



**An
Phríomh-Oifig
Staidrimh**

Central
Statistics
Office

**Standard Report
on
Methods and Quality
for
Stillbirths Registration**



Standard Report on Methods and Quality (v1) for Stillbirths Registration

This documentation applies to the reporting period:

<2007 onwards>

Last edited: 16/06/2022

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1 Overview

There is no legal requirement to register a stillbirth with the General Registration Office (GRO). Registration of a stillbirth is voluntary. The details of these stillbirth registrations are compiled into statistical reports by the Central Statistics Office, acting on behalf of the Minister for Social Protection. These reports are used by perinatal health researchers. Perinatal deaths are stillbirths or late foetal deaths plus early neonatal deaths. An early neonatal death is a death at ages under 1 week of live born infant.

2 General Information

2.1 Statistical Category

Compilation based on administrative data

2.2 Area of Activity

Social Statistics

2.3 Organisational Unit Responsible, Persons to Contact

Vital Statistics

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2.4 Objectives and Purpose; History

While statistics of infant mortality are obtained in the course of the usual procedure for registration of deaths which has been in operation since 1863, particulars of late foetal mortality (defined below) have been obtained through a scheme of notification to the Directors of Community Care. The scheme of notifying late foetal deaths was introduced in 1957, but comparisons between different areas of the country showed marked differences in the coverage of the scheme in the early years. Consequently, the number of late foetal deaths in the early years of the scheme is believed to be understated.

- In 1995 stillbirths were registered in Ireland for the first time under the Stillbirths Registration Act, 1994.
- The definition of a stillbirth under the Act is broader than the definition used for late foetal deaths in previous Vital Statistics Reports.
- Late foetal deaths were defined as foetal deaths at or over 28 weeks gestation. This definition was applied up to 1994 inclusive.
- Stillbirths are defined as foetal deaths weighing 500 grams or more or at gestational age of 24 weeks or more. This definition applies to stillbirth figures from 1995 onwards.

2.5 Periodicity

Statistics on stillbirths are presented in the Annual Report of Vital Statistics.

2.6 Client



Vital Statistics releases and publications are prepared on behalf of the Minister for Social Protection, under Section 73(6) of the Civil Registration Act 2004. Prior to the 2004 Act, the statistics were compiled by the CSO on behalf of the Minister for Health and Children, in accordance with the provisions of Section 2 of the Vital Statistics and Births, Deaths and Marriages Registration Act, 1952.

2.7 Users

- Government
- Other CSO sections e.g. Census, (Labour Force Survey (LFS))
- Demographic Researchers, Health Researchers
- The general public
- Professional Bodies
- Eurostat

2.8 Legal basis

Vital Statistics releases and publications are prepared by the CSO on behalf of the Minister for Social Protection, under Section 73(6) of the Civil Registration Act 2004. Prior to the 2004 Act, the statistics were compiled by the CSO on behalf of the Minister for Health and Children, in accordance with the provisions of Section 2 of the Vital Statistics and Births, Deaths and Marriages Registration Act, 1952.

3 Statistical Concepts, Methods

3.1 Subject of the Statistics

Information on stillbirths occurring in Ireland.

3.2 Units of Observation/Collection Units/Units of Presentation

Stillbirths as recorded on Birth Notification Forms and the Medical Certificate Relating to the Birth of a Stillborn Child. These are presented in tables aggregated by sex, underlying cause of stillbirth, weight, gestation period, and age, area of residence and number of previous children of mother. See copy of Birth Notification form at the end of this document.

3.3 Data Sources

General Register Office.

3.4 Reporting Unit/Respondents

A Stillbirth occurring in Ireland may be registered with the General Register Office. Registration of a stillbirth is voluntary.

3.5 Type of Survey/Process

Aggregation of administrative data concerning registered stillbirths.



3.6 Characteristics of the Sample/Process

Stillbirths, Infant Mortality and Maternal Mortality

The terms used in relation to stillbirths and infant mortality are defined as follows:

Stillbirth: Stillbirth weighing 500 grams or more or at gestational age of 24 weeks or more. this definition applies to stillbirth figures from 1995 onwards.

Late foetal death: Foetal death at or over 28 weeks gestation. this definition was applied up to 1994 inclusive.

Early neonatal death: Death at ages under 1 week live born infant.

Perinatal deaths: Stillbirths or late foetal deaths plus early neonatal deaths.

Late neonatal deaths: Death between the ages of 1 week and 4 weeks of live born infant.

Neonatal death: Death at ages under 4 weeks of live born infant.

Post neonatal death: Death between the ages of 4 weeks and 1 year of live born infant.

Infant death: Death at ages under 1 year of live born infant.

Maternal death: a maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

3.6.1 Stillbirth, Infant mortality and Maternal Mortality rates

Stillbirth rate: Stillbirths divided by total live births plus stillbirths, multiplied by 1,000.

Late foetal mortality rate: Late foetal deaths divided by total live births plus late foetal deaths, multiplied by 1,000.

Early neonatal mortality rate: Early neonatal deaths divided by total live births, multiplied by 1,000.

Perinatal mortality rate: Perinatal deaths divided by total live births plus stillbirths, multiplied by 1,000.

Late neonatal mortality rate: Late neonatal deaths divided by total live births, multiplied by 1,000.

Neonatal mortality rate: Neonatal deaths divided by total live births, multiplied by 1,000.

Post neonatal mortality rate: Post neonatal deaths divided by total live births, multiplied by 1,000.

Infant mortality rate: Infant deaths divided by total live births, multiplied by 1,000.

Maternal death rate: Maternal deaths divided by total live and stillbirths multiplied by 100,000.

Sampling frame

Not applicable

3.6.2 Sampling/Census Design

Not applicable

3.7 Survey Technique/Data Transfer



Information about stillbirths as recorded on Birth Notification Forms and the Medical Certificate Relating to the Birth of a Stillborn Child is collected electronically by the General Registration Office. This information is sent to the Central Statistics Office annually and the file is in encrypted xml format. The file is decrypted to excel. Data for infant mortality and maternal deaths is included in the weekly death registrations transmitted to the CSO from the General Registration Office.

3.8 Questionnaire (including explanations)

Not applicable

3.9 Participation in the Survey

Not applicable

3.10 Characteristics of the Survey/Process and its Results

Aggregations classified by:

- sex, underlying cause of stillbirth, weight, gestation period
- age, area of residence, socio-economic group and marital status of parents,
- number of previous children of mother.

3.11 Classifications used

Stillbirths are defined as foetal deaths weighing 500 grams or more or at gestational age of 24 weeks or more. This definition applies to stillbirth figures from 1995 onwards.

Late foetal deaths were defined as foetal deaths at or over 28 weeks gestation. This definition was applied up to 1994 inclusive.

All stillbirths registered on or after 1, January 2007 are classified according to The World Health Organisation's International Classification of Diseases, Version 10 (ICD-10).

<http://www.who.int/classifications/apps/icd/icd10online>

Stillbirths and late foetal deaths from 1979 to 2006 were coded according to ICD-9. Causes of stillbirth/late foetal death for other years were classified by earlier versions of ICD.

3.12 Regional Breakdown of Results

Stillbirths are classified by the residence of the parents. The classification is at the level of counties, cities and certain towns. See breakdown directly below:

Border, Midland and Western NUTS2 Region

Border
Cavan
Donegal
Leitrim
Monaghan
Sligo

Southern and Eastern NUTS2 Region

Dublin
Dublin City
Dún Laoghaire- Rathdown
Fingal
South Dublin



Midland

Laois
Longford
Offaly
Westmeath

West

Galway City
Galway County
Mayo
Roscommon

South-West

Cork City
Cork County
Kerry

Mid-East

Kildare
Louth
Meath
Wicklow

Mid-West

Clare
Tipperary
Limerick City
Limerick County

South-East

Carlow
Kilkenny
Waterford City
Waterford County
Wexford



4 Production of the Statistics, Data Processing, Quality Assurance

4.1 Data Capture

The hospital completes details of the birth on the Birth Notification Form. The attending physician completes the Medical Certificate Relating to the Birth of a Stillborn Child and the General Registration Office is subsequently notified. When the stillbirth is registered the data from these forms is entered electronically by the General Registration Office and is encrypted and sent to CSO where file is decrypted into excel and cause of death coding is done in excel.

4.2 Coding

An Underlying Cause of Stillbirth Code is determined from the text string provided on the medical certificate of the stillbirth. World Health Organisation rules are followed in choosing this code. Cause is coded manually for all stillbirths.

Each stillbirth is geographically coded for the residence of the parents. The parents are also each assigned a Social Class and Socio-Economic Group code.

4.3 Data Editing

The data on stillbirths is held in EXCEL format and this file is edited to ensure that the ICD-10 code chosen as the underlying cause of death is an acceptable underlying cause of a stillbirth.

4.4 Imputation (for Non-Response or Incomplete Data Sets)

No imputation.

4.5 Grossing and Weighting

No grossing or weighting.

4.6 Computation of Outputs, Estimation Methods Used

Results are aggregated – no estimation used.

4.7 Other Quality Assurance Techniques Used

Not applicable.

5 Quality

5.1 Relevance

Relevant to researchers on stillbirth and infant mortality.

5.2 Accuracy and Reliability

5.2.1. Sampling Effect & Representivity

Not a sample



5.2.2 Non-Sampling Effects

5.2.2.1 Quality of the Data Sources used

The sources of the data are the attending doctor for the cause of stillbirth, and the next of kin or other qualified informant for the demographic details. Either parent of a stillborn child may voluntarily register the stillbirth. Registration of a stillbirth is not mandatory.

5.2.2.2 Register Coverage

Either parent of a stillborn child may register the stillbirth. The National Perinatal Reporting System (NPRS), (<http://www.hpo.ie/>) also produces statistics on stillbirths, which can be compared to the numbers in these reports. The NPRS figures are derived from birth notification forms only, rather than from stillbirths registered. In recent years, the numbers of stillbirths according to NPRS reports have been higher than the numbers published in CSO reports. This suggests that there is some non-registration of stillbirths and that caution should be taken in interpreting the statistics on stillbirths in CSO reports. As registration of a stillbirth is voluntary only the numbers of stillborn births that are registered are published by the CSO. This accounts for the difference that arises between the number of stillbirths per the birth notification forms and the number of stillbirths that are registered and published by the CSO.

5.2.2.3 Non-response (Unit and Item)

Not applicable

5.2.2.4 Measurement Errors

Not applicable

5.2.2.5 Processing Errors

Not applicable

5.2.2.6 Model-related Effects

Not applicable

5.3 Timeliness & Punctuality

5.3.1 Provisional Results

None

5.3.2 Final Results

The annual report on births, deaths, and stillbirths includes tables on the stillbirths occurring in that year.

5.4 Coherence

The National Perinatal Reporting System (NPRS), (<http://www.hpo.ie/>) also produces statistics on stillbirths, which can be compared to the numbers in these reports. The NPRS figures are derived from birth notification forms only, rather than from stillbirths registered. In recent years, the numbers of stillbirths according to NPRS reports have been higher than the numbers published in CSO reports.



This suggests that there is some non-registration of stillbirths and that caution should be taken in interpreting the statistics on stillbirths in CSO reports.

5.5 Comparability

As cause of stillbirth coding strictly follows World Health Organisation guidelines, statistics are internationally comparable. These guidelines also ensure comparability over time.

Version 10 of ICD coding was introduced in Ireland in 2007.

Definitions of stillbirth can vary internationally, with different conditions for gestation period and/or weight, or relying only on gestation period, or relying only on weight. The World Health Organisation defines a stillbirth as the death of a foetus weighing at least 500 grams. This is the definition used in the National Perinatal Reporting System (NPRS). The definition of stillbirth as used by the CSO is a stillbirth weighing 500 grams or more or at gestational age of 24 weeks or more. This definition applies to stillbirth figures published by the CSO from 1995 onwards.

5.6 Accessibility and Clarity

5.6.1 Assistance to Users, Special Analyses

Specific user requests are acceded to where possible, and where confidentiality issues do not arise. Please contact vitalstats@cs0.ie

5.6.2 Revisions

Generally there are no revisions.

5.6.3 Publications

5.6.3.1 Releases, Regular Publications

Annual Report on Births, Deaths and Stillbirths:

<https://www.cs0.ie/en/releasesandpublications/ep/p-vsar/vitalstatisticsannualreport2019/>

5.6.3.2 Statistical Reports

None

5.6.3.3 Internet

Most recent publication tables are available at CSO PxStat:

<https://data.cs0.ie/product/VSIMS>

5.6.4 Confidentiality



All data are treated as strictly confidential in accordance with Part V of the Statistics Act, 1993, and in accordance with the provisions of Section 2 of the Vital Statistics and Births, Deaths and Marriages Registration Act 1952 (as amended by section 7 of the Births, Deaths and Marriages Registration Act 1972) and Section 73 (when commenced) of the Civil Registration Act 2004.



6 Additional documentation and publications

The NPRS figures are derived from birth notification forms, rather than from stillbirths registered. In recent years, the numbers of stillbirths according to NPRS reports have been higher than the numbers published in CSO reports. This suggests that there is some non-registration of stillbirths and that caution should be taken in interpreting the statistics on stillbirths in CSO reports.

ESRI:

<https://www.esri.ie/publications/browse?keywords=nprs>

Ireland's Open data portal:

<https://data.gov.ie/dataset/otal-births-stillbirths-early-neonatal-deaths-and-perinatal-deaths-500-grams-only-nprs-and-2016>

Healthcare Pricing Office:

<http://www.hpo.ie/index.htm?NPRS>

also produces statistics on stillbirths, which can be compared to the numbers in these reports.



Notification of Birth - Hospital Copy

TYPE OF BIRTH 1
 (Live = 1, Still = 2)
 SENSITIVE CASE 3
 (YES = 1, NO = 2)

PLACE OF BIRTH (Hospital = 1, BBA = 2, Domiciliary = 3) 2

NAME AND _____

HOSPITAL NO. 4 _____ CASE NO. 7 _____
 Y Y Y Y

ADDRESS OF _____

HOSPITAL _____

INFANT'S DETAILS

DATE OF BIRTH (DD/MM/YYYY) 15 _____

IF MULTIPLE BIRTH ORDER OF BIRTH No. 23 of 24

FORENAME(S) _____

SURNAME _____

SEX (Male = 1, Female = 2, Indeterminate = 3) 25

BIRTHWEIGHT 26 _____ GRAMMES

PERIOD OF GESTATION 30 _____ WEEKS

FATHER'S DETAILS

FORENAME(S) _____

SURNAME _____

BIRTH SURNAME _____

FORMER SURNAME(S) _____

BIRTH SURNAME OF FATHER'S MOTHER _____

ADDRESS _____

COUNTY _____ 32 _____

COUNTRY _____ 35 _____

NATIONALITY _____ 39 _____

OCCUPATION _____ 43 _____

DATE OF BIRTH (DDMMYYYY) 45 _____

MOTHER'S DETAILS

FORENAME(S) _____

SURNAME _____

BIRTH SURNAME _____

FORMER SURNAME(S) _____

BIRTH SURNAME OF MOTHER'S MOTHER _____

ADDRESS _____

COUNTY _____ 53 _____

COUNTRY _____ 56 _____

NATIONALITY _____ 60 _____

OCCUPATION _____ 64 _____

DATE OF BIRTH (DDMMYYYY) 66 _____

MARITAL STATUS (Married = 1, Never Married = 2, Widowed = 3, Married but Separated = 4, Divorced, = 5) 74

DATE OF PRESENT MARRIAGE (DDMMYYYY) 75 _____

DATE OF LAST BIRTH (live or still) (DDMMYYYY) 83 _____

NO. OF PREVIOUS LIVE BIRTHS 91 _____

CHILDREN STILL LIVING 93 _____

STILLBIRTHS 95 _____

SPONTANEOUS ABORTIONS 97 _____

PERINATAL DEATH

TYPE OF DEATH (Early Neonatal = 1, Stillbirth = 2) 99

WAS AUTOPSY PERFORMED (Yes = 1, No = 2) 100

AGE AT DEATH 101 _____ DAYS 102 _____ HOURS

PLACE OF DEATH 104 _____

IF STILLBIRTH, DID DEATH OCCUR BEFORE LABOUR (1) DURING LABOUR (2) NOT KNOWN (3) 107

CAUSE OF DEATH

MAIN DISEASE OR CONDITION IN FOETUS OR INFANT _____

OTHER DISEASES OR CONDITIONS IN FOETUS OR INFANT _____

108 _____

113 _____

Signature _____

Date _____

MOTHER'S HEALTH

ANTENATAL CARE THIS PREGNANCY (Hospital / Obstetrician = 1, G.P. Only = 2, Combined = 3, None = 4, Midwife Only=5) 118 _____

DATE OF FIRST VISIT TO DOCTOR DURING PREGNANCY (DDMMYYYY) 119 _____

DATE OF FIRST VISIT TO HOSPITAL DURING PREGNANCY (DDMMYYYY) 127 _____

WAS MOTHER IMMUNE TO RUBELLA (Yes = 1, No = 2, Not Known = 3) 135 _____

METHOD OF DELIVERY (Spontaneous = 1, Breech ± Forceps = 2, Forceps = 3, Vac. Extraction = 4, Caesarean Sec. = 5, Other = 6) 136 _____

MAIN MATERNAL DISEASE OR CONDITION AFFECTING FOETUS OR INFANT _____

137 _____

OTHER MATERNAL DISEASES OR CONDITIONS AFFECTING FOETUS OR INFANT _____

142 _____

INFANT'S HEALTH

TYPE OF FEEDING (Artificial = 1, Breast = 2, Combined = 3) 147 _____

WAS BCG ADMINISTERED (Yes = 1, No = 2) 148 _____

MAIN DISEASE OR CONGENITAL MALFORMATION AFFECTING INFANT _____

149 _____

OTHER DISEASES OR CONGENITAL MALFORMATIONS AFFECTING INFANT _____

154 _____

HOSPITAL

WAS ADMISSION BOOKED (Yes = 1, No = 2) 159 _____

DATE OF MOTHER'S ADMISSION (DDMMYYYY) 160 _____

DATE OF MOTHER'S DISCHARGE (DDMMYYYY) 168 _____

DATE OF INFANT'S DISCHARGE (DDMMYYYY) 176 _____

WAS INFANT TRANSFERRED TO OTHER HOSPITAL FOR MEDICAL REASONS (Yes = 1, No = 2) 184 _____

IF 'YES', NAME OF HOSPITAL _____

185 _____

GENERAL PRACTITIONER ATTENDED BY MOTHER

G.P.'s NAME AND ADDRESS _____

GENERAL PRACTITIONER TO ATTEND INFANT FOR IMMUNISATIONS

G.P.'s NAME AND ADDRESS _____