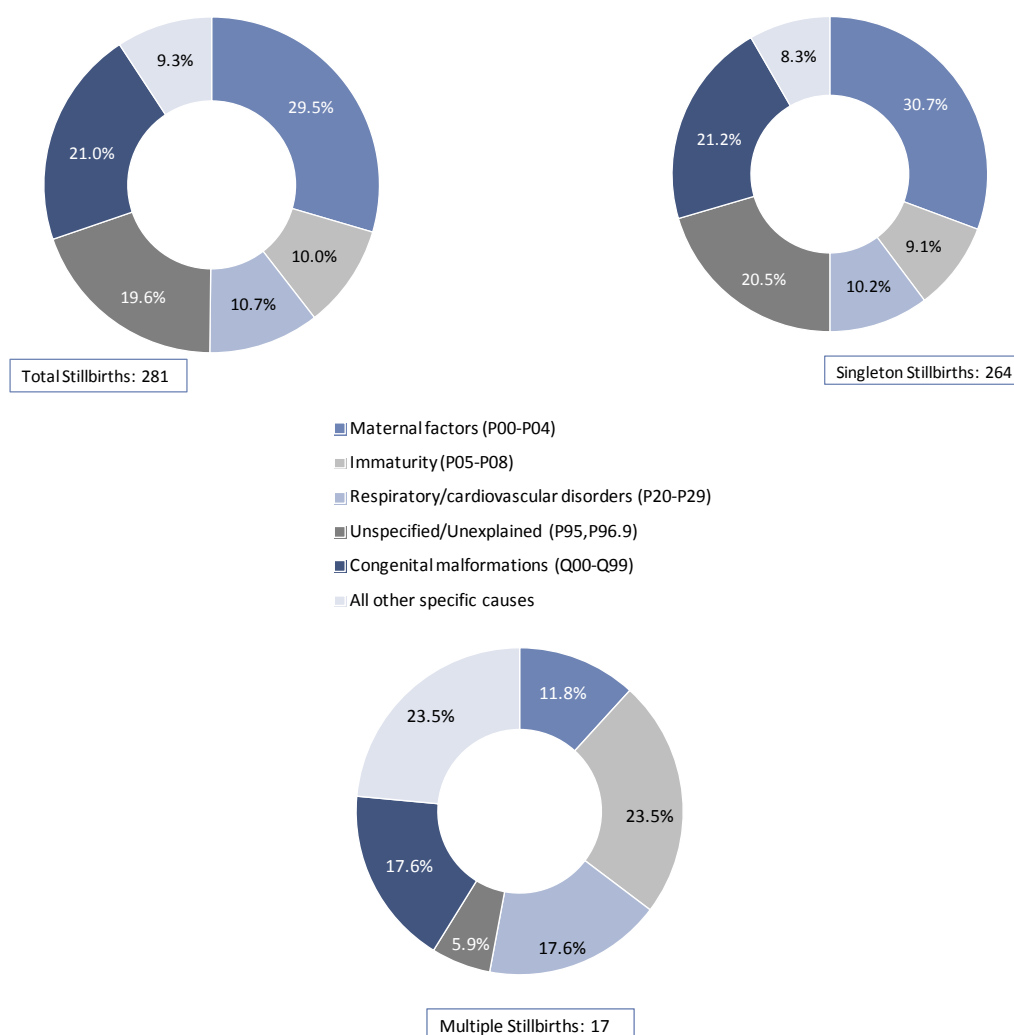
Rates are calculated per 1,000 births. For stillbirths, perinatal deaths and adjusted perinatal deaths, rates are calculated on total live births and stillbirths. For early neonatal deaths, rates are calculated on total live births.

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 (29.5 per cent) and singleton stillbirths (30.7 per cent).
- Immaturity (P05-P08) accounted for 23.5 per cent of multiple stillbirths.
- Congenital malformations (Q00-Q99) contributed to over 1 in 5 deaths for total stillbirths (21.0 per cent) and singleton stillbirths (21.2 per cent).
- The cause of death was unspecified/unexplained (P95, P96.9) for 19.6 per cent of total stillbirths.

FIGURE 5.7
Stillbirths by Cause of Death,



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

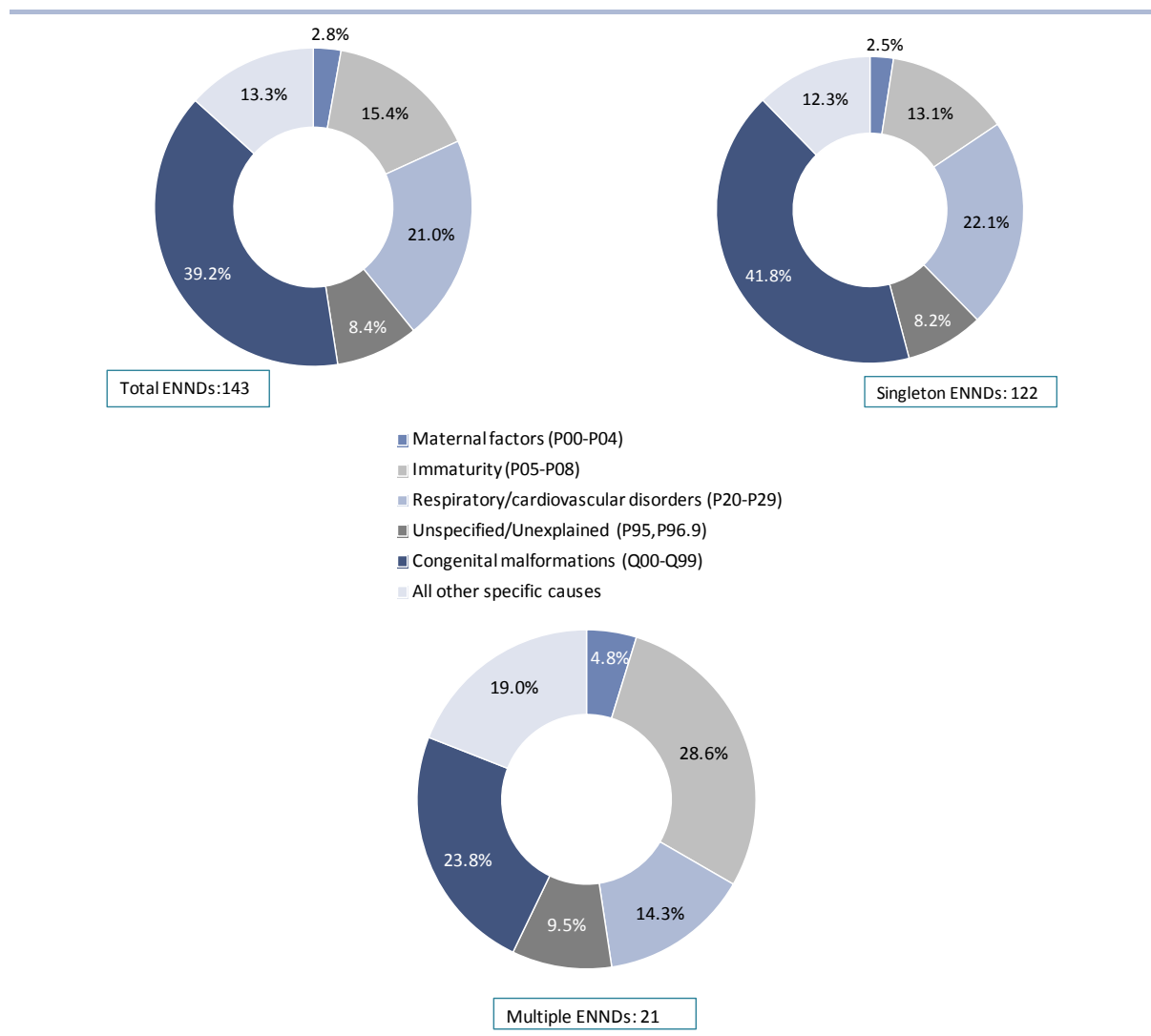
EARLY NEONATAL DEATHS (ENNDs)

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

- Almost 40 per cent of total early neonatal deaths and 41.8 per cent of singleton early neonatal deaths were due to congenital malformations (Q00-Q99).
- Respiratory/cardiovascular disorders (P20-P29) was the second leading cause of death, contributing to 21.0 per cent of total early neonatal deaths and 22.1 per cent of singleton early neonatal deaths.
- Immaturity (P05-P08) accounted for 28.6 per cent of multiple early neonatal deaths.

FIGURE 5.8

Early Neonatal Deaths by Cause of Death



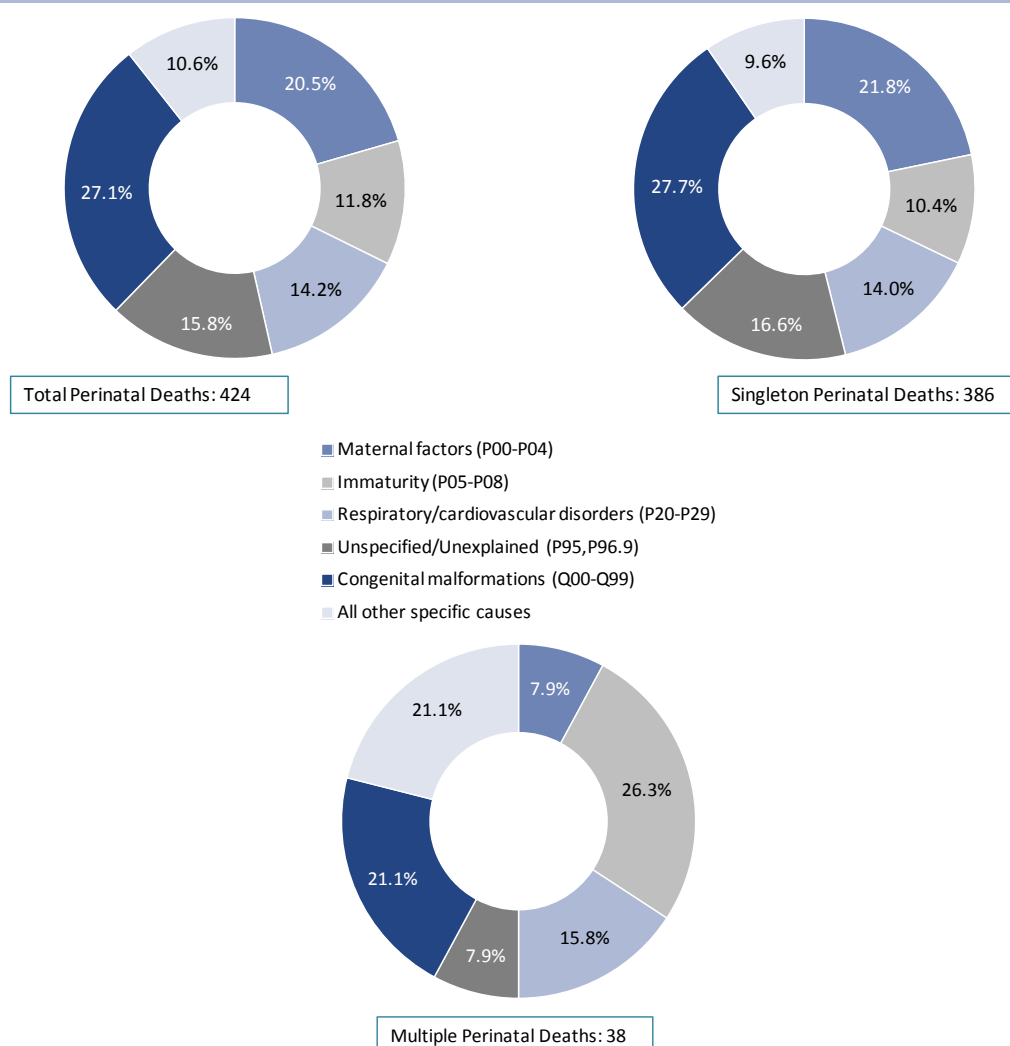
Notes: See Table 5.4 for data.
Percentages are subject to rounding.

TOTAL PERINATAL DEATHS

Figure 5.9 presents data on all perinatal deaths.

- Congenital malformations (Q00-Q99) accounted for over 1 in 4 total perinatal deaths (27.1 per cent).
- Maternal factors (P00-P04) was the second most frequently reported cause of death for total singleton deaths (21.8 per cent).
- Immaturity (P05-P08) was the leading cause of death for total multiple perinatal deaths accounting for 26.3 per cent of deaths.

FIGURE 5.9
Perinatal Deaths by Cause of Death



Notes: 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.

- Almost 1 in 5 early neonatal deaths occurred within the first hour of life.
- 56.6 per cent of total early neonatal deaths occurred within the first day of life.
- Almost a quarter of early neonatal deaths occurred during the first and second completed days 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
Completed Hours						
<1 hour	27	18.9	27	22.1	0	0.0
1-23 hours	54	37.8	43	35.2	11	52.4
Total under 1 day	81	56.6	70	57.4	11	52.4
Completed Days						
1	15	10.5	13	10.7	2	9.5
2	20	14.0	16	13.1	4	19.0
3	10	7.0	10	8.2	0	0.0
4	8	5.6	6	4.9	2	9.5
5	4	2.8	3	2.5	1	4.8
6	4	2.8	3	2.5	1	4.8
Total under 1 Week	61	42.7	51	41.8	10	47.6
Unknown	1	0.7	1	0.8	0	0.0
Total	143	100	122	100	21	100

Note: Percentage columns are subject to rounding.

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.³⁷ Table 5.6 presents data on post-mortem examinations.

- The percentage of early neonatal deaths undergoing post-mortem examinations was 27.3 per cent compared to 42.3 per cent of stillbirths.
- A post-mortem examination was undertaken for 37.3 per cent of total perinatal deaths in 2012.

TABLE 5.6

Post-Mortem Examinations, Total Perinatal Deaths

Frequency Row Per Cent Col. Per Cent	Type of Death		
	Early Neonatal Deaths	Stillbirths	Total
Total Births			
Post-Mortem	39	119	158
	24.7	75.3	100.0
	27.3	42.3	37.3
No Post-Mortem	99	162	261
	37.9	62.1	100.0
	69.2	57.7	61.6
Not Stated	5	0	5
	100.0	0.0	100.0
	3.5	0.0	1.2
Total	143	281	424
	33.7	66.3	100
	100	100	100
Singleton Births			
Post-Mortem	36	111	147
	24.5	75.5	100
	29.5	42.0	38.1
No Post-Mortem	82	153	235
	34.9	65.1	100.0
	67.2	58.0	60.9
Not Stated	4	0	4
	100	0.0	100
	3.3	0.0	1.0
Total	122	264	386
	31.6	68.4	100.0
	100	100	100
Multiple Births			
Post-Mortem	3	8	11
	27.3	72.7	100.0
	14.3	47.1	28.9
No Post-Mortem	17	9	26
	65.4	34.6	100.0
	81.0	52.9	68.4
Not Stated	1	0	1
	100	0.0	100.0
	4.8	0.0	2.6
Total	21	17	38
	55.3	44.7	100.0
	100	100	100

Note: Percentage rows and columns are subject to rounding.

³⁷ Previous reports in this series can be downloaded from 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*, 10th 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 2012, there were 53 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:³⁸

1. Spontaneous cephalic delivery
2. Breech delivery, spontaneous, with or without forceps to after-coming head, breech extraction
3. Forceps delivery
4. Vacuum extraction³⁹
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 Socio-economic Groups: Occupations are coded and grouped, with minor modifications, according to the system of socio-economic groupings as used by the Central Statistics Office in the *1991 Census of Population, Volume 6*. Details are given in Appendix C.

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

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

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

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

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

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

Perinatal Period: For the purposes of NPRS 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.

³⁸ For the purpose of presenting data in this report 'instrumental delivery' includes breech/forceps, forceps or vacuum extraction.

³⁹ Also known as Ventouse Deliveries (Source: World Health Organization, 2005, *International Statistical Classification of Diseases and Related Health Problems, 10th Revision*, Vol. 1. Geneva: World Health Organization).

Plurality: 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 2012.

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)	PLACE OF BIRTH (Hospital = 1, BBA = 2, Domiciliary = 3)	NAME AND ADDRESS OF _____	
HOSPITAL NO. 3	CASE NO. 6	ADDRESS OF _____	
HOSPITAL _____		HOSPITAL _____	
INFANT'S DETAILS		MOTHER'S HEALTH	
DATE OF BIRTH (DDMM/YYYY) 14	TIME OF BIRTH _____	ANTENATAL CARE THIS PREGNANCY (Hospital / Obstetrician = 1, G.P. Only = 2, Combined = 3, None = 4, Midwife Only = 5)	117
IF MULTIPLE BIRTH	ORDER OF BIRTH No. 22 of 23	DATE OF FIRST VISIT TO DOCTOR DURING PREGNANCY (DDMMYYYY)	118
SEX (Male = 1, Female = 2, Indeterminate = 3)	24	DATE OF FIRST VISIT TO HOSPITAL DURING PREGNANCY (DDMMYYYY)	126
BIRTHWEIGHT 25	GRAMMES	WAS MOTHER IMMUNE TO RUBELLA (Yes = 1, No = 2, Not Known = 3)	134
PERIOD OF GESTATION 29	WEEKS	METHOD OF DELIVERY (Spontaneous = 1, Breech ± Forceps = 2, Forceps = 3, Vac. Extraction = 4, Caesarean Sec. = 5, Other = 6)	135
FATHER'S DETAILS		MAIN MATERNAL DISEASE OR CONDITION AFFECTING FOETUS OR INFANT _____	
COUNTRY _____	31	OTHER MATERNAL DISEASES OR CONDITIONS AFFECTING FOETUS OR INFANT _____	
NATIONALITY _____	34	_____ 141	
OCCUPATION _____	38	INFANT'S HEALTH	
DATE OF BIRTH (DDMMYYYY) 44	42	TYPE OF FEEDING (Artificial = 1, Breast = 2, Combined = 3)	146
MOTHER'S DETAILS		WAS BCG ADMINISTERED (Yes = 1, No = 2)	147
COUNTRY _____	52	MAIN DISEASE OR CONGENITAL MALFORMATION AFFECTING INFANT _____	
NATIONALITY _____	55	OTHER DISEASES OR CONGENITAL MALFORMATIONS AFFECTING INFANT _____	
OCCUPATION _____	59	_____ 153	
DATE OF BIRTH (DDMMYYYY) 65	63	HOSPITAL	
MARITAL STATUS (Married = 1, Never Married = 2, Widowed = 3, Married but Separated = 4, Divorced = 5)	72	WAS ADMISSION BOOKED (Yes = 1, No = 2)	158
DATE OF PRESENT MARRIAGE (DDMMYYYY) 74	73	DATE OF MOTHER'S ADMISSION (DDMMYYYY)	159
DATE OF LAST BIRTH (live or still) (DDMMYYYY) 82	74	DATE OF MOTHER'S DISCHARGE (DDMMYYYY)	167
NO. OF PREVIOUS LIVE BIRTHS 90	75	DATE OF INFANT'S DISCHARGE (DDMMYYYY)	175
CHILDREN STILL LIVING 92	76	WAS INFANT TRANSFERRED TO OTHER HOSPITAL FOR MEDICAL REASONS (Yes = 1, No = 2)	
STILLBIRTHS 94	77	IF 'YES', NAME OF HOSPITAL _____	
SPONTANEOUS ABORTIONS 96	78	_____ 184	
PERINATAL DEATH		GENERAL PRACTITIONER ATTENDED BY MOTHER	
TYPE OF DEATH (Early Neonatal = 1, Stillbirth = 2)	98	_____	
WAS AUTOPSY PERFORMED (Yes = 1, No = 2)	99	_____	
AGE AT DEATH 100	DAYS	_____	
101	HOURS	_____	
PLACE OF DEATH 103	100	_____	
IF STILLBIRTH, DID DEATH OCCUR BEFORE LABOUR (1) DURING LABOUR (2) NOT KNOWN (3)	106	_____	
CAUSE OF DEATH		_____	
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 SOCIO-ECONOMIC GROUPS

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 to the socio-economic group 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 socio-economic group. 'Not Classifiable' has been used to categorise indecipherable, unclear, or unlisted occupations where efforts to clarify the information have failed. 'Home Duties' is recorded as the socio-economic group 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 socio-economic group in this report, the categories 'Not Applicable' and 'Not Stated' are combined.

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

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

APPENDIX D

CAUSE OF DEATH CLASSIFICATION

The main cause of death has been determined according to the guidelines set out by the WHO in the Tenth Revision of the ICD.⁴⁰ 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).

⁴⁰ World Health Organization, 2005, *International Statistical Classification of Diseases and Related Health Problems, 10th Revision*, Vols. 1- 3. Geneva: World Health Organization

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

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

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

Rule P4. Conditions entered in wrong section

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

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

Table D1 summarises these rules.

TABLE D1

Cause of Death Coding Rules

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

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

TABLE D2

ICD 10, Cause of Death Codes

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

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

APPENDIX E

CLASSIFICATION OF COUNTY OF RESIDENCE

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

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

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

APPENDIX F

CLASSIFICATION OF NATIONALITY

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

Nationalities have been coded and classified into groupings according to a system devised by the CSO, as follows:

Ireland includes the following:

Ireland
Irish American
Irish English
Irish European
Irish Other.

UK includes the following:

England
Great Britain
Northern Ireland
Scotland
Wales.

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

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

EU 15 to EU 27 includes the following:

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

Rest of Europe includes the following:

Andorra	Jersey
Armenia	Liechtenstein
Azerbaijan	Macedonia, The Former Yugoslav Republic of,
Belarus	Moldova, Republic of
Bosnia and Herzegovina	Monaco
Croatia	Norway
Faroe Islands	Russian Federation
Georgia	San Marino
Gibraltar	Switzerland
Guernsey	Turkey

Iceland
Isle of Man

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	

America includes the following:

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

Australia includes the following:

Australia.

New Zealand and Other Oceania includes the following:

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

Multi-Nationality includes the following:

Mixed/Multi-Nationality (stated as so).

No Nationality:

Stated as so

Not Stated:

Where nationality is not provided

Not Applicable:

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

All Other Nationalities:

Where nationality is not recorded to any category listed above

APPENDIX G

SOURCE DATA FOR FIGURES

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

TABLE G1

Mother's County of Residence, Total Births

Mother's County of Residence	Number	Per Cent
Carlow	938	1.3
Cavan	1,162	1.6
Clare	1,668	2.3
Cork	8,118	11.3
Donegal	2,070	2.9
Dublin City	15,183	21.1
Dublin County	6,097	8.5
Galway	3,917	5.4
Kerry	1,940	2.7
Kildare	3,641	5.1
Kilkenny	1,351	1.9
Laois	1,264	1.8
Leitrim	459	0.6
Limerick	2,958	4.1
Longford	658	0.9
Louth	1,922	2.7
Mayo	1,764	2.5
Meath	3,180	4.4
Monaghan	841	1.2
Offaly	1,125	1.6
Roscommon	836	1.2
Sligo	960	1.3
Tipperary	2,215	3.1
Waterford	1,699	2.4
Westmeath	1,473	2.0
Wexford	2,255	3.1
Wicklow	2,257	3.1
Other	35	0.0
Total	71,986	100

Notes: Percentage column is subject to rounding.
See Appendix E for details of county of residence classification.

TABLE G2
 Mother's Average Age by Mother's Nationality, Total Maternities

Mother's Nationality	Average Age in Years
Ireland	32.3
UK	32.0
EU15 (excluding Ireland & UK)	33.5
EU15 to EU27	29.6
Rest of Europe	31.2
Africa	31.4
Asia	31.5
America	32.6
Total	31.9

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

TABLE G3
 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	1,408	173	15	3	0	0	0	0	0	0	1,599
	88.1	10.8	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	100
20-24 Years	4,230	2,014	501	98	15	2	1	0	0	0	6,861
	61.7	29.4	7.3	1.4	0.2	0.0	0.0	0.0	0.0	0.0	100
25-29 Years	7,198	5,298	1,898	545	177	51	16	5	3	15,191	
	47.4	34.9	12.5	3.6	1.2	0.3	0.1	0.0	0.0	100	
30-34 Years	9,817	9,729	4,176	1,285	419	167	53	50	2	25,698	
	38.2	37.9	16.3	5.0	1.6	0.6	0.2	0.2	0.0	100	
35-39 Years	4,074	6,135	4,689	1,738	511	185	60	79	2	17,473	
	23.3	35.1	26.8	9.9	2.9	1.1	0.3	0.5	0.0	100	
40 Years and Over	878	1,191	916	495	203	104	45	52	0	3,884	
	22.6	30.7	23.6	12.7	5.2	2.7	1.2	1.3	0.0	100	
Not Stated	2	1	0	0	0	0	0	0	0	3	
	66.7	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100	
Total	27,607	24,541	12,195	4,164	1,325	509	175	186	7	70,709	
	39.0	34.7	17.2	5.9	1.9	0.7	0.2	0.3	0.0	100	

Note: Percentage rows are subject to rounding.

TABLE G4

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
Total Births										
500-749	79	0.3	57	22	278.5	14	245.6	455.7	448.7	66
750-999	88	0.3	75	13	147.7	12	160.0	284.1	222.2	78
1000-1249	101	0.4	90	11	108.9	4	44.4	148.5	104.2	83
1250-1499	129	0.5	121	8	62.0	3	24.8	85.3	48.4	101
1500-1999	417	1.5	406	11	26.4	5	12.3	38.4	26.7	319
2000-2499	1,159	4.1	1,142	17	14.7	7	6.1	20.7	13.0	981
2500-2999	3,807	13.5	3,795	12	3.2	10	2.6	5.8	4.2	3,637
3000-3499	9,696	34.4	9,683	13	1.3	2	0.2	1.5	1.4	9,654
3500-3999	9,109	32.3	9,100	9	1.0	4	0.4	1.4	1.3	9,104
4000-4499	3,129	11.1	3,127	2	0.6	3	1.0	1.6	1.3	3,129
4500 and Over	455	1.6	455	0	–	0	–	–	–	455
Total	28,169	100	28,051	118	4.2	64	2.3	6.5	5.0	27,607
Singleton Births										
500-749	56	0.2	37	19	339.3	9	243.2	500.0	490.9	56
750-999	68	0.3	55	13	191.2	10	181.8	338.2	274.2	68
1000-1249	68	0.3	59	9	132.4	3	50.85	176.5	111.1	68
1250-1499	81	0.3	75	6	74.1	3	40.00	111.1	52.6	81
1500-1999	238	0.9	231	7	29.4	5	21.6	50.4	34.2	238
2000-2499	820	3.0	803	17	20.7	6	7.5	28.0	17.3	820
2500-2999	3,463	12.8	3,452	11	3.2	10	2.9	6.1	4.6	3,463
3000-3499	9,575	35.4	9,562	13	1.4	2	0.2	1.6	1.5	9,575
3500-3999	9,101	33.6	9,092	9	1.0	4	0.4	1.4	1.3	9,101
4000-4499	3,129	11.6	3,127	2	0.6	3	1.0	1.6	1.3	3,129
4500 and Over	455	1.7	455	0	–	0	–	–	–	455
Total	27,054	100	26,948	106	3.9	55	2.0	6.0	4.6	27,054
Multiple Births										
500-749	23	2.1	20	3	130.4	5	250.0	347.8	347.8	10
750-999	20	1.8	20	0	–	2	100.0	100.0	52.6	10
1000-1249	33	3.0	31	2	60.6	1	32.3	90.9	90.9	15
1250-1499	48	4.3	46	2	41.7	0	–	41.7	41.7	20
1500-1999	179	16.1	175	4	22.3	0	–	22.3	16.9	81
2000-2499	339	30.4	339	0	–	1	2.9	2.9	2.9	161
2500-2999	344	30.9	343	1	2.9	0	–	2.9	–	174
3000-3499	121	10.9	121	0	–	0	–	–	–	79
3500-3999	8	0.7	8	0	–	0	–	–	–	3
4000-4499	0	–	0	0	–	0	–	–	–	0
4500 and Over	0	–	0	0	–	0	–	–	–	0
Total	1,115	100	1,103	12	10.8	9	8.2	18.8	16.2	553

Notes: Percentage column is subject to rounding.

* Rates are calculated 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 7 maternities with parity unknown; these were excluded from this table.

TABLE G5

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
Total Births										
500-749	71	0.2	43	28	394.4	13	302.3	577.5	508.2	65
750-999	82	0.2	69	13	158.5	10	144.9	280.5	223.7	70
1000-1249	101	0.2	87	14	138.6	6	69.0	198.0	138.3	91
1250-1499	104	0.2	95	9	86.5	2	21.1	105.8	70.0	81
1500-1999	430	1.0	403	27	62.8	13	32.3	93.0	51.1	354
2000-2499	1,283	2.9	1,266	17	13.3	14	11.1	24.2	15.7	1,086
2500-2999	4,646	10.6	4,630	16	3.4	11	2.4	5.8	3.5	4,373
3000-3499	13,234	30.2	13,217	17	1.3	4	0.3	1.6	1.3	13,134
3500-3999	15,775	36.0	15,756	19	1.2	4	0.3	1.5	1.3	15,758
4000-4499	6,725	15.4	6,722	3	0.4	2	0.3	0.7	0.7	6,724
4500 and Over	1,359	3.1	1,359	0	–	0	–	–	–	1,359
Total	43,810	100	43,647	163	3.7	79	1.8	5.5	3.8	43,095
Singleton Births										
500-749	57	0.1	32	25	438.6	9	281.3	596.5	510.6	57
750-999	60	0.1	47	13	216.7	7	148.9	333.3	272.7	60
1000-1249	80	0.2	67	13	162.5	5	74.6	225.0	162.2	80
1250-1499	65	0.2	56	9	138.5	2	35.7	169.2	114.8	65
1500-1999	284	0.7	257	27	95.1	11	42.8	133.8	78.7	284
2000-2499	895	2.1	878	17	19.0	13	14.8	33.5	21.5	895
2500-2999	4,115	9.7	4,100	15	3.6	10	2.4	6.1	3.7	4,115
3000-3499	13,013	30.7	12,996	17	1.3	4	0.3	1.6	1.3	13,013
3500-3999	15,740	37.1	15,721	19	1.2	4	0.3	1.5	1.3	15,740
4000-4499	6,723	15.9	6,720	3	0.4	2	0.3	0.7	0.7	6,723
4500 and Over	1,359	3.2	1,359	0	–	0	–	–	–	1,359
Total	42,391	100	42,233	158	3.7	67	1.6	5.3	3.7	42,391
Multiple Births										
500-749	14	1.0	11	3	214.3	4	363.6	500.0	500.0	8
750-999	22	1.6	22	0	–	3	136.4	136.4	95.2	10
1000-1249	21	1.5	20	1	47.6	1	50.0	95.2	50.0	11
1250-1499	39	2.7	39	0	–	0	–	–	–	16
1500-1999	146	10.3	146	0	–	2	13.7	13.7	–	70
2000-2499	388	27.3	388	0	–	1	2.6	2.6	2.6	191
2500-2999	531	37.4	530	1	1.9	1	1.9	3.8	1.9	258
3000-3499	221	15.6	221	0	–	0	–	–	–	121
3500-3999	35	2.5	35	0	–	0	–	–	–	18
4000-4499	2	0.1	2	0	–	0	–	–	–	1
4500 and Over	0	–	0	0	–	0	–	–	–	0
Total	1,419	100	1,414	5	3.5	12	8.5	12.0	8.5	704

Notes: Percentage column is subject to rounding.
 * Rates are calculated 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 7 maternities with parity unknown; these were excluded from this table.

TABLE G6

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

Birthweight (grams)	Number	Per Cent
Less than 1,500 grams	637	0.9
1,500 - 2,499 grams	3,219	4.5
2,500 - 4,499 grams	66,035	92.1
4,500 grams and Over	1,814	2.5
Total	71,705	100

Note: Percentage column is subject to rounding.

TABLE G7

Birthweight (grams) by Sex, Total Live Births

	Male		Female		Indeterminate		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
500-749	40	0.1	60	0.2	0	0.0	100	0.1
750-999	69	0.2	75	0.2	0	0.0	144	0.2
1000-1249	89	0.2	88	0.3	0	0.0	177	0.2
1250-1499	109	0.3	106	0.3	1	33.3	216	0.3
1500-1999	423	1.1	387	1.1	0	0.0	810	1.1
2000-2499	1,127	3.0	1,282	3.7	0	0.0	2,409	3.4
2500-2999	3,749	10.1	4,676	13.5	0	0.0	8,425	11.7
3000-3499	10,662	28.8	12,240	35.2	1	33.3	22,903	31.9
3500-3999	13,328	36.1	11,527	33.2	1	33.3	24,856	34.7
4000-4499	6,130	16.6	3,721	10.7	0	0.0	9,851	13.7
4500 and Over	1,233	3.3	581	1.7	0	0.0	1,814	2.5
Total	36,959	100	34,743	100	3	100	71,705	100

Note: Percentage columns are subject to rounding.

TABLE G8

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
Total Births										
Less than 28	140	0.5	115	25	178.6	26	226.1	364.3	355.1	122
28-31	270	1.0	246	24	88.9	8	32.5	118.5	73.9	220
32-36	1,643	5.8	1,612	31	18.9	15	9.3	28.0	17.2	1,382
37-41	25,018	88.8	24,980	38	1.5	15	0.6	2.1	1.8	24,785
42 and Over	1,094	3.9	1,094	0	–	0	–	–	–	1,094
Not Stated	4	0.0	4	0	–	0	–	–	–	4
Total	28,169	100	28,051	118	4.2	64	2.3	6.5	5.0	27,607
Singleton Births										
Less than 28	103	0.4	80	23	223.3	19	237.5	407.8	396.0	103
28-31	172	0.6	153	19	110.5	7	45.8	151.2	87.5	172
32-36	1,134	4.2	1,108	26	22.9	14	12.6	35.3	21.5	1,134
37-41	24,547	90.7	24,509	38	1.5	15	0.6	2.2	1.8	24,547
42 and Over	1,094	4.0	1,094	0	–	0	–	–	–	1,094
Not Stated	4	0.0	4	0	–	0	–	–	–	4
Total	27,054	100	26,948	106	3.9	55	2.0	6.0	4.6	27,054
Multiple Births										
Less than 28	37	3.3	35	2	54.1	7	200.0	243.2	243.2	19
28-31	98	8.8	93	5	51.0	1	10.8	61.2	51.5	48
32-36	509	45.7	504	5	9.8	1	2.0	11.8	7.9	248
37-41	471	42.2	471	0	–	0	–	–	–	238
42 and Over	0	0.0	0	0	–	0	–	–	–	0
Not Stated	0	0.0	0	0	–	0	–	–	–	0
Total	1,115	100	1,103	12	10.8	9	8.2	18.8	16.2	553

Notes: Percentage column is subject to rounding.
 * Rates are calculated 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 7 maternities with parity unknown; these were excluded from this table.

TABLE G9

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
Total Births										
Less than 28	153	0.3	119	34	222.2	21	176.5	359.5	305.0	139
28-31	253	0.6	223	30	118.6	12	53.8	166.0	120.8	216
32-36	1,996	4.6	1,951	45	22.5	23	11.8	34.1	21.8	1,696
37-41	40,444	92.3	40,390	54	1.3	22	0.5	1.9	1.3	40,080
42 and Over	963	2.2	963	0	–	1	1.0	1.0	1.0	963
Not Stated	1	0.0	1	0	–	0	–	–	–	1
Total	43,810	100	43,647	163	3.7	79	1.8	5.5	3.8	43,095
Singleton Births										
Less than 28	123	0.3	91	32	260.2	14	153.8	374.0	312.5	123
28-31	182	0.4	153	29	159.3	12	78.4	225.3	165.7	182
32-36	1,407	3.3	1,364	43	30.6	20	14.7	44.8	29.6	1,407
37-41	39,715	93.7	39,661	54	1.4	20	0.5	1.9	1.3	39,715
42 and Over	963	2.3	963	0	–	1	1.0	1.0	1.0	963
Not Stated	1	0.0	1	0	–	0	–	–	–	1
Total	42,391	100	42,233	158	3.7	67	1.6	5.3	3.7	42,391
Multiple Births										
Less than 28	30	2.1	28	2	66.7	7	250.0	300.0	275.9	16
28-31	71	5.0	70	1	14.1	0	0.0	14.1	14.1	34
32-36	589	41.5	587	2	3.4	3	5.1	8.5	3.4	289
37-41	729	51.4	729	0	–	2	2.7	2.7	1.4	365
42 and Over	0	0.0	0	0	–	0	–	–	–	0
Not Stated	0	0.0	0	0	–	0	–	–	–	0
Total	1,419	100	1,414	5	3.5	12	8.5	12.0	8.5	704

Notes: Percentage column is subject to rounding.
 * Rates are calculated 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 7 maternities with parity unknown; these were excluded from the table.

TABLE G10

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

Frequency Row Per Cent Col. Per Cent	Postnatal Length of Stay					Total
	0-2 Days	3-5 Days	6-8 Days	9+ Days	Not Stated	
Singleton Births						
Spontaneous	30,716	8,268	239	49	22	39,294
	78.2	21.0	0.6	0.1	0.1	100
	80.6	27.9	18.6	20.9	91.7	56.7
Breech/Forceps	146	79	2	0	0	227
	64.3	34.8	0.9	0.0	0.0	100
	0.4	0.3	0.2	0.0	0.0	0.3
Forceps	1,408	1,259	57	12	0	2,736
	51.5	46.0	2.1	0.4	0.0	100
	3.7	4.3	4.4	5.1	0.0	3.9
Vacuum extraction	4,887	2,916	94	20	0	7,917
	61.7	36.8	1.2	0.3	0.0	100
	12.8	9.9	7.3	8.5	0.0	11.4
Caesarean section	955	17,077	893	154	2	19,081
	5.0	89.5	4.7	0.8	0.0	100
	2.5	57.7	69.5	65.5	8.3	27.5
Other specified & combined	16	5	0	0	0	21
	76.2	23.8	0.0	0.0	0.0	100
	0.0	0.0	0.0	0.0	0.0	0.0
Total	38,128	29,604	1,285	235	24	69,276
	55.0	42.7	1.9	0.3	0.0	100
	100	100	100	100	100	100
Multiple Births						
Spontaneous	195	356	30	8	0	589
	33.1	60.4	5.1	1.4	0.0	100
	64.6	19.1	9.5	15.7	0.0	23.2
Breech/Forceps	34	45	4	2	0	85
	40.0	52.9	4.7	2.4	0.0	100
	11.3	2.4	1.3	3.9	0.0	3.4
Forceps	6	44	6	0	0	56
	10.7	78.6	10.7	0.0	0.0	100
	2.0	2.4	1.9	0.0	0.0	2.2
Vacuum extraction	37	107	8	0	0	152
	24.3	70.4	5.3	0.0	0.0	100
	12.3	5.7	2.5	0.0	0.0	6.0
Caesarean section	30	1,314	267	41	0	1,652
	1.8	79.5	16.2	2.5	0.0	100
	9.9	70.4	84.8	80.4	0.0	65.2
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	302	1,866	315	51	0	2,534
	11.9	73.6	12.4	2.0	0.0	100
	100	100	100	100	0.0	100

Notes: Percentage rows and columns are subject to rounding.

Domiciliary births, of which there were 176 births, are excluded from this table. See Appendix H for detailed analysis.

TABLE G11

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	Total
Carlow	461	448	27	936
	49.3	47.9	2.9	100
	1.4	1.3	0.4	1.3
Cavan	595	513	51	1,159
	51.3	44.3	4.4	100
	1.9	1.5	0.8	1.6
Clare	952	596	112	1,660
	57.3	35.9	6.7	100
	3.0	1.8	1.8	2.3
Cork	3,220	4,400	464	8,084
	39.8	54.4	5.7	100
	10.1	13.2	7.5	11.3
Donegal	1,233	686	138	2,057
	59.9	33.3	6.7	100
	3.9	2.1	2.2	2.9
Dublin City	5,784	7,611	1,705	15,100
	38.3	50.4	11.3	100
	18.1	22.8	27.5	21.1
Dublin County	2,097	3,252	712	6,061
	34.6	53.7	11.7	100
	6.6	9.8	11.5	8.5
Galway	1,632	1,698	560	3,890
	42.0	43.7	14.4	100
	5.1	5.1	9.0	5.4
Kerry	912	853	152	1,917
	47.6	44.5	7.9	100
	2.8	2.6	2.4	2.7
Kildare	1,507	1,732	388	3,627
	41.5	47.8	10.7	100
	4.7	5.2	6.3	5.1
Kilkenny	636	695	8	1,339
	47.5	51.9	0.6	100
	2.0	2.1	0.1	1.9
Laois	590	626	44	1,260
	46.8	49.7	3.5	100
	1.8	1.9	0.7	1.8
Leitrim	239	162	55	456
	52.4	35.5	12.1	100
	0.7	0.5	0.9	0.6
Limerick	1,817	955	172	2,944
	61.7	32.4	5.8	100
	5.7	2.9	2.8	4.1
Longford	346	266	39	651
	53.1	40.9	6.0	100
	1.1	0.8	0.6	0.9
Louth	1,051	670	193	1,914
	54.9	35.0	10.1	100
	3.3	2.0	3.1	2.7
Mayo	835	672	242	1,749
	47.7	38.4	13.8	100
	2.6	2.0	3.9	2.4

TABLE G11

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	Total
Meath	1,406	1,466	281	3,153
	44.6	46.5	8.9	100
	4.4	4.4	4.5	4.4
Monaghan	445	353	37	835
	53.3	42.3	4.4	100
	1.4	1.1	0.6	1.2
Offaly	600	462	57	1,119
	53.6	41.3	5.1	100
	1.9	1.4	0.9	1.6
Roscommon	400	350	79	829
	48.3	42.2	9.5	100
	1.2	1.0	1.3	1.2
Sligo	495	316	143	954
	51.9	33.1	15.0	100
	1.5	0.9	2.3	1.3
Tipperary	1,196	944	56	2,196
	54.5	43.0	2.6	100
	3.7	2.8	0.9	3.1
Waterford	762	902	27	1,691
	45.1	53.3	1.6	100
	2.4	2.7	0.4	2.4
Westmeath	710	650	103	1,463
	48.5	44.4	7.0	100
	2.2	1.9	1.7	2.0
Wexford	1,125	993	121	2,239
	50.2	44.4	5.4	100
	3.5	3.0	1.9	3.1
Wicklow	944	1,064	236	2,244
	42.1	47.4	10.5	100
	2.9	3.2	3.8	3.1
Other	15	16	4	35
	42.9	45.7	11.4	100
	0.0	0.0	0.1	0.0
Total	32,005	33,351	6,206	71,562
	44.7	46.6	8.7	100
	100	100	100	100

Notes: Percentage rows and columns are subject to rounding.
See Appendix E for details of county of residence classification.
This table excludes early neonatal deaths.

TABLE G12

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

Frequency Row Per Cent	Type of Feeding			
	Artificial	Breast	Combined	Total
Ireland	29,283 53.9	21,595 39.7	3,472 6.4	54,350 100
UK	678 39.9	865 50.9	158 9.3	1,701 100
EU15 (excluding Ireland & UK)	103 10.3	808 81.0	87 8.7	998 100
EU15 to EU27 Accession States	1,011 12.3	6,316 76.8	898 10.9	8,225 100
Rest of Europe	51 9.3	444 80.7	55 10.0	550 100
Africa	251 13.0	992 51.5	682 35.4	1,925 100
Asia	449 15.7	1,665 58.3	744 26.0	2,858 100
America	70 11.4	462 75.0	84 13.6	616 100
Australia	25 26.0	65 67.7	6 6.3	96 100
New Zealand and Other Oceania	4 11.4	28 80.0	3 8.6	35 100
Multi-Nationality	0 0.0	1 50.0	1 50.0	2 100
Other Nationality	3 75.0	1 25.0	0 0.0	4 100
Not Stated	77 38.1	109 54.0	16 7.9	202 100
Total	32,005 44.7	33,351 46.6	6,206 8.7	71,562 100

Notes: Percentage rows are subject to rounding.
See Appendix F for a description of the classification system for nationality.
This table excludes early neonatal deaths.

TABLE G13

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

	Total Perinatal Deaths	Total Perinatal Deaths %	Ante-partum Stillbirths	Intra-partum Stillbirths	Not Stated	Stillbirth Rate*	Early Neonatal Deaths	Early Neonatal Mortality Rate*	Perinatal Mortality Rate*	Adj. PMR*
Total Births										
500-749	77	18.2	45	4	1	333.3	27	270.0	513.3	474.8
750-999	48	11.3	25	0	1	152.9	22	152.8	282.4	222.9
1000-1249	35	8.3	24	1	0	123.8	10	56.5	173.3	121.1
1250-1499	22	5.2	16	1	0	73.0	5	23.1	94.4	58.0
1500-1999	56	13.2	34	3	1	44.8	18	22.2	66.0	38.8
2000-2499	55	13	31	2	1	13.9	21	8.7	22.5	14.4
2500-2999	49	11.6	25	0	3	3.3	21	2.5	5.8	3.8
3000-3499	36	8.5	28	2	0	1.3	6	0.3	1.6	1.4
3500-3999	36	8.5	25	3	0	1.1	8	0.3	1.4	1.3
4000-4499	10	2.4	5	0	0	0.5	5	0.5	1.0	0.9
Total	424	100	258	16	7	3.9	143	2.0	5.9	4.3
Singleton Births										
500-749	62	16.1	40	4	0	389.4	18	260.9	548.7	500.0
750-999	43	11.1	25	0	1	203.1	17	166.7	335.9	273.5
1000-1249	30	7.8	21	1	0	148.6	8	63.5	202.7	138.7
1250-1499	20	5.2	14	1	0	102.7	5	38.2	137.0	80.3
1500-1999	50	13	30	3	1	65.0	16	32.7	95.6	57.8
2000-2499	53	13.7	31	2	1	19.8	19	11.3	30.9	19.5
2500-2999	46	11.9	23	0	3	3.4	20	2.6	6.1	4.1
3000-3499	36	9.3	28	2	0	1.3	6	0.3	1.6	1.4
3500-3999	36	9.3	25	3	0	1.1	8	0.3	1.4	1.3
4000-4499	10	2.6	5	0	0	0.5	5	0.5	1.0	0.9
Total	386	100	242	16	6	3.8	122	1.8	5.6	4.0
Multiple Births										
500-749	15	39.5	5	0	1	162.2	9	290.3	405.4	405.4
750-999	5	13.2	0	0	0	–	5	119.0	119.0	75.0
1000-1249	5	13.2	3	0	0	55.6	2	39.2	92.6	75.5
1250-1499	2	5.3	2	0	0	23.0	0	–	23.0	23.0
1500-1999	6	15.8	4	0	0	12.3	2	6.2	18.5	9.3
2000-2499	2	5.3	0	0	0	–	2	2.8	2.8	2.8
2500-2999	3	7.9	2	0	0	2.3	1	1.1	3.4	1.1
3000-3499	0	0	0	0	0	–	0	–	–	–
3500-3999	0	0	0	0	0	–	0	–	–	–
4000-4499	0	0	0	0	0	–	0	–	–	–
Total	38	100	16	0	1	6.7	21	8.3	15.0	11.9

Notes: Percentage column is subject to rounding.

* Rates are calculated 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, 2003–2012

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 2003–2012.

- There were 176 domiciliary births in 2012 representing just 0.2 per cent of all births.
- The number of domiciliary births has decreased by 25.4 per cent over the decade while the increase from 168 births in 2011 is estimated at 4.8 per cent. The lowest number of domiciliary births over the 10-year period was reported for 2009 at 148 and the highest number reported in 2003 at 236 (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 34.3 years in 2012.
- Of all domiciliary births in 2012, 27.3 per cent were to single mothers compared with 28.0 per cent in 2003.
- Women choosing a domiciliary delivery in 2012 had an average maternal parity of 1.5 previous births.
- The percentage of women recording any breastfeeding was 95.8 per cent in 2003; this has increased to 98.3 per cent in 2012.
- Exclusive breastfeeding was reported for 96.6 per cent of domiciliary births in 2012.
- The average birthweight for domiciliary births in 2012 was 3,713.1 grams.

More detailed analysis of domiciliary births for 2012 is presented in Tables H2 to H7, including the maternal characteristics of age, parity, socio-economic group, 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, 2003–2012

		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change	
													2003-2012
General Characteristics													
Total Domiciliary Births		236	202	183	170	186	158	148	177	168	176	-25.4	4.8
Age of mother (years) ¹	Avg	34.0	34.3	33.4	34.3	34.1	34.3	35.0	33.8	33.7	34.3	0.9	1.8
Single mothers ^{1,2}	%	28.0	29.2	23.5	20.0	16.1	25.3	22.3	24.3	29.2	27.3	-2.5	-6.5
Maternal parity ¹	Avg	1.6	1.6	1.7	1.7	1.6	1.5	1.7	1.4	1.5	1.5	-6.3	0.0
Gestational age at delivery in weeks ¹	Avg	40.1	40.0	40.0	40.1	40.0	40.1	40.0	40.0	40.0	39.9	-0.5	-0.3
Interval since last birth (years) ³	Avg	3.7	3.5	3.3	3.4	3.4	3.6	3.7	3.4	3.2	3.4	-8.1	6.3
Immunity to Rubella ¹	%	94.1	97.0	95.1	96.5	100.0	96.2	98.0	97.2	97.0	96.6	2.7	-0.4
Any Breastfeeding ^{4,5}	%	95.8	98.0	94.0	98.2	96.2	95.6	96.6	97.2	99.4	98.3	2.6	-1.1
Exclusive Breastfeeding ⁴	%	94.1	97.5	94.0	97.1	95.7	95.6	96.6	96.6	98.2	96.6	2.7	-1.6
Combined Antenatal Care – Midwife and G.P./Hospital ⁶	%	66.1	64.4	71.6	76.5	60.8	77.8	99.3	98.9	93.5	86.9	31.5	-7.1
Birthweight (grams) ⁷	Avg	3,754.3	3,738.4	3,760.1	3,742.2	3,699.2	3,667.1	3,764.9	3,833.9	3,679.6	3,713.1	-1.1	0.9
Low Birthweight (<2,500 grams) ⁷	%	0.0	1.0	0.5	0.6	1.1	0.6	0.0	0.0	0.0	0.0	–	–

Notes: Percentage columns are subject to rounding.

There were no domiciliary multiple births in the years 2003 -2012.

¹ Based on maternities.

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

³ Based on multiparous maternities.

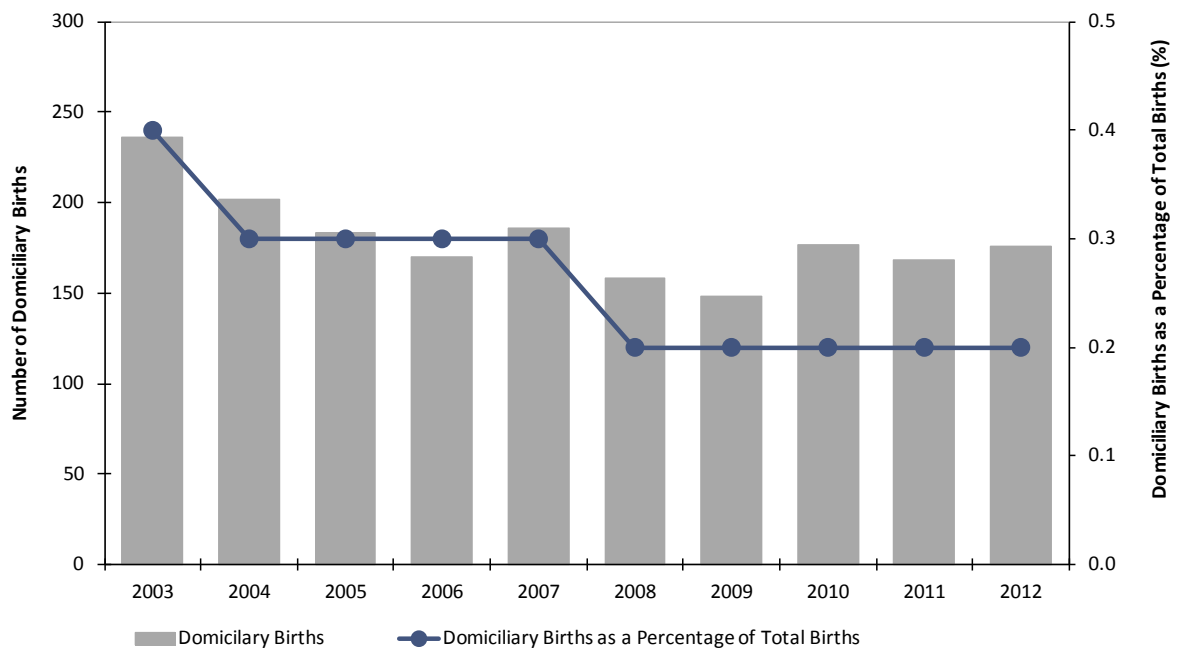
⁴ Based on maternities with live births. Excludes early neonatal deaths.

⁵ Any breastfeeding includes type of feeding recorded as either breast or combined.

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

⁷ Based on live births.

FIGURE H1
Number and Percentage of Domiciliary Births Reported, 2003–2012



Note: See Table 2.2 and Table H1 for data.

TABLE H2
Age of Mother by Maternal Parity

Frequency Row Per Cent Col. Per Cent	Maternal Parity								
	0	1	2	3	4	5	6	More than 6	Total
< 25 Years	3	2	1	0	0	0	0	0	6
	50.0	33.3	16.7	0.0	0.0	0.0	0.0	0.0	100
	8.6	2.9	2.3	0.0	0.0	0.0	0.0	0.0	3.4
25-29 Years	9	8	3	0	0	0	0	0	20
	45.0	40.0	15.0	0.0	0.0	0.0	0.0	0.0	100
	25.7	11.6	7.0	0.0	0.0	0.0	0.0	0.0	11.4
30-34 Years	16	34	20	3	1	0	0	0	74
	21.6	45.9	27.0	4.1	1.4	0.0	0.0	0.0	100
	45.7	49.3	46.5	16.7	20.0	0.0	0.0	0.0	42.0
35-39 Years	6	23	15	11	3	1	1	1	61
	9.8	37.7	24.6	18.0	4.9	1.6	1.6	1.6	100
	17.1	33.3	34.9	61.1	60.0	50.0	100.0	33.3	34.7
40 Years and Over	1	2	4	4	1	1	0	2	15
	6.7	13.3	26.7	26.7	6.7	6.7	0.0	13.3	100
	2.9	2.9	9.3	22.2	20.0	50.0	0.0	66.7	8.5
Total	35	69	43	18	5	2	1	3	176
	19.9	39.2	24.4	10.2	2.8	1.1	0.6	1.7	100
	100	100	100	100	100	100	100	100	100

Note: Percentage rows and columns are subject to rounding.

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	2	12	57	45	11	127
	1.6	9.4	44.9	35.4	8.7	100
	33.3	60.0	77.0	73.8	73.3	72.2
Single	4	8	17	16	3	48
	8.3	16.7	35.4	33.3	6.3	100
	66.7	40.0	23.0	26.2	20.0	27.3
Other*	0	0	0	0	1	1
	0.0	0.0	0.0	0.0	100.0	100
	0.0	0.0	0.0	0.0	6.7	0.6
Total	6	20	74	61	15	176
	3.4	11.4	42.0	34.7	8.5	100
	100	100	100	100	100	100

Notes: Percentage rows and columns are subject to rounding.
* 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
	3.6	0.0	3.4
25-29 Years	18	2	20
	90.0	10.0	100
	10.8	22.2	11.4
30-34 Years	73	1	74
	98.6	1.4	100
	43.7	11.1	42.0
35-39 Years	57	4	61
	93.4	6.6	100
	34.1	44.4	34.7
40 Years and Over	13	2	15
	86.7	13.3	100
	7.8	22.2	8.5
Total	167	9	176
	94.9	5.1	100
	100	100	100

Note: Percentage rows and columns are subject to rounding.

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	5	0	5
	100.0	0.0	100
	3.0	0.0	2.8
3000-3499	55	0	55
	100.0	0.0	100
	32.9	0.0	31.3
3500-3999	65	2	67
	97.0	3.0	100
	38.9	22.2	38.1
4000-4499	37	4	41
	90.2	9.8	100
	22.2	44.4	23.3
4500 and Over	5	3	8
	62.5	37.5	100
	3.0	33.3	4.5
Total	167	9	176
	94.9	5.1	100
	100	100	100

Note: Percentage rows and columns are subject to rounding.

TABLE H6
Mother's Socio-economic Group by Birthweight

Frequency Row Per Cent Col. Per Cent	Birthweight (grams)					Total
	<3000	3000-3499	3500-3999	4000-4499	4500 and Over	
Farmers and Farm Managers	0	1	1	0	0	2
	0.0	50.0	50.0	0.0	0.0	100
	0.0	1.8	1.5	0.0	0.0	1.1
Other Agricultural Occupations & Fishermen	0	0	0	1	0	1
	0.0	0.0	0.0	100.0	0.0	100
	0.0	0.0	0.0	2.4	0.0	0.6
Higher Professional	0	6	6	3	2	17
	0.0	35.3	35.3	17.6	11.8	100
	0.0	10.9	9.0	7.3	25.0	9.7
Lower Professional	2	17	20	18	5	62
	3.2	27.4	32.3	29.0	8.1	100
	40.0	30.9	29.9	43.9	62.5	35.2
Employers & Managers	0	4	5	4	0	13
	0.0	30.8	38.5	30.8	0.0	100
	0.0	7.3	7.5	9.8	0.0	7.4
Salaried Employees	0	0	0	1	0	1
	0.0	0.0	0.0	100.0	0.0	100
	0.0	0.0	0.0	2.4	0.0	0.6
Intermediate Non-Manual Workers	0	8	9	3	0	20
	0.0	40.0	45.0	15.0	0.0	100
	0.0	14.5	13.4	7.3	0.0	11.4
Other Non-Manual Workers	2	6	7	2	0	17
	11.8	35.3	41.2	11.8	0.0	100
	40.0	10.9	10.4	4.9	0.0	9.7
Skilled Manual Workers	0	0	2	0	0	2
	0.0	0.0	100.0	0.0	0.0	100
	0.0	0.0	3.0	0.0	0.0	1.1
Unemployed	0	0	1	0	0	1
	0.0	0.0	100.0	0.0	0.0	100
	0.0	0.0	1.5	0.0	0.0	0.6
Not Classifiable	0	2	0	0	0	2
	0.0	100.0	0.0	0.0	0.0	100
	0.0	3.6	0.0	0.0	0.0	1.1
Home Duties	1	11	16	9	1	38
	2.6	28.9	42.1	23.7	2.6	100
	20.0	20.0	23.9	22.0	12.5	21.6
Total	5	55	67	41	8	176
	2.8	31.3	38.1	23.3	4.5	100
	100	100	100	100	100	100

Notes: Percentage rows and columns are subject to rounding.
See Appendix C for a description of the classification system for socio-economic group.

TABLE H7

Mother's Socio-economic Group 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 1.1
Other Agricultural Occupations & Fishermen	0 0.0 0.0	1 100.0 0.6	0 0.0 0.0	1 100 0.6
Higher Professional	2 11.8 66.7	14 82.4 8.2	1 5.9 33.3	17 100 9.7
Lower Professional	1 1.6 33.3	60 96.8 35.3	1 1.6 33.3	62 100 35.2
Employers & Managers	0 0.0 0.0	13 100.0 7.6	0 0.0 0.0	13 100 7.4
Salaried Employees	0 0.0 0.0	1 100.0 0.6	0 0.0 0.0	1 100.0 0.6
Intermediate Non-Manual Workers	0 0.0 0.0	20 100.0 11.8	0 0.0 0.0	20 100 11.4
Other Non-Manual Workers	0 0.0 0.0	17 100.0 10.0	0 0.0 0.0	17 100 9.7
Skilled Manual Workers	0 0.0 0.0	2 100.0 1.2	0 0.0 0.0	2 100 1.1
Unemployed	0 0.0 0.0	1 100.0 0.6	0 0.0 0.0	1 100 0.6
Not Classifiable	0 0.0 0.0	2 100.0 1.2	0 0.0 0.0	2 100 1.1
Home Duties	0 0.0 0.0	37 97.4 21.8	1 2.6 33.3	38 100 21.6
Total	3 1.7 100	170 96.6 100	3 1.7 100	176 100 100

Notes: Percentage rows and columns are subject to rounding.
See Appendix C for a description of the classification system for socio-economic group.

Health Research and Information Division
The Economic and Social Research Institute

Whitaker Square
Sir John Rogerson's Quay
Dublin 2
Ireland

Telephone + 353 1 8632000
Fax + 353 1 8632100

www.esri.ie

ISBN 978-0-7070-0361-0

