



# Births Statistics: Metadata

July 2015

**Office for National Statistics** 

#### A National Statistics publication

National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. They are produced free from political influence.

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics.

Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs
- are well explained and readily accessible
- are produced according to sound methods
- are managed impartially and objectively in the public interest

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

#### About us

#### The Office for National Statistics

We are the executive office of the UK Statistics Authority, a nonministerial department which reports directly to Parliament and the UK government's single largest statistical producer. We compile information about the UK's society and economy, and provide the evidence-base for policy and decision-making, the allocation of resources, and public accountability.

#### The Government Statistical Service

The Government Statistical Service (GSS) is a network of professional statisticians and their staff operating both within the Office for National Statistics and across more than 30 other government departments and agencies.

#### Contacts

#### This publication

For information about the content of this publication, contact Vital Statistics Outputs Branch Tel: +44 (0)1329 444110 Email: vsob@ons.gsi.gov.uk

#### Other customer enquiries

ONS Customer Contact Centre Tel: 0845 601 3034 International: +44 (0)845 601 3034 Minicom: 01633 815044 Email: info@statistics.gsi.gov.uk Fax: 01633 652747 Post: Room d.265, Government Buildings, Cardiff Road, Newport, South Wales NP10 8XG www.ons.gov.uk

#### **Media enquiries**

Tel: 0845 604 1858 Email: <u>press.office@ons.gsi.gov.uk</u>

#### **Copyright and reproduction**

#### © Crown copyright 2015

You may re-use this document/publication (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence.

To view this licence, go to: www.nationalarchives.gov.uk/doc/open-government-licence;

or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU;

or email: psi@nationalarchives.gsi.gov.uk

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

This document/publication is also available on our website at www.ons.gov.uk

Any enquiries regarding this publication should be sent to us at: info@statistics.gsi.gov.uk

# Contents

Page

1. Introduction	1
1.1 Symbols and conventions	2
<b>1.2</b> Information collected at birth registration	2 3
1.3 Issues affecting the quality of birth registration data	4
1.4 Figures for UK countries and international comparisons	5
<b>1.5</b> Release commentary and other relevant articles	6
2 Notes and definitions	7
2.1 Base populations	7
2.2 Occurrences and registrations	7
2.3 Areal coverage	8
2.4 Registration of births	9
2.5 Visitors and overseas registrations	10
2.6 Abandoned children	10
2.7 Stillbirths	11
2.8 Births within marriage/civil partnership, and sole and joint registration	11
2.9 Age of parents	12
2.10 Country of birth of each parent	12
2.11 Place of birth and area of usual residence	13
2.12 Multiple Births	13
2.13 Previous live-born children, true birth order, registration birth order and marital birth order	13
<b>2.14</b> Birth intervals	15
<b>2.15</b> Birthweight	15
<b>2.16</b> Duration of marriage/civil partnership	16
<b>2.17</b> Birth cohorts	16
<b>2.18</b> Socio-economic classification as defined by occupation	17
2.19 Rates	18
2.20 Accuracy of information	20
2.21 Historical information	20
2.22 Legislation	20
2.23 Further information	21
References	22
Glossary	23
Annex	28

# **1** Introduction

This document provides supporting information for ONS birth statistics for England and Wales. Birth statistics are released as a series of packages throughout the year and are online.

The packages released are:

- <u>Birth summary tables</u>: provides summary figures including the number of live births and stillbirths, fertility rates, percentage of live births outside marriage/civil partnership, mean age of mother and percentage of live births to non-UK born mothers; live births (numbers and rates) are also provided by age of mother and by local authority
- <u>Parents' country of birth</u>: includes births by country of birth of mother by local authority as well as total fertility rates for UK born and non-UK born women
- <u>Characteristics of birth 1</u>: provides summary statistics on stillbirths tables also provide birthweight data for live and stillbirths by mother's area of usual residence and maternities, live births, and stillbirths in hospitals by area of occurrence
- <u>Births by area of usual residence</u>: provides summary data for live births for local authorities and health areas including figures by age of mother
- <u>Characteristics of mother 1</u>: provides live birth, stillbirth and maternity statistics by age of mother, type of registration (within marriage/civil partnership, joint, sole), and mean age of mother by birth order
- <u>Characteristics of birth 2</u>: provides live birth statistics by month and quarter of occurrence, and maternity figures for multiple births and by place of birth
- <u>Characteristics of mother 2</u>: provides live birth statistics (numbers and rates) within and outside marriage/civil partnership and statistics on the number of previous live-born children by age of mother for all live births
- Further parental characteristics: provides age-specific fertility rates for men, the mean age of father, and paternities within and outside marriage/civil partnership. Statistics on live births by National Statistics Socio-economic classification are also included (prior to 2012 data year these were published in <u>Births by socio-economic</u> <u>status of father</u>)
- <u>Childbearing for women born in different years</u> (formerly known as <u>Cohort</u> <u>fertility</u>): presents birth statistics by year of birth of mother rather than the year of birth of child including the average number of live-born children and the proportion of women born in different years remaining childless

From the 2014 data year, there will be some changes to the published packages. Packages that will remain unchanged are:

- Births summary tables
- Parents' country of birth

- Births by area of usual residence
- Childbearing for women born in different years

From October 2015 a number of births packages will be combined into two packages: Birth characteristics and Births by parents' characteristics. Details of what will be included in these packages are shown below:

• **Birth characteristics** – will provide summary statistics on stillbirths, including birthweight data for live and stillbirths by mother's area of usual residence and maternities, live births, and stillbirths in hospitals by area of occurrence. These tables will also provide live birth statistics by month and quarter of occurrence, and maternity figures for multiple births and by place of birth. Prior to the 2014 data year these statistics were published in separate releases: <u>Characteristics of birth 1</u> and <u>Characteristics of birth 2</u>;

• **Births by parents' characteristics** – will provide live birth, stillbirth and maternity statistics by age of mother, type of registration (within marriage/civil partnership, joint, sole), and mean age of mother by birth order. It will also provide live birth statistics (numbers and rates) within and outside marriage/civil partnership, data on live births by age of mother and number of previous live-born children along with median birth intervals. Prior to the 2014 data year these statistics were published in separate releases: Characteristics of mother 1, Characteristics of mother 2 and Further parental characteristics.

Historic data are included in each publication where possible. Historic publications for England and Wales are <u>FM1 Birth statistics</u> (from 1974 to 2008) and for earlier years the Registrar General's Statistical Review of England and Wales.

<u>Our website</u> provides a comprehensive source of freely available vital statistics and products. More information on can be obtained from the contact address in section 2.23. Publication dates for statistical releases are announced on the <u>GOV.UK release calendar</u>. Statistical bulletins are published alongside releases and provide commentary on important findings.

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the <u>Code of Practice for Official Statistics</u>.

Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs
- are well explained and readily accessible
- are produced according to sound methods
- are managed impartially and objectively in the public interest

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

The registration of life events (births, deaths, marriages, and civil partnerships) is a service carried out by the Local Registration Service in partnership with the General Register Office (GRO) in Southport. The provision of life events data by GRO is formally defined by a service level agreement between GRO and ourselves. The provision of births data under

the agreement is monitored on a quarterly basis by the Fertility Management Group (a meeting between important personnel from GRO and ONS involved in the delivery and analysis of birth statistics).

# 1.1 Symbols and conventions

In Birth Statistics published from July 2014 onwards, symbols used are:

- : denotes not available
- z denotes not applicable
- 0 denotes nil
- c confidential
- u low reliability

Rates are not calculated where there are fewer than 3 births in a cell, denoted by (u). It is our practice not to calculate rates where there are fewer than 3 births in a cell, as rates based on such low numbers are susceptible to inaccurate interpretation.

It is our practice not to calculate age-standardised rates, such as the Total Fertility Rate (TFR), where there are fewer than 10 births in total across all ages as rates based on such low numbers are susceptible to inaccurate interpretation.

Rates in tables calculated from fewer than twenty deaths are denoted by (u) as a warning to the user that their reliability as a measure may be affected by the small number of events.

Where data are not yet available, cells in tables are left blank.

In Birth Statistics published prior to July 2014, symbols used were:

- .. denotes not available
- : denotes not appropriate/not applicable
- denotes nil
- \* suppressed to protect confidentiality

Also prior to July 2014:

- rates were not calculated where there are fewer than 3 births in a cell, denoted by (:). It is our practice not to calculate rates where there are fewer than 3 births in a cell, as rates based on such low numbers are susceptible to inaccurate interpretation
- rates and percentages calculated from fewer than twenty births were distinguished by italic type as a warning to the user that their reliability as a measure may be affected by the small number of events

The new set of symbols used is being implemented across our outputs in order to improve harmonisation and consistency, and facilitate understanding of data and comparability. For further information please refer to <a href="https://gss.civilservice.gov.uk/statistics/a-z-of-policies-and-guidance/guidance-use-data-markers/">https://gss.civilservice.gov.uk/statistics/a-z-of-policies-and-guidance/guidance-use-data-markers/</a>

The <u>ONS policy on protecting confidentiality in birth and death statistics</u> is available on our website. This was revised in January 2014.

Figures in some tables may not add precisely due to rounding or suppression. Data showing a combination of information on stillbirths, and data items collected under the Population Statistics Acts have been aggregated to protect confidentiality.

#### **1.2 Information collected at birth registration**

Most of the information, for both live births and stillbirths, is typically supplied to registrars by one or both parents.

Information not supplied by the parents:

- for live births, details of **birthweight** are provided by the hospital where the birth took place, or by the midwife or doctor in attendance at the birth. The birthweight is passed to ONS as a consequence of the NHS birth notification being linked to the corresponding birth registration by the registrar
- for stillbirths, details of cause of death, duration of pregnancy and weight of foetus are supplied on a certificate or notification by a doctor or midwife who was present at the birth, or who examined the body. The certificate or notification is then taken by the informant to a registrar

Information supplied by the parents: (since 1 September 2009 it has been possible for two females in a same sex couple to register a birth. This new law applied to fertility treatments carried out on or after 6 April 2009. See section 2.22 for more information).

- the **date of birth** is provided, if more than 1 live child is born to the mother, then time of birth is also recorded
- **place of birth** is entered as the usual name and the address of a hospital, maternity home or other communal establishment, or the address of a private dwelling. ONS then codes the **place of birth** to one of the following: NHS hospital, non-NHS hospital, at home or elsewhere
- the name of the child
- the sex of the child
- the place of birth of each parent may be recorded in detail if this was in the UK
- the **mother's usual address** is entered, as is that of the informant where appropriate
- **occupation** is recorded for each parent, if both parent's names are entered in the register. The informant is asked whether each parent was in employment at any time before the child's birth, and a description of the occupation may be recorded. If either parent is unemployed, their last full-time occupation will be recorded
- the employment status and industry of each parent
- whether the pregnancy resulted in a **multiple birth**

Informants are also required to provide further information, treated as confidential, under the provisions of the Population Statistics Acts (PSA), as below:

- i. the mother's date of birth
- ii. the **father's/second parent's date of birth,** if his/her name is entered in the register

and if the child's parents were married/in a civil partnership at the time of the birth, or when the child was conceived even if they later divorced/dissolved their civil partnership or the father died before the child's birth:

# iii. the date of the parents' marriage/civil partnership

Until May 2012 the following information was also collected under the PSA for births occurring within marriage only:

- whether the mother has been married more than once
- **number of previous children** by her present husband and any former husband that were, (a) **born alive** and (b) **stillborn**

Two amendments to the PSA mean that from 28 May 2012 information is now collected at <u>all</u> birth registrations on:

- the total numbers of previous live births and previous stillbirths that the mother has had (not just those with the current or former husband). This has simplified the question asked by registrars and will provide improved coverage
- whether the mother has been previously married or in a civil partnership (if she is currently married or in a civil partnership) or whether the mother has ever been married or in a civil partnership (if she is not currently married or in a civil partnership). This brings the birth registration process more in line with equality legislation

#### 1.3 Issues affecting the quality of birth registration data

In November 2006, a pilot for a web-based Registration Online system for births and deaths (RON), commenced in 5 registration districts. This enabled registrars to record births, stillbirths and deaths online. Following the success of this pilot, RON was implemented in most register offices on 26 March 2007. However, as a result of significant performance problems, the system was suspended on 10 April 2007 resulting in around half of registrars reverting back to using the previous electronic system, Registration Service Software (RSS).

From 8 May 2007, almost all register offices were submitting data electronically using either RON or RSS. Any remaining birth registrations that were held only on paper at register offices were later entered onto the RON system at ONS, or by the local registration service. Once all the birth records were available electronically, a rigorous statistical quality assurance process was completed by ONS. Work to improve the performance of RON continued throughout 2008. During this time a further 15 registration districts moved back onto RON. By the end of 2008, 56% of registration districts were using RON for birth and death registrations. For births in 2009, 88% were recorded by registrars using this system.

The RON system was fully rolled out on 1 July 2009 with all register offices using it to record births from this date. With the introduction of RON, it became possible to carry out some additional validation checks at the point of registration, such as validation of address and postcode.

When RSS was used, then the registrar would complete a draft entry Form 309 (**Annex A**) for a live birth or Form 308 (**Annex B**) for a stillbirth. Using RON, registrars now complete a draft entry Form 309 (**Annex C**) for a live birth or Form 308 (**Annex D**) for a stillbirth.

Under the Population (Statistics) Acts (PSA), certain confidential data items are collected at the registration of a birth. The method used to impute missing PSA data items is outlined below.

Prior to 2004 the donor record chosen to impute a missing data item was the most recently processed complete record of similar characteristics to the incomplete record. From 2004 to 2006, all imputed values for PSA data items were re-imputed using the Canadian Census Edit and Imputation System (CANCEIS) (Statistics Canada, 2005) which selects the most appropriate donor record from the entire annual dataset. Compared with the previous imputation system, this improved the distribution of imputed mothers' ages (especially in small areas) and the distributions for each of the other PSA data items.

In 2007 a new process was introduced to link live birth registrations to their corresponding NHS birth notification record. Where mother's age was missing on the birth registration and the registrations was successfully linked to a birth notification containing mother's date of birth, the mother's date of birth was taken from the birth notification and mother's age was calculated. Any remaining missing PSA data items were then imputed using CANCEIS as in previous years, with the following exceptions:

From 2012 mother's age and father's age were imputed using the most recently processed complete record of similar characteristics to the incomplete record due to the very small number of records requiring imputation (0.04% and 0.07% of all live births had mother's age imputed in 2013 and 2014 respectively). From May 2012, missing data on the number of previous children has not been imputed. This is because the level of missing data is very low (the number of previous live-born children is missing on less than 0.7% of live births). Published tables now provide the information on the number of records where information on previous children was missing.

Further information on the level of missing data for different data items can be found in section 2.

In 1999, the proportion of live birth registrations without PSA information received from 1 register office was higher than usual due to a combination of circumstances. The missing data on those records were imputed using a random sample of data for that particular area from the previous 3 years. This was a change from the usual method, but was used to improve the quality of the imputations. Procedures were put in place, which means that such a problem is unlikely to recur. For further information about this see section C.2 of the 1999 volume.

# Changes to the PSA

As well as expanding coverage of the previous children question to all women, the question changed slightly. Before May 2012 married women were asked only for births to current and previous husbands (even if they took place before the marriage), whereas after the change, all women are simply asked to provide information on all previous births.

The information provided by women on the number of previous live born children they have had when registering their most recent birth shows higher proportions of married women saying they have previous children than had been recorded prior to the change. Some difference was expected due to the question change, as more previous births to married women are included in the new question compared to the old. The difference, between the old and new data, in the proportion of married women reporting previous births is larger than was expected purely from the question change. More information can be found in this methodology paper on <u>Quality assurance of new data on birth</u> registrations, as a result of changes to the Population Statistics Act – from May 2012 onwards.

#### 1.4 Figures for UK countries and international comparisons

Separate statistics for Scotland and Northern Ireland are published as follows:

- Scotland: in the Vital Events Reference Tables for Scotland
- Northern Ireland: in the Annual Report of the Registrar General for Northern Ireland

We publish a summary of birth statistics for the UK and constituent countries in the <u>Vital</u> <u>Statistics: Population and Health Reference Tables</u>. These contain annual data including the number of births, crude birth rate, total fertility rate and mean age of mother. The tables also provide an international comparison of the crude birth rate.

Following the <u>ONS consultation on statistical products</u> in 2013, the provisional quarterly birth statistics for the United Kingdom, and its constituent countries in the <u>Vital Statistics</u>: <u>Population and Health Reference Tables</u> were discontinued (last published February 2014).

Statistics for Europe are published by <u>Eurostat</u>. Statistics for United Nations member countries appear in the <u>United Nations monthly bulletin of statistics</u> and the annual <u>UN</u> <u>Demographic Yearbook</u>.

#### 1.5 Release commentary and other relevant articles

We provide commentary for releases in statistical bulletins which are published on our website.

Between 1998 and 2009 (2008 data year for births) commentary appeared as reports issued in the quarterly journal <u>Population Trends</u>. Conceptions reports appeared in <u>Health</u> <u>Statistics Quarterly</u>.

Up to 1997 (1996 data year for births) we published annual reports summarising patterns and trends, in the annual reference volume <u>Series FM1</u>, for conceptions and live births. These contained basic commentary on annual conceptions and live birth registrations.

Some other recent background information on fertility data and other relevant articles and publications are listed below.

- Berrington A (2004), <u>Perpetual postponers? Women's, men's and couple's fertility</u> <u>intentions and subsequent fertility behaviour</u>. Population Trends 117, pp 9–19, Autumn 2004
- 2. Chamberlain J and Gill B (2005), <u>Chapter 5: Fertility and Mortality, Focus on People</u> <u>and Migration</u> Palgrave Macmillan: Basingstoke, pp 71–90
- Donkin A, Lee Y and Toson B (2002), <u>Implications of changes in the UK social and occupational classifications in 2001 for vital statistics</u>. Population Trends 107, pp 23–29, Spring 2002
- 4. Jefferies J (2008), <u>Fertility assumptions for the 2006-based national population</u> projections, Population Trends 131, pp 19–27, Spring 2008
- 5. Messer J (2011), <u>An analysis of the socio-demographic characteristics of sole</u> registered births and infant deaths, Health Statistics Quarterly 50, pp 79–107
- 6. Moser K and Hilder L (2008), <u>Assessing quality of NHS Numbers for Babies data and providing gestational age statistics</u>, Health Statistics Quarterly 37, pp 15–23

- Moser K , Stanfield K M and Leon D (2008), <u>Birthweight and gestational age by ethnic group</u>, <u>England and Wales 2005</u>: introducing new data on births, Health Statistics Quarterly 39, pp 22–31
- 8. Ni Bhrolchain M, Beaujouan E and Berrington A (2010), <u>Stability and change in fertility</u> intentions in Britain, 1991–2007, Population Trends 141, pp 13–35, Autumn 2010
- 9. Nove A, Berrington A and Matthews Z (2008), <u>Home births in the UK, 1955 to 2006,</u> <u>Population Trends 133</u>, pp 20–27, Autumn 2008
- 10. O'Leary L, Natamba E, Jefferies J and Wilson B (2010), <u>Fertility and partnership status</u> in the last two decades, Population Trends 140, pp 5–35, Summer 2010
- 11. ONS (2015), <u>How do parental age differences vary for births registered in England and</u> <u>Wales, 2013?</u>
- 12. ONS (2014), International comparisons of teenage births
- 13. ONS (2014), <u>An investigation of childbearing by registration status in England and</u> <u>Wales, using birth registration data for 2012 and 2013</u>
- 14. ONS (2014), Childbearing of UK and non-UK born women living in the UK, 2011 Census data
- 15. ONS (2013), Fertility Assumptions, 2012-based National Population Projections
- 16. ONS (2013), Why has the fertility rate risen over the last decade in England and Wales
- 17. ONS (2012), Childbearing of UK and Non-UK Born Women Living in the UK, 2011
- 18. ONS (2012), <u>National Population Projections 2010-based (series PP2), Chapter 3:</u> <u>Fertility</u>
- 19. ONS (2009). <u>Patterns of fatherhood in England and Wales, 1964–2007</u>, Population Trends 136, pp 103–107, Summer 2009
- Rendall M, Couet C, Lappegard T, Robert-Bobée I, Rønsen M and Smallwood S (2005), <u>First births by age and education in Britain, France and Norway</u>. Population Trends 121, pp 27–34, Autumn 2005
- 21. Smallwood S (2004), <u>Characteristics of sole registered births and the mothers who</u> register them. Population Trends 117, pp 20–26, Autumn 2004
- 22. Smallwood S and Chamberlain J (2005), <u>Replacement fertility, what has it been and</u> <u>what does it mean?</u> Population Trends 119, pp 116–27, Spring 2005
- 23. Smallwood S and Jefferies J (2003), <u>Family building intentions in England and Wales:</u> <u>trends, outcomes and interpretations</u>. Population Trends 112, pp 15–28, Summer 2003
- 24. Tromans N, Natamba E and Jefferies J (2009), <u>Have women born outside the UK</u> <u>driven the rise in UK births since 2001?</u> Population Trends 136, pp 28–42, Summer 2009
- 25. Tromans N, Natamba E, Jefferies J and Norman P (2008), <u>Have national trends in fertility between 1986 and 2006 occurred evenly across England and Wales?</u>, Population Trends 133, pp 7–19, Autumn 2008

# 2. Notes and definitions

# 2.1 Base populations

The population figures used to calculate rates are mid-year estimates of the resident population of England and Wales based on the Census of Population. Mid-year population estimates are updated figures using the most recent census, allowing for births, deaths, net migration and ageing of the population.

The population estimates used for the calculation of fertility rates are the most up-to-date when rates are produced. The specific population estimates used to calculate rates are detailed alongside published tables. Sometimes it is necessary to revise fertility rates

following population estimate revisions. Any revisions to fertility rates are footnoted on tables. Further information on <u>population estimates</u>, and their methodology, can be found online.

#### 2.2 Occurrences and registrations

Between 1994 and 2000, the cut-off date for inclusion in the annual dataset was births occurring in the reference year that were registered by 11 February of the following year, this being 42 days after 31 December, the legal time limit for registering a birth occurring at the end of the year.

For 2001, the cut-off date was extended to 25 February 2002 to allow increased capture of births registered late. This change means that the annual statistics are prepared on as close to a true occurrences basis as possible without further delay to publication, which provides a purer denominator for calculating infant mortality rates. To avoid artificially inflating the 2001 dataset through the increased capture of late registrations, the start date for the carryover of late registrations from births occurring in 2000 was similarly moved by 2 weeks.

Since 2001, the total number of births in an annual dataset includes:

- births occurring in the reference year which were registered by 25 February the following year, and
- births occurring in the year prior to the reference year which were registered between 26 February in the reference year and 25 February the following year, that is births in the previous year which had not been tabulated previously

In the <u>2000 volume</u> the total number of births included:

- births which occurred in 2000 registered by 11 February 2001, and
- births occurring in 1999 which were registered between 12 February 2000 and 11 February 2001, that is births in the previous year which had not been tabulated previously

Total annual births for 1994 to 1999 were derived in a similar way, except that births for all earlier years were included in the annual totals, not just births in the previous year. Up to 1993, the cut-off date was 31 January of the following year, but from 1994 this was then extended to the legal time limit by which a birth should be registered (42 days).

Since the dataset for the 2000 volume, a small number of very late registrations have been excluded each year from the official statistics. Inclusion of these very late registrations in the statistical dataset was found to have an adverse effect on the quality of infant mortality data when linked with the live birth data. The annual dataset now includes only those births occurring in the reference year, and late registrations of births occurring in the year previous to the reference year. The numbers of late registrations included in, and numbers of very late registrations excluded from, the statistics are shown in Table A below.

Annual Dataset Year	Number of late registrations	Number of very late
	from the previous year	registrations excluded from
	included in the dataset	the dataset
2014	145	38
2013	207	7
2012	299	18
2011	173	17
2010	218	51
2009	198	68
2008	242	53
2007	326	61
2006	395	25
2005	307	24
2004	320	10
2003	207	13
2002	161	21
2001	195	26
2000	519	22

# Table A: Numbers of late registrations included in, and numbers of very late registrations excluded from ONS annual birth statistics<sup>1</sup>

1. The annual dataset for 2014 includes145 births which occurred in 2013 but were registered too late to be included in the 2013 dataset (registered between 26 February 2014 and 25 February 2015). The annual dataset for 2014 excludes 38 births registered between 1 January 2014 and 31 December 2014 where the birth occurred in 2012 or earlier.

# 2.3 Areal coverage

Published birth statistics are based on births occurring (and then registered) in England and Wales.

A birth to a mother whose usual residence is outside England and Wales is assigned to the country of residence. These births are included in total figures for England and Wales, but excluded from any sub-division of England and Wales. However they are identified as a separate group in area tables (usual residence outside England and Wales).

# 2.4 Registration of births

Every registrar of births and deaths is required to secure the prompt registration of births occurring within the sub-district covered. Registration of a birth is legally required within 42 days of its occurrence, and the registrar will, if necessary, send a requisition to the person whose duty it is to register the birth. Table B shows the number and percentage of live births registered more than 42 days after the birth occurred and the total number of live births for England and Wales between 2008 and 2012.

Year	Live births with a registration period greater than 42 days		Total live births
	Number	Percentage	Number
2014	19,119	2.8	695,233
2013	15,649	2.2	698,512
2012	24,319	3.3	729,674
2011	25,120	3.5	723,913
2010	17,808	2.5	723,165
2009	17,376	2.5	706,248
2008	19,968	2.8	708,711

#### Table B: Live births registered later than 42 days after the birth, England and Wales

Under the National Health Service Act 2006 and the National Health Service (Wales) Act 2006, births must also be notified, within 36 hours, to the Director of Public Health in the Clinical Commissioning Group (Local Health Board in Wales) where the birth occurred. This is carried out by the hospital where the birth took place, or by the midwife or doctor in attendance at the birth. A list of the births which have occurred in the sub-district is supplied to the registrar, who will then check whether every birth has been registered. The registrar will also verify each birth registered by checking it is on the health authority list.

The following people are qualified to give information to the registrar concerning a birth:

- the mother of the child
- the father/second parent if the child was born within marriage/civil partnership
- the occupier of the house in which the child was, to the knowledge of that occupier, born
- any person present at the birth
- any person having charge of the child

The duty of giving information is placed primarily upon the parents of the child but, in the case of death or inability of the parents, the duty falls on one of the other qualified informants.

The particulars to be registered concerning a birth are prescribed by the Births and Deaths Registration Act 1953, and are covered in section 1.2. Certain other particulars are collected for statistical purposes under the Population Statistics Acts 1938 and 1960, and are not entered in the register.

The procedures and information required for stillbirths are similar to those for live births. The main difference is the recording of the cause of death of the stillborn child, on evidence given by the doctor or midwife present at the birth or who examined the body. There are also differences in the way birthweight is processed: for more information see section 2.15.

Usually, information for the registration of a birth must be given personally by the informant to the registrar for the sub-district in which the birth occurred. However, an informant may supply this information to any registrar by making a declaration of these particulars. The

declaration is sent to the registrar of the sub-district where the birth occurred, and that registrar will enter the particulars in the register.

#### 2.5 Visitors and overseas registrations

The coverage of Birth Statistics is births occurring, and then registered, in England and Wales. Births to residents of England and Wales which are registered elsewhere are thus excluded, while births registered in England and Wales to mothers whose usual residence is elsewhere, are included.

In recent years, around 6,000 to 7,000 births occurring outside the UK to British nationals have been voluntarily registered annually with British Consulates, British High Commissioners, or HM Armed Forces registration centres. Most of these, however, are likely to be births to women who had emigrated from the UK: that is, had lived outside the UK for at least one year; and were thus not residents of England and Wales. Such persons are not included in birth statistics or population estimates for England and Wales.

At any one time some women of childbearing age (defined as age 15 to 44), usually resident in England and Wales, are temporarily absent overseas. Most of these women are absent for only a short period, so it is unlikely that more than a few hundred per year give birth while overseas. The number of births to residents of England and Wales that were registered in Scotland and Northern Ireland are shown in Table C.

Year	Births to residents of England and Wales that were registered in:	
	Scotland	Northern Ireland
2014	:	:
2013	179	12
2012	225	10
2011	221	10
2010	220	11
2009	175	11
2008	210	21
2007	186	19
2006	144	26
2005	177	43

# Table C: Number of live births to residents of England and Wales that were registered in Scotland and Northern Ireland

1. 2014 figures for Scotland and Northern ireland were not available at the time of publication.

The number of births to residents of England and Wales occurring outside the country is likely to be of the same order as the number of births occurring in England and Wales to visitors resident elsewhere. The effect on fertility rates of the difference between the definitions used for birth event numerators and population denominators is assumed to be negligible.

#### 2.6 Abandoned children

Few, if any, details are known about abandoned children, and they are not included in birth statistics. However, since 1977, these infants have been included in the Abandoned Children Register maintained at the GRO in Southport. Table D shows the number of entries in recent years.

Year	Entries into the Abandoned Children
	Register
2014	0
2013	0
2012	0
2011	1
2010	3
2009	1
2008	0
2007	0
2006	3
2005	4

# Table D: Number of abandoned children registered by GRO

# 2.7 Stillbirths

In section 41 of the Births and Deaths Registration Act 1953, a stillbirth is defined as "a child which has issued forth from its mother after the 28th week of pregnancy and which did not at any time after being completely expelled from its mother breathe or show other signs of life". This definition was used up to 30 September 1992. On 1 October 1992 the Still-Birth (Definition) Act 1992 came into force, altering the above definition of a stillbirth to 24 or more weeks completed gestation. Figures for stillbirths from 1993 are thus not fully comparable with those for previous years. The effect of this change on figures for 1992 is analysed in the annual volume for that year (OPCS, 1994).

#### 2.8 Births within marriage/civil partnership, and sole and joint registration

Following the implementation of the Human Fertilisation and Embryology Act (2008) same sex female couples have been able to register the birth of a child as mother and second parent since 1 September 2009. The Act also made provision for 2 men to be officially recognised as the parents of a child through the provision of a parental order, obtainable through the courts.

A birth within marriage/civil partnership is that of a child born to parents who were lawfully married/in a civil partnership either:

- at the date of the child's birth, or
- when the child was conceived, even if they later divorced/were granted a civil partnership dissolution or the father/second parent died before the child's birth

Births occurring outside marriage/civil partnership may be registered either jointly or solely. A joint registration records details of both parents, and requires them both to be present. A sole registration records only the mother's details. In a few cases a joint registration is made in the absence of the father/second parent if an affiliation order or statutory declaration is provided. Information from the birth registration is used to determine whether the mother and father/second parent jointly registering a birth outside marriage/civil partnership were usually resident at the same address at the time of registration. Births with both parents at the same address are identified by a single entry for the informant's usual address, while different addresses are identified by 2 entries.

Due to the small numbers of births registered to same sex couples, births to same sex couples in a civil partnership are included with marital births and births occurring to same

sex couples outside of a civil partnership are included with births outside marriage. The Marriages (Same Sex Couples) Act 2013 enabled same sex couples to get married in England and Wales from 29 March 2014. Due to the small numbers of births registered to same sex couples, births occurring inside marriage are not separated in the tables by opposite sex or same sex marriage. The number of births to same sex couples is footnoted on relevant tables to assist users. Given the relatively small numbers of births registered to same sex couples, the impact on statistics is negligible.

#### 2.9 Age of parents

The mother's or father's/second parent's date of birth is recorded and translated into the age at the birthday preceding the date of the child's birth. This age is often termed age last birthday. Detailed checks are carried out on those dates of birth which imply that the age of the mother is over 50 years or under 16 years.

For births registered under the Human Fertilisation and Embryology Act, 2008, the age of second parent has been included with age of father. Given the relatively small number of births registered to same sex couples, this has a negligible impact on the statistics.

The method by which missing values for mother's and father's/second parent's age have been imputed changed in 2004. From 2004 onwards, if either the mother's date of birth or the father's/second parent's date of birth (where applicable) is not given, and mother's date of birth cannot be gained from the birth notification (used from 2007 onwards), an age is imputed. See section 1.3 for further details.

Table E below shows the percentage of records where parents' dates of birth were not stated at registration. Figures from 2007 onwards show the percentage of records still with no date of birth following birth notification matching.

Year	Records with mother's date of birth not stated		Percentage of records where father's/second
	Percentage	Percentage still missing following birth notification matching	parent's date of birth not stated (where father's/second parent's details
			present) <sup>i</sup>
2014	0.9	0.1	0.9
2013	0.5	0.07	0.5
2012	0.4	0.04	0.4
2011	0.3	0.04	0.4
2010	0.3	0.03	0.4
2009	0.5	0.1	0.6
2008	1.0	0.2	1.1
2007	2.0	0.4	2.1
2006	1.4		1.5
2005	1.1		1.2

# Table E: Percentage of records where parents' dates of birth were not stated at registration (live births and stillbirths)

<sup>1</sup>Births to females in a same sex couple registered under the Human Fertilisation and Embryology Act, 2008, are only included from 2009. Figures prior to 2009 represent where father's date of birth was not stated.

#### 2.10 Country of birth of each parent

The country of birth of each parent for children born in England and Wales has been recorded at birth registration since April 1969. This is coded to country of birth for statistical purposes. The details for country of birth groupings can be found in the **Parents' country of birth** package on the metadata tab. Birthplace does not necessarily equate with ethnic group. A fuller discussion of this subject can be found in <u>Population Trends</u>.

#### 2.11 Place of birth and area of usual residence

Place of birth is categorised as follows:

- NHS establishments generally hospitals, maternity units and maternity wings
- Non-NHS establishments including private maternity units, military hospitals, and private hospitals
- at home denoting the usual place of residence of the mother
- elsewhere including all locations not covered above: most of these are at a private residence not that of the mother, or are on the way to a hospital

A birth is assigned to an area according to the usual residence of the mother at the time of birth, as stated at registration. However, a birth may take place in an area other than that of the mother's usual residence and so an area of occurrence is also assigned.

Births which take place at home or elsewhere are not allocated a health area of occurrence.

Until the 2010 data year for births, we assigned area of usual residence using a look-up product (the National Statistics Postcode Directory). This product associated postcodes with a number of geographical levels (for example, local authority, region). The postcode was allocated to each level of geography using a point-in-polygon methodology. Although this method is spatially accurate, it does not provide the stable building blocks needed for comparing geographies at different levels.

From the 2011 data year for births, we have assigned area of usual residence by first linking each postcode to an output area using this same point-in-polygon methodology, and then linking to all higher geographies by using a population weighted, best-fit look-up to output area. This means that postcodes are allocated to a higher geography based on where the output area population weighted centroid lies. This is in line with the <u>Geography</u> <u>Policy for National Statistics</u>.

Switching to the new area allocation method has negligible impact on birth statistics down to local authority level. However, the new method improves comparability of birth statistics for sub-national areas over time.

For more information about these methods, see <u>National Statistics Postcode Products</u>. An assessment of this change in methodology was also published in 2013: <u>Assigning life</u> events data to sub-national areas: an assessment of a change to the methodology.

#### 2.12 Multiple births

Multiple births arising from a single pregnancy are counted as one maternity or paternity, although each child born is considered separately in analyses of birth statistics.

# 2.13 Previous live-born children, true birth order, registration birth order and marital birth order

Until May 2012, when a birth was within marriage, the informant was asked for the number of previous children, by the mother's husband and any former husband, for both live births and stillbirths. This allowed determination of the registration birth order. If the number of previous live-born children was not given, a value was imputed from a similar record with completely stated and otherwise matching particulars. Table F shows the percentage of records requiring imputation of this variable for 2005 to 2011.

# Table F: Percentage of live births with information on the number of previous liveborn and stillborn children missing, 2005 to 2011

Year	Percentage of all live births within marriage which had information on previous live- born children missing	Percentage of all stillbirths within marriage which had information on previous live-born
		children missing
2011	0.01	0.2
2010	0.01	0.2
2009	0.03	2.1
2008	0.03	3.6
2007	0.1	8.7
2006	0.1	15.3
2005	0.1	15.1

However, the number of previous live births was deficient for fertility statistics in 2 respects:

- at registration, the question on previous live births and stillbirths was not asked where the birth occurred outside marriage or within or outside a civil partnership
- at the registration of births and stillbirths occurring within marriage, or within or outside a civil partnership, previous live births where the woman had never been married to the father were not counted - however, because of the ambiguous nature of the question (see Annex A and C) it is possible that births outside marriage where the woman subsequently married the father were not always included

The proportion of births occurring outside marriage has risen steadily in recent years. To allow for this, up until May 2012 the information collected on birth order at registration was supplemented to give estimates of overall or true birth order, that is, a measure which includes births both within and outside marriage. The supplementary information was obtained from the General Lifestyle Survey (GLF), formerly the General Household Survey (GHS). The example in table F of a hypothetical birth history helps to illustrate the relationship between true birth order, marital birth order and birth order collected at registration.

Prior to the 2004 volume of Birth statistics, information from the GHS surveys from 1986 to 1996, 1998 and 2000 was used to produce the estimates of true birth order. In the 2004, 2005 and 2006 volumes, additional information from the GHS for the years 2001 to 2003 was incorporated. For the 2007 and 2008 volumes and the 2009, 2010 and 2011 births packages this information has been further supplemented by incorporating GHS/GLF data

from the 2004 to 2006 surveys. The method of estimation is described in a <u>Population</u> <u>Trends article</u>.

# Table G: Hypothetical birth history to illustrate the relationship between true birth order, marital birth order and birth order collected at registration.

Birth History	True Birth Order	Registration Birth Order	Marital Birth Order
First birth while cohabiting with man A	1	Not recorded	Not applicable
Second birth while married to man B	2	1	1
Third birth while cohabiting with man C	3	Not recorded	Not applicable
Fourth birth after marriage to man C	4	3	2

Amendments to the Population (Statistics) Act 1938 mean that from May 2012, information is now collected at all birth registrations on the total numbers of previous live births and previous stillbirths that the mother has had (not just those with the current or former husband). This has simplified the question asked by registrars and provides improved coverage.

A paper describing the changes that have occurred to ONS birth statistics as a result of improvements to the Population Statistics Act is available on the <u>our website</u>. It provides background to the changes and provides high level findings from the new data collected in 2012 and 2013.

An investigation of <u>Childbearing by registration status in England and Wales, using birth</u> <u>registration data for 2012 and 2013</u> examines the patterns and characteristics in birth registrations following the improvements to the data collected at birth registration. The principal characteristics explored in the paper relate to whether a woman has been previously married, and whether the birth is the mother's first child or subsequent child.

# 2.14 Birth intervals

Figures showing median birth intervals are available in <u>Characteristics of mother 2</u> (will be available in the new Births characteristics package). The median intervals between first, second, third and fourth births is derived by HM Revenue & Customs (HMRC) from a 100% extract (5% sample for estimates up to and including 2006) of new claims for Child Benefit from all births occurring in the UK, whether within or outside marriage. A zero interval is assumed for births resulting from a multiple maternity.

#### 2.15 Birthweight

Birthweight is measured in grams. For live birth registrations received on RON, birthweight is passed electronically to us from the notification by the midwife or doctor in attendance at the birth. These details are then supplied to the registrar. For stillbirths, details of the weight of the foetus are supplied on a certificate by a doctor or midwife. The certificate is

then taken by an informant to the registrar. If the birthweight is missing, but the registration is linked to the birth notification then the birthweight from the notification is taken.

In cases where no birthweight is recorded, the birth is included in the total 'all weights' but not distributed among the individual categories. Table H provides figures for records where no birthweight was recorded.

Year	Percentage of all live births where birthweight was not recorded	Percentage of all stillbirths where birthweight was not recorded
0014		
2014	1.5	0.4
2013	1.0	0.5
2012	0.8	0.3
2011	0.9	0.5
2010	1.0	0.2
2009	0.7	1.1
2008	0.8	0.7
2007	1.1	2.6
2006	0.9	3.0
2005	0.4	1.6

Table H: Percentage of births where birthweight was not recorded

# 2.16 Duration of marriage/civil partnership

At registration only the month and year of marriage/civil partnership are recorded, so the calculation relates to the interval in completed months between the middle of the month of marriage/civil partnership and the date of the child's birth.

If the date of marriage/civil partnership is not given, a value for the duration is imputed from a similar record with completely stated and otherwise matching particulars. Table I provides figures for records which had this variable imputed in recent years.

Table I: Percentage of all live births within marriage/civil partnership which did not
have a year of marriage/civil partnership stated at registration

Year	Percentage of all live births within marriage/civil partnership where year of marriage/civil partnership was not stated
2014	1.5
2013	1.1
2012	0.8
2011	0.7
2010	0.6
2009	0.8
2008	1.2
2007	2.3
2006	1.6
2005	1.4

For women who have been married or formed a civil partnership more than once, duration refers to the length of the current marriage/civil partnership.

# 2.17 Birth cohorts

Birth statistics analysed by year of occurrence and by age of mother have been available since 1938. The tables in the <u>Childbearing for women born in different years</u> package (formerly known as <u>Cohort fertility</u>) show these statistics in cohort form: by the year of birth of the mother rather than the year of birth of the child. The year of birth of the mother is by necessity approximate because, prior to 1963, data are available only by calendar year of occurrence and age of mother at childbirth. For instance, women aged 32 giving birth to children in 2012 could have been born in either 1979 or 1980; for convenience however, such women are here regarded as belonging to the 1980 cohort. Tables refer to age in exact years.

# 2.18 Socio-economic classification as defined by occupation

Information on occupation of the mother/father is coded for only a sample of 1 in 10 live births. Combining this with the employment status, a code for socio-economic classification (or social class in previous volumes) may be derived.

From 1991 to 2000 occupation was coded using the Standard Occupational Classification SOC90<sup>9</sup>, and occupation codes were allocated to the Registrar General's Social Class. Since 2001 the National Statistics Socio-economic Classification (NS-SEC) (Rose D and O'Reilly K, 1998) has categorised the socio-economic classification of people, and has replaced the Registrar General's Social Class and the Socio-economic Group (SEG).

The Standard Occupational Classification is revised every 10 years and in 2011 <u>SOC2010</u> replaced <u>SOC2000</u>. A report outlining the <u>impact of re-basing the NS-SEC on SOC2010</u> is available on the ONS website. We derive NS-SEC using the reduced method due to not collecting information on the size of the organisation.

NS-SEC has 8 analytic classes, the first of which can be subdivided:

- 1 Higher managerial and professional occupations
- 1.1 Large employers and higher managerial occupations
- 1.2 Higher professional occupations
- 2 Lower managerial and professional occupations
- 3 Intermediate occupations
- 4 Small employers and own-account workers
- 5 Lower supervisory and technical occupations
- 6 Semi-routine occupations
- 7 Routine occupations
- 8 Never worked and long-term unemployed

Students, occupations not stated or inadequately described, and occupations not classifiable for other reasons are added as 'not classified'.

Up until the 2011 data year, live birth statistics by NS-SEC was published using the father's NS-SEC. Historically, the decision to use father's NS-SEC was based on the premise that many mothers either do not have a paid occupation or choose not to state their occupational details at birth registration.

From the 2012 data year, we have used the combined method for reporting NS-SEC for birth statistics (using the most advantaged NS-SEC of either parent and creating a household level classification rather than just using the father's classification). The combined method means that sole registered births where information on the father is not

available are now included in published birth statistics by NS-SEC. Following this change, the publication <u>Births by socio-economic status of father</u> has been discontinued and a new set of NS-SEC tables have been included in the <u>Further parental characteristics</u> births release (will be in the new Births by parents' characteristics package).

The sample figures in tables are grossed-up to agree with known totals derived from the 100% processing of birth registrations by mother's age and previous live-born children. This ensures consistency with sub-totals, and improves the quality of sample estimates.

**Appendix tables 1** and **2** published alongside the NS-SEC tables show standard errors for selected numbers of births and percentages. If the estimated grossed-up number in a particular category was 50,000, then the standard error of that estimate would be approximately 640. Based on statistical theory, this means that for the type of distribution being considered there is about a 95% chance that the 'true' number in the population lies within 2 standard errors of the estimates. This true number is that which would have been obtained had all the information been collected, rather than a 1 in 10 sample.

In this example, the 95% confidence interval would be:

50,000 ± 1,300, or 48,700 to 51,300.

In other words, we could say that we are 95% confident that the true value, if we had collected all the information instead of a 10%, lies somewhere between 48,700 and 51,300.

# 2.19 Rates

Fertility rates have been calculated using the most up-to-date consistent mid-year estimates of the female population, based on census data.

The most commonly used rates are described below (Shyrock HS and Siegel JS, 1973)

# Crude birth rate

This is the simplest overall measure of fertility in the population, given by the number of live births in a year per 1,000 mid-year population. It is unsophisticated since it takes no account of the composition of the population, in particular the age and sex distribution. It is given by:

(B/P) x 1,000 where B = total live births in the year, and P = mid-year population.

# General fertility rate (GFR)

This is an easily calculated measure of current fertility levels, and denotes the number of live births per 1,000 women aged 15 to 44. However, it makes no allowance for different sized cohorts of women at childbearing ages. It is given by

 $B/P_{15-44}^{f} \times 1,000$ 

where B = total live births in the year, and

 $P_{15-44}^{f}$  = female population aged 15 to 44.

# Age-specific fertility rates (ASFRs)

ASFRs are a measure of fertility specific to the age of the mother, and are useful for comparing the reproductive behaviour of women at different ages. They are calculated by dividing the number of live births to mothers of each age group by the number of females in the population of that age and then expressed per 1,000 women in the age group. They can be calculated for single ages, but are usually calculated for 5-year age groups in the reproductive age range, from under 20 up to 40 and over. They provide the basis for a detailed analysis of fertility levels by age of mother when giving birth. The ASFR based on 5-year age groups is given by:

$$F_a = \left( \mathbf{B}_a / \mathbf{P}_a^{\mathrm{f}} \right) \times 1,000$$

where  $F_a$  = age-specific fertility rate for age-group a,

 $B_a$  = live births to women in age-group a,

 $P_{a}^{\mathrm{f}}\,$  = female population in age-group a, and

a = age-group under 20, 20 to 24,...., 35 to 39 , 40 and over.

For the groups under 20 and 40 and over, the female populations used are women aged 15 to 19, and women aged 40 to 44 respectively.

# Total fertility rate (TFR)

National TFRs are derived by summing single-year ASFRs over all ages within the childbearing lifespan. TFRs at geographies below national level (that is regions, counties, local authorities and health boards) have been calculated by summing 5-year ASFRs for all ages and then multiplying by 5 (this method gives more robust TFRs for areas with small populations). The TFR is a measure independent of variations in the age distribution of women of childbearing age. It may be interpreted as representing the completed fertility of a synthetic cohort of women, that is, the average number of live children that a group of women would have if they experienced the age-specific fertility rates for the calendar year in question throughout their childbearing lifespan.

The national level TFRs are given by:

$$TFR = \sum_{a = under \, 16}^{a = 44 \text{ and over}} F_a$$

TFRs at geographies below national level are given by:

$$\begin{split} TFR = & 5\sum_{a\,=\,under\,\,20}^{a\,=\,40\,\,and\,\,over} \\ \text{where} \quad & F_a = B_a\,/\,P_a^f \text{ and} \\ & B_a = \text{live births to women in age group a,} \end{split}$$

 $P_a^f$  = female population in age group a, and

a = ages (see below).

For national TFRs, the ages used are under 16, 16, 17, ...., 42, 43, 44 and over. For the age groups under 16 and 44 and over the female populations used are women aged 15 and 44 respectively.

For subnational TFRs the ages used are under 20, 20 to 24, ...., 35 to 39, 40 and over. For the groups under 20 and 40 and over, the female populations used are women aged 15 to 19, and women aged 40 to 44 respectively.

#### Stillbirth rate

The stillbirth rate is defined as the number of stillbirths per 1,000 live births and stillbirths.

#### Sex ratio

Expressed as males per 1,000 females, it is most often used for live births, but also for stillbirths.

#### Other rates used in the releases include:

- live births within marriage/civil partnership per 1,000 married women, by age of mother
- live births within marriage/civil partnership per 1,000 married men, by age of father
- live births outside marriage/civil partnership per 1,000 single, widowed and divorced women, by age
- live births outside marriage/civil partnership per 1,000 live births
- paternities within marriage/civil partnership per 1,000 married men, by age
- stillbirths within marriage/civil partnership per 1,000 married men, by age
- maternities with multiple births per 1,000 total maternities, by age

#### 2.20 Accuracy of information

The accuracy of information contained in the draft birth entry is the responsibility of the informant(s), usually the mother, or both parents where the registration is a joint one outside marriage. Wilfully supplying false information may render the informant(s) liable to prosecution for perjury.

It is believed that in general the information supplied by the informant(s) is correct. Births that are registered using the RON system provide the opportunity for the registrar to make validation checks at the point of registration, therefore improving the quality of the data.

#### 2.21 Historical information

When the Statistics and Registration Service Act 2007 came into force on 1 April 2008, the National Statistician was no longer the Registrar General for England and Wales and the General Register Office (GRO) separated from the Office for National Statistics (ONS). The Statistics Board is the legal successor to ONS and among other things undertakes the former statistical functions of the Registrar General. The responsibility for the production of birth statistics is now a function of the UK Statistics Authority (the preferred name for the Statistics Board) which is required to produce an annual abstract of birth statistics in order that the Minister for the Cabinet Office can lay it before Parliament.

The formal registration of live births commenced on 1 July 1837, while stillbirths have been registered only since 1 July 1927. Confidential particulars for statistical purposes have been collected since 1 July 1938, under the Population Statistics Act of that year. From the later date, it has also been possible to routinely distinguish multiple births.

The Population (Statistics) Act 1960, effective from 1 January 1961, added a question on father's date of birth to the confidential particulars requested in the case of births within

marriage. This applied also to births outside marriage where the father's name is entered in the register.

Questions on father's and mother's place of birth were introduced on 1 April 1969 by the Registration of Births, Deaths and Marriages Regulations 1968.

#### 2.22 Legislation

The existing provisions for the registration of births and the processing, reporting and analysis of births data appear in different legislation that reflects the distinct and separate roles of the Registrar General for England and Wales and the UK Statistics Authority. The Registrar General is guided by the following:

- Welfare and Reform Act 2009, which amends the Population (Statistics) Act 1938, enabling data to be collected for all women (not just married women) on i) the number of previous children and whether the mother had been previously married
- The Human Fertilisation and Embryology Act 2008, which gave provision for same sex female couples to jointly register the birth of a child as mother and parent. It also allows for 2 men to obtain a parental order through the courts to be officially registered as the parents of a child post-registration
- National Health Service Act 2006 (amended 2013) and National Health Service (Wales) Act 2006, which consolidate legislation relating to the health service and separate provision of the health service in Wales from that in England. The Acts require notification of a birth to the local authority and Clinical Commissioning Group (Local Health Board in Wales) where the birth occurred. Both Acts include provisions both for the supply of information about birth notifications by the National Health Service (NHS) to the Registrar General and the supply of information on individual registered births by the Registrar General to the NHS
- Still-Birth (Definition) Act 1992, which altered the definition of a stillbirth to 24 or more weeks completed gestation, instead of the previous definition of 28 or more weeks completed gestation
- Population (Statistics) Act 1960, which makes further provision for collecting statistical detail at registration
- Population (Statistics) Act 1938, which deals with the statistical information collected at registration
- Births and Deaths Registration Act 1953, which covers all aspects of the registration of births and stillbirths

The UK Statistics Authority is guided by the following:

 Statistics and Registration Service Act 2007, which transfers some of the statistical functions of the Registrar General including the production of an annual abstract to the UK Statistics Authority and the Office for National Statistics (ONS) becomes the executive office of the UK Statistics Authority - simultaneous changes resulted in the General Register Office, of which the Registrar General is the head, becoming part of the Identity and Passport Service (now Her Majesty's Passport Office) and the National Health Service Central Register (NHSCR) transferring to the NHS Information Centre for Health and Social Care (IC)

- the 2007 Act also provides the Registrar General with a power to allow the disclosure of any information about a birth or stillbirth to the UK Statistics Authority for statistical purposes. It also enables the UK Statistics Authority to produce and publish statistics relating to any matter
- Registration Service Act 1953, which in section 19 requires the UK Statistics Authority to provide annual abstracts of live births and stillbirths

## 2.23 Further information

Special extracts and tabulations of births data for England and Wales are available to order for a charge (subject to legal frameworks, disclosure control, resources and agreements of costs, where appropriate). Such enquiries should be made to:

Vital Statistics Outputs Branch Office for National Statistics Segensworth Road Titchfield Fareham Hampshire PO15 5RR Tel: +44 (0)1329 444 110 E-mail: <u>vsob@ons.gsi.gov.uk</u>

The <u>ONS charging policy</u> is available on our website. In line with the <u>ONS approach to</u> <u>open data</u>, ad hoc data requests will be published onto <u>the website</u>. We welcome feedback on the content, format and relevance of releases. Please send feedback to the postal or email address above.

#### References

Division.OPCS (1987). Birth statistics historical series 1837–1983, series FM1 no 13.

OPCS (1994). Birth statistics 1992, series FM1 no 21.

Rose D and O'Reilly K (1998). The ESRC Review of Government Social Classifications, ESRC & ONS: Swindon.

Shryock HS. and Siegel JS. (1973). The methods and materials of demography, chapter 16. (US Government Printing Office, Washington DC, 1973).

Statistics Canada (2005). CANCEIS User's Guide: Canadian Census Edit and Imputation System, CANCEIS Development Team, Social Survey Methods

# Glossary

# Age-Specific Fertility Rate (ASFR)

The number of live births to mothers of a particular age per 1,000 women of that age in the population. Useful for comparing fertility of women at different ages or women of the same age in different populations.

# Average Family Size

Average family size represents the number of births each woman has achieved by a specified age, for a cohort of women (such as, women born in a particular year).

# Canadian Census Edit and Imputation System (CANCEIS)

A donor-based imputation system, developed by Statistics Canada, used to impute missing values for Population Statistics Act data items for birth records since 2004.

# **Civil Partnership**

Civil partnerships are a legal confirmation of a relationship between 2 people of the same sex.

# **Code of Practice for Official Statistics**

The principles and protocols followed and upheld by all those involved in producing National Statistics.

# Cohort

A specific group of people, in this case, those born during a particular year. Analysis using cohorts considers the experience of that group of people over time.

# **Cohort Fertility Measures**

Fertility measures based on women born in particular years.

# **Crude Birth Rate**

The number of live births in a year per 1,000 mid-year population.

# Dissolution

A dissolution is a legal end to a civil partnership obtained through the courts.

# General Fertility Rate (GFR)

The number of live births in a year per 1,000 women aged 15 to 44. Measure of current fertility levels.

# General Household Survey (GHS)

The GHS is a continuous survey carried out by ONS, collecting information on a range of topics from people living in private households in Great Britain. Now known as the General Lifestyle Survey (GLF).

# General Lifestyle Survey (GLF)

Formerly known as the General Household Survey (GHS)

# General Register Office (GRO)

The GRO is responsible for ensuring the registration of all births, deaths, marriages and civil partnerships that have occurred in England and Wales and for maintaining a central archive.

# Informant

The person(s), normally one or both parents, who provide the registrar with the information required at the registration of a birth.

#### Imputation

A method used to add information to an incomplete birth record, using the details from another similar but complete record.

#### **Joint Registration**

A birth outside marriage/civil partnership registered by both the mother and father/second parent of the child. Both parents' details are recorded and both must be present at the registration.

# Live Birth

A baby showing signs of life at birth.

#### Maternity

A pregnancy resulting in the birth of one or more live-born or stillborn children. Therefore, the number of maternities (and **paternities**) is less than the total number of live births and stillbirths.

#### Mean

A common measure of the average. The values are summed and then divided by the total number of observations.

#### Median

Statistical term for the value for which half the data are above and half are below. An alternative measure of the average to the mean.

# **Multiple Birth**

A single maternity resulting in 2 or more births.

#### Notification

A document completed by the doctor or midwife present at the birth. The notification provides certain data items, such as the birthweight, to the birth record.

#### NS-SEC

National Statistics Socio-economic Classification categorises the socio-economic classification of people, and has replaced the Registrar General's Social Class and the Socio-economic Group (SEG).

#### Occurrences

Births which occur in a given period, for example a calendar year.

# ONS

Office for National Statistics (ONS). Since 1 April 2008, ONS is the executive arm of the UK Statistics Authority.

# OPCS

Office of Population Censuses and Surveys joined with Central Statistical Office in 1996 to become ONS.

# Parity

The number of live births a woman has had. A woman who has one child has a parity of one. See **Previous live-born children and true birth order**.

# Period Fertility Measures

Fertility measures relating to a particular time period, to provide a snapshot of fertility at that time.

# Place of Birth

Place where a birth occurs.

# Population Statistics Act (PSA)

This Act makes provision for certain information to be collected at the registration of a birth for statistical use. This information is confidential and is not entered on the register.

# Ratio

A measure of the relative size of two variables.

# Registrar

Local authority employee responsible for the registration of births, deaths, marriages and civil partnerships.

# **Registrar General**

Statutory appointment with responsibility for the administration of the Registration Acts in England and Wales and other related functions as specified by the relevant legislation.

# **Registration Birth Order**

The number assigned to a birth based on the number of previous live births to that mother, counting only those births by her current or any previous husband(s).

# **Registration Officer**

Generic term for registrar, superintendent registrar and additional registrars.

# Registrations

Births that were registered in a particular period, even though some may have occurred in an earlier period.

# RON

Registration Online. A web-based system which enables registrars to record births, stillbirths, deaths, marriages and civil partnerships online. From July 2009 all birth registrations have been recorded on RON.

# RSS

Registration Service Software. System of collecting data electronically at the registration of a birth or a death. Used prior to the introduction of RON. Since July 2009 this system has been obsolete.

#### Single Men or Women

Persons who have never been married. At present population estimates by marital status do not take account of civil partnerships.

#### Singleton

Only birth born in a maternity.

#### SOC2010

Standard Occupational Classification 2010 is the current occupational classification. SOC2010 codes, details of employment status and size of organisation are required for the derivation of NS-SEC. See NS-SEC.

#### Sole Registration

A birth outside of marriage/civil partnership registered only by the mother. No information on the father is recorded.

#### Standard Error

A measure of the sampling variation occurring by chance when only part of the total population has been selected for analysis. For example, father's occupation is coded on only 10% of live birth records.

#### Standardised Mean Age

The standardised mean (average) age (for example, at birth or marriage) is a measure which eliminates the impact of any changes in the distribution of the population by age and therefore enables trends over time to be analysed. Standardised means are calculated using rates per 1,000 female population by single year of age of mother.

#### Stillbirth

A child that has issued forth from its mother after the 24th week of pregnancy, and that did not at any time after being completely expelled from its mother breathe or show any signs of life.

#### Superintendent Registrar

Local authority employee with responsibilities relating to marriage and other registration functions, as specified in the relevant legislation.

#### Total Fertility Rate (TFR)

The TFR is the average number of live children a group of women would have if they experienced the age-specific fertility rates for the calendar year in question throughout their childbearing lifespan.

#### **True Birth Order**

The number assigned to a birth based on the number of previous live births to that mother, counting all births inside or outside of marriage.

#### **UK Statistics Authority**

The UK Statistics Authority is an independent body operating at arm's length from government as a non-ministerial department, directly accountable to Parliament. It was established on 1 April 2008 by the Statistics and Registration Service Act 2007.

# Unstandardised Mean Age

The average age (for example, at birth or marriage) of the population in question, calculated as the actual average for a particular year. Comparisons of unstandardised mean ages are affected by changes in the structure of the population by age, marital status and parity. This measure should only be used when requiring a mean for a particular year. Unstandardised means are calculated using only numbers of births by single year of age of mother.

# VSOB

Vital Statistics Outputs Branch (at ONS).