

# OECD Health Statistics 2023 Definitions, Sources and Methods

# **Neonatal mortality**

The number of deaths of children under 28 days of age in a given year, expressed per 1000 live births.

Note: Some of the international variation in infant and neonatal mortality rates may be due to variations among countries in registering practices of premature infants. Most countries have no gestational age or weight limits for mortality registration. However, some countries specify limits based on some combination of gestational age, birth weight or survival.

The **Eurostat database** (dataset Infant mortality rates [demo\_minfind] accessed in June 2023) is the main data source for European countries, except for Austria, Denmark, Norway and Türkiye. Time series are also completed with national data for selected years, see details below.

# **Australia**

Source: Australian Bureau of Statistics. Deaths, Australia. ABS Cat. No. 3302.0. Canberra: ABS and Births,

Australia. ABS Cat. No. 3301.0. Canberra: ABS. **Further information:** <a href="http://www.abs.gov.au/">http://www.abs.gov.au/</a>.

Minimum threshold of 22 weeks:

Source: Australian Bureau of Statistics. Causes of Death, Australia. ABS Cat. No. 3303.0. Canberra.

### **Austria**

Source: Statistics Austria, Gesundheitsstatistisches Jahrbuch (Todesursachenstatistik).

Further information: http://www.statistik.at/web\_en/.

Minimum threshold of 22 weeks:

Source: Statistics Austria, Gesundheitsstatistisches Jahrbuch (Todesursachenstatistik).

Further information: http://www.statistik.at/web\_en/.

# **Belgium**

Source: Eurostat database. Data extracted on 23 June 2023.

Further information: http://ec.europa.eu/eurostat/data/database?node code=demo minfind.

# Minimum threshold of 22 weeks:

Source: Statistics Belgium (former National Statistical Institute).

**Methodology:** Since 2010, the official numbers for livebirths and deaths are coming from the Population National Register (and not exclusively from vital registration). Livebirths and deaths of residents taking place in foreign countries are therefore included in the statistics.

# Canada

Source: Statistics Canada, Canadian Vital Statistics Birth and Death Databases.

From 1991: Table 13-10-0713-01 (formerly CANSIM 102-0507).

1960-1990: Selected Infant Mortality and Related Statistics, Canada, 1921-1990, Cat. No. 82-549.

**Further information:** <a href="http://www.statcan.gc.ca/">http://www.statcan.gc.ca/</a>.

Minimum threshold of 22 weeks: Data not available.

### Chile

**Source: National Committee of Vital Statistics**, composed of the National Institute of Statistics (INE), the Ministry of Health (MINSAL, Department of Health Statistics and Information DEIS) and the National Service of Civil Identification Registry ("Servicio de Registro Civil e Identificación", SRCeI).

**Methodology:** Data correspond to vital registries. **Further information:** <a href="https://deis.minsal.cl/">https://deis.minsal.cl/</a>.

### Minimum threshold of 22 weeks:

**Source: National Committee of Vital Statistics**, composed of the National Institute of Statistics (INE), the Ministry of Health (MINSAL, Department of Health Statistics and Information DEIS) and the National Service of Civil Identification Registry ("Servicio de Registro Civil e Identificación", SRCeI).

Methodology: Data calculated using the gestational age criteria.

Further information: Information on Vital Registries available at <a href="https://deis.minsal.cl/">https://deis.minsal.cl/</a>.

### Colombia

Source: National Administrative Department of Statistics (DANE). Vital Statistics, Births and deaths.

**Further information:** <a href="http://www.dane.gov.co/index.php/estadisticas-por-tema/demografia-y-poblacion/nacimientos-y-defunciones">http://www.dane.gov.co/index.php/estadisticas-por-tema/demografia-y-poblacion/nacimientos-y-defunciones</a>.

# Minimum threshold of 22 weeks:

Source: National Administrative Department of Statistics (DANE). Vital Statistics, Births and deaths.

Source of the Administrative Record: Sole Registry of Affiliates (Registro único de Afiliados, RUAF).

**Deviation from the definition:** For the period 2001 to 2019, the definition is the same as the one proposed, but for the period 1998 to 2000, the variable gestational time was captured categorically, grouping children with between 20 and 27 weeks of gestation. For this reason, for the period 1998 to 2000, the indicator includes children with 20 and 21 weeks of gestation.

**Estimation:** The information has no adjustments, it is calculated with the totals obtained from the official registry. **Further information:** 

- http://www.dane.gov.co/index.php/estadisticas-por-tema/demografia-y-poblacion/nacimientos-y-defunciones.
- Anonymised microdata: <a href="http://microdatos.dane.gov.co/index.php/catalog/MICRODATOS/about\_collection/22/5">http://microdatos.dane.gov.co/index.php/catalog/MICRODATOS/about\_collection/22/5</a>.

# **Costa Rica**

# **Sources:**

<u>From 2000 onwards</u>: **National Institute of Statistics and Census (INEC)**. Unidad de Estadísticas Demográficas, 2000-2022. See <a href="https://www.inec.cr/sites/default/files/documetos-biblioteca-virtual/repoblacevcygbiddefinitivos2020.xlsx">https://www.inec.cr/sites/default/files/documetos-biblioteca-virtual/repoblacevcygbiddefinitivos2020.xlsx</a>

<u>Up until 1999</u>: **The World Bank, World Development Indicators online** (accessed on 11 June 2019). https://databank.worldbank.org/data/source/world-development-indicators.

Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division) at <a href="https://www.childmortality.org">www.childmortality.org</a>. Projected data are from the United Nations Population Division's World Population Prospects; and may in some cases not be consistent with data before the current year.

Further information: http://www.inec.go.cr.

Minimum threshold of 22 weeks: Data not available.

# **Czech Republic**

Source: Eurostat database. Data extracted on 23 June 2023.

Coverage: <u>Until March 2012</u>, **live birth was** defined as a child expelled or removed out of the mother's body, who gives sign of life (respiration, heartbeat, umbilicus pulsation, active movement of muscles) and whose birth weight is 500 grams and more or less than 500 grams, and survives for 24 hours after birth. Those surviving less than 24 hours were registered as spontaneous abortions. A fetus with no signs of life and with a birth weight of at least 1000 grams was considered a **stillbirth**. <u>Since April 2012</u>, **live birth** is defined as a child expelled or removed out of the mother's body, who gives sign of life. Definition of live birth does not contain weight limit and gestational age. A fetus with no signs of life and with a birth weight of at least 500 grams is considered a **stillbirth**.

Break in time series in 1965: Until 1964, live birth was defined as a birth of a fetus that showed signs of life (breathing or a heartbeat), born after 28 weeks of gestation, longer than 35 cm and weighing at least 1000 grams. All fetuses not meeting the criteria of live birth but surviving at least 24 hours were considered live births. Those surviving less than 24 hours were registered as spontaneous abortions. A fetus, or at least 28 weeks gestation, that was not breathing, with a body length of at least 35 cm and with a birth weight of at least 1000 grams was considered a stillbirth. In 1965, the former Czechoslovakia started using the internationally recommended definition of live birth. Such change in definition resulted in a sudden jump in infant mortality rates between 1964 and 1965 in both the Czech Republic and Slovak Republic. Live birth child was defined as a birth of a fetus that showed signs of life (no minimum threshold). A fetus with no signs of life, born at least 28 week gestation and with a birth weight of at least 1000 grams was considered a stillbirth.

Further information: <a href="http://ec.europa.eu/eurostat/data/database?node">http://ec.europa.eu/eurostat/data/database?node</a> code=demo minfind.

# Minimum threshold of 22 weeks:

Source: Czech Statistical Office, official national data on births and deaths.

**Methodology:** Data are counted according to a different methodology. Numbers of deaths by birthweight were used in the calculation from 2000 to 2011. Since 2012, the gestational age was used as minimum threshold in the calculation.

### **Denmark**

# **Sources:**

From 1997 onwards: The Medical Birth Register, The Danish Health Data Authority.

1960-1996: Eurostat database. Data extracted on 23 June 2023.

### Coverage

- For cases where an induced abortion has been made up to 30 days before birth, and the baby is stillborn and the birth weight <1000g after gestational week 22+0, or a live birth with a baby that dies within the first day and the birth weight < 1000g, those cases are since September 2022 registered as late abortions and excluded from data from 1997 onwards.

Breaks in time series in 1997 and 2019 due to a change in source.

- Data before 1997 include stillbirths while data from 1997 onwards only include live births.
- Children with a birth weight equal to or less than 200g are excluded until 2019.

**Further information:** <a href="https://sundhedsdatastyrelsen.dk/da/registre-og-services/om-de-nationale-sundhedsregistre/graviditet-foedsler-og-boern/foedselsregisteret">https://sundhedsdatastyrelsen.dk/da/registre-og-services/om-de-nationale-sundhedsregistre/graviditet-foedsler-og-boern/foedselsregisteret</a> and <a href="http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind">http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind</a>.

# Minimum threshold of 22 weeks:

Source: The Medical Birth Register, The Danish Health Data Authority. Methodology:

- The number of deaths within 28 days of birth in a given birth year out of 1000 live births in that birth year.
- Only live births with a gestational age of at least 22 weeks are included. In cases where gestational age is unknown, a weight criteria of 500g has been used.
- Live births with unknown gestational age and weight have been excluded.

Break in time series in 2019: Children with a birth weight equal to or less than 200g are excluded until 2019.

# **Estonia**

**Source: Eurostat database**. Data extracted on 23 June 2023.

Further information: <a href="http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind">http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind</a>.

Minimum threshold of 22 weeks:

**Sources:** 

<u>From 2008</u>: **National Institute for Health Development**, Causes of Death Registry and Medical Birth Registry.

Until 2007: Statistics Estonia, Causes of death database.

### **Finland**

**Source: Eurostat database.** Data extracted on 23 June 2023.

Further information: <a href="http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind">http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind</a>.

# Minimum threshold of 22 weeks:

Source: Finnish Institute for Health and Welfare (THL), Medical Birth Register.

**Methodology:** Information on infant and neonatal mortality for the pilot data collection is taken from THL Medical Birth Register (and includes cases without information on gestational age), since the data collected by Statistics Finland do not include information on gestational age for others than deceased infants. The inclusion criteria differ slightly between these two data sources: Statistics Finland includes all births and deaths in Finland for citizens and permanent residents, while THL Medical Birth Register includes all births and deaths in Finland without any restrictions to citizenship or residency.

### France

### **Sources:**

From 1996: Eurostat database. Data extracted on 23 June 2023.

Until 1995: Institut national de la statistique et des études économiques (Insee).

# Methodology:

# **Breaks in time series:**

<u>- in 2009</u>: In 2008, a new legislative change took place. The decree No. 2008-800 of August 20<sup>th</sup> 2008 has redefined the notion of a lifeless child. The certificate for a lifeless child is based on a medical birth certificate. The criteria (22 weeks of gestation or a 500-grams weight) are no longer taken into account.

<u>- in 2002</u>: Data for the period 2002 to 2008 refer to neonatal mortality rates based on a minimum threshold of 22 weeks following the viability criteria defined by WHO

(http://www.insee.fr/fr/methodes/default.asp?page=sources/sou-adm-etat-civil.htm). Until 2001, a minimum threshold of 180 days of gestation age or 28 weeks was necessary for considering a lifeless child.

### **Further information:**

**Further information:** <a href="http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind">http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind</a>. Until 1997: <a href="http://www.insee.fr/fr/themes/tableau.asp?reg\_id=0&ref\_id=NATnon02230">http://www.insee.fr/fr/themes/tableau.asp?reg\_id=0&ref\_id=NATnon02230</a>.

# Minimum threshold of 22 weeks:

**Source:** Institut national de la statistique et des études économiques (Insee). Données détaillées des statistiques d'état civil sur les décès en 2019, séries longues, tableau T77 : *Décès d'enfants de moins d'un an selon le sexe et la durée de vie*, <a href="https://www.insee.fr/fr/statistiques/4771989?sommaire=4772633">https://www.insee.fr/fr/statistiques/4771989?sommaire=4772633</a>. And Drees Rapport 2017 *L'état de santé de la population en France*, indicateur thématique mortalité périnatale et mortalité infantile, p.176, see <a href="https://drees.solidarites-sante.gouv.fr/sites/default/files/2021-01/Rapport-ESPF-2017.pdf">https://drees.solidarites-sante.gouv.fr/sites/default/files/2021-01/Rapport-ESPF-2017.pdf</a>.

# **Germany**

**Source: Eurostat database**. Data extracted on 23 June 2023.

Further information: <a href="http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind">http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind</a>.

### Minimum threshold of 22 weeks:

**Source: Federal Statistical Office, Statistics on the natural movement of the population, internal table. Data not available after 2012.** 

# **Coverage:**

- <u>Death statistics</u> are produced from a compulsory complete count. They are based on reports from the registrar in whose district the death has taken place. The surveys are conducted decentrally by the statistical offices of the Länder. The offices exchange information so that the deaths can be shown by the Land in which the deceased person lived. Deaths of persons who lived abroad but died in Germany are not included in deaths statistics.
- <u>Births statistics</u> are produced from a compulsory complete count. They are based on reports from the registrar in whose district the birth has taken place. Births of mothers who live abroad but gave birth to their child in Germany are not included in births statistics. Live births include all children whose heart has beat, whose umbilical cord has pulsated or whose natural pulmonary respiration has begun after separation from the womb. The other children are considered as still births or miscarriages and are not included in this figure.

# **Deviation from the definition:**

- In Germany data on gestational age are not available.
- From reporting year 2014 onwards, data on birth weight are no longer available.
- From reporting year 2013 onwards, data on deaths of children by birth weight are no longer available.
- <u>Calculation of data on neonatal mortality</u>: total number of deaths of children up to 28 completed days after live birth with a birth weight of respectively 500 grams and more and 1000 grams and more, divided by the total number of live births with a birth weight of respectively 500 grams and more and 1000 grams and more, expressed per 1000 live births.

Further information: <a href="http://www.destatis.de">http://www.destatis.de</a>.

### Greece

**Source: Eurostat database.** Data extracted on 23 June 2023.

Further information: http://ec.europa.eu/eurostat/data/database?node code=demo minfind.

Minimum threshold of 22 weeks: Data not available.

# Hungary

**Source: Eurostat database**. Data extracted on 23 June 2023.

Further information: http://ec.europa.eu/eurostat/data/database?node code=demo minfind.

Minimum threshold of 22 weeks:

Source: Hungarian Central Statistical Office (KSH), Demographic Yearbook.

Further information: <a href="http://www.ksh.hu">http://www.ksh.hu</a>.

# Iceland

Source: Eurostat database. Data extracted on 23 June 2023.

Further information: http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind.

# Minimum threshold of 22 weeks:

**Source: Statistics Iceland.** 

**Coverage:** Two measurements of estimated gestational age are available: the traditional way and by ultrasound scan. Data are collected as follows: ultrasound (89%), and if ultrasound is not known, then estimation of gestational age by the traditional way (5%), and if no information is available about weeks of gestation, then by weight (5%).

# Ireland

Source: Eurostat database. Data extracted on 23 June 2023.

Further information: http://ec.europa.eu/eurostat/data/database?node code=demo minfind.

Minimum threshold of 22 weeks: Data not available.

# Israel

Source: Central Bureau of Statistics. Based on birth and death registrations.

Further information: https://www.cbs.gov.il/EN/Pages/search/yearly.aspx.

<u>Note</u>: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

# Minimum threshold of 22 weeks:

**Source: Central Bureau of Statistics**. Based on death registration and birth registration (including birth weight and gestational age).

Coverage: Coverage rates of gestational age data are approximately 94% on average over the years 2000-2012.

<u>Note</u>: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

# Italy

Source: Eurostat database. Data extracted on 23 June 2023.

Further information: http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind.

# Minimum threshold of 22 weeks:

Data not available. The minimum threshold is not used in Italy for defining live birth in accordance to the WHO definition. Infant and neonatal mortality refer to deaths of all live births independently from the gestational age and/or birth weight. These two variables are collected through infant death forms and used for coding only, since the proportion of unknown cases is about 30%. Nevertheless, where this information is available, the number of cases under the threshold of 22 weeks of gestational age was 12 out of about 1132 in 2014. In substance, the indicators with and without threshold have nearly the same values.

# Japan

Source: Ministry of Health, Labour and Welfare, Vital Statistics of Japan (published annually).

**Methodology:** The live births are registered regardless of gestation period, so very premature babies are registered as live births

Further information: https://www.e-stat.go.jp/en/stat-

search/files?page=1&toukei=00450011&tstat=000001028897.

# Minimum threshold of 22 weeks:

Source: Ministry of Health, Labour and Welfare, Vital Statistics of Japan (published annually).

**Methodology:** Data are submitted with the gestation period threshold, while the live births are registered regardless of the gestation period and very premature babies are registered as live births. The infant mortality rate and neonatal mortality rate by gestation period are only on deaths due to diseases, i.e. they do not include deaths due to external causes.

**Further information:** <a href="https://www.e-stat.go.jp/en/stat-search/files?page=1&toukei=00450011&tstat=000001028897">https://www.e-stat.go.jp/en/stat-search/files?page=1&toukei=00450011&tstat=000001028897</a>.

### Korea

### Sources:

<u>From 2009</u>: **Statistics Korea**, Annual Report on the Cause of Death Statistics (based on vital registration). <u>1993-2008</u>: **Ministry of Health and Welfare**, **Korea Institute for Health and Social Affairs**, Infant Mortality Survey Report.

# Methodology:

- Information on neonatal deaths was gathered from various existing sources and integrated into one set, after adjusting any overlap among datasets from the various sources (medical insurance data, survey data from medical facilities and vital registration data).
- Total neonatal deaths divided by estimated total live births based on vital registration.

Further information: <a href="http://kosis.kr/eng/">http://kosis.kr/eng/</a>.

# Minimum threshold of 22 weeks:

Source: Statistics Korea, Annual Report on the Cause of Death Statistics (based on vital registration), unpublished data.

# Methodology:

- Information on infant/neonatal deaths was gathered from various existing sources and integrated into one set, after adjusting any overlap among datasets from the various sources (medical insurance benefit data, survey data from medical facilities and vital registration data).
- Total infant/neonatal deaths divided by estimated total live births based on vital registration.

Further information: <a href="http://kosis.kr/eng/">http://kosis.kr/eng/</a>.

### Latvia

**Source: Eurostat database.** Data extracted on 23 June 2023.

Further information: http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind.

# Minimum threshold of 22 weeks:

**Source: Centre for Disease Prevention and Control.** 

# Methodology:

- 1) Register of Causes of Death (Number of deaths of live-born children under 28 days old and  $\geq$ 500 grams birthweight).
- 2) Medical Birth Register (Number of live-born children ≥500 grams birthweight).

### Lithuania

Source: Eurostat database. Data extracted on 23 June 2023.

**Break in time series in 1991:** Up to 1990, live births were calculated based on a birthweight of 1,000 grams and 28 weeks of gestation period.

Further information: http://ec.europa.eu/eurostat/data/database?node code=demo minfind.

# Minimum threshold of 22 weeks:

Data not available.

The minimum threshold is not used for defining live birth in accordance to live births definition. Live birth means the birth of a child who breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles, regardless of gestational age.

Data on gestational age and birth weight can be collected through Medical perinatal death certificate only for infants aged 0–6 days. No data are available from age 7 days to 365 days.

# Luxembourg

Source: Eurostat database. Data extracted on 23 June 2023.

- National data source: Civil Register (collected by the National Statistics Office "STATEC").

# Methodology:

Numerator: Number of neonatal deaths of residents in or outside the country.

<u>Denominator</u>: Number of live births of residents in or outside the country.

Further information: http://ec.europa.eu/eurostat/data/database?node code=demo minfind.

Minimum threshold of 22 weeks: Data not available.

### Mexico

Sources: National Institute of Statistics (INEGI) / Ministry of Health, Mortality Database 1970-2021. National Population Council (CONAPO), Mexico 2019: Demographic estimations 1990-2015 and Population projections 2016-2050.

**Break in time series in 2011:** 

- <u>From 2011</u>, information from birth certificates and administrative death records is used, both are corrected for underreporting.

- Due to problems of completeness in infant deaths from vital statistics, the number of neonatal deaths was calculated by multiplying the proportion of deaths observed between between 0-27 days (1990-2010) by the number of infant deaths estimated by the National Population Council.

**Further information:** <a href="http://www.inegi.gob.mx/">http://www.inegi.gob.mx/</a>, <a href="http://www.inegi.gob.mx/">http://www.inegi.gob.mx/</a>, <a href="http://www.inegi.gob.mx/">http://www.inegi.gob.mx/</a>, <a href="http://www.salud.gob.mx/">http://www.salud.gob.mx/</a> (all in Spanish).

Minimum threshold of 22 weeks: Data not available.

# **Netherlands**

Source: Eurostat database. Data extracted on 23 June 2023.

# Methodology:

- Data come from the Causes of death statistics, based on the obligatory registration in the population register.
- Stillbirths are obligatory registered with a minimum threshold of 24 weeks (and before 1991, 28 weeks); children who die within 7 days after birth are also included.

Further information: <a href="http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind">http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind</a>.

# Minimum threshold of 22 weeks:

# Source: The Netherlands Perinatal Registry (Perined).

2017 onwards: Data are directly derived from the Perined database. The Perined database is a dynamic database dealing with backorders and adjustments. Data updated on February 1<sup>st</sup>, 2023 are used.

2004-2016: Data are derived from the linkage of **Perined-data and Population Register (PR)**.

# Methodology:

- In the Netherlands it is not obligatory to report to the authorities a stillborn child with a gestational period of 22-23 weeks.
- The perinatal registry includes four registers (midwives, obstetricians + gynaecologists, GPs and paediatricians/neonatologists) and uses the minimum threshold of 22 weeks.
- The perinatal registry covers around 95% of all newborn children; the population register covers all stillborn children after a gestational period of 24 weeks or more and all liveborn children irrespective of the gestational period.

Further information: www.peristat.nl.

### **New Zealand**

Source: Ministry of Health (National Collections).

# **Methodology:**

- Birth data from 1991 onwards are based on live births registered in New Zealand by the date of registration. Late birth data are based on live births registered in New Zealand by the date of registration. Late birth registrations are included in the denominator population.
- Death data are based on deaths registered in New Zealand by death registration year.
- The infant mortality figures include late registrations of deaths, after resolving mis-registered infant deaths and still births (i.e. registered as one when it is the other) based on additional information that they receive. These data processes cause delays in provision of final data (for both infant and neonatal mortality statistics).
- Data relate to the year ending in December.

**Further information:** <a href="http://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/mortality-collection">http://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/mortality-collection.</a>

# Minimum threshold of 22 weeks:

Source: Ministry of Health (National Collections).

**Methodology:** Live births and deaths with no reported gestation are excluded from the gestation specific categories but included in the total mortality categories.

# **Norway**

# Sources:

1967 onwards: The Norwegian Institute of Public Health, Medical Birth Registry of Norway (MBRN).

1960-1966: Eurostat database. Data extracted on 23 June 2023.

http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind.

# Methodology:

- The Medical Birth Registry contains information about all births, stillbirths, perinatal deaths, neonatal deaths and abortions from the 16<sup>th</sup> week of pregnancy onwards from 1967-2001 and from the 12<sup>th</sup> week of pregnancy onwards starting in 2002.
- The data on deaths are updated using information from maternity wards, neonatal wards and the national register, Norway.

**Break in time series in 1967** due to a change in source.

**Further information:** <a href="https://www.fhi.no/en/hn/health-registries/medical-birth-registry-of-norway/">https://www.fhi.no/en/hn/health-registries/medical-birth-registry-of-norway/</a> and <a href="https://statistikkbank.fhi.no/mfr/">https://statistikkbank.fhi.no/mfr/</a>.

### Minimum threshold of 22 weeks:

**Source: The Norwegian Institute of Public Health**, Medical Birth Registry of Norway (MBRN). **Methodology:** 

- The Medical Birth Registry contains information about all births, stillbirths, perinatal deaths, neonatal deaths and abortions from the 16<sup>th</sup> week of pregnancy onwards from 1967-2001 and from the 12<sup>th</sup> week of pregnancy onwards starting in 2002.
- Data are available from 1967.
- The data on deaths are updated using information from maternity wards, neonatal wards and the national register, Norway.

 $\label{lem:further information: https://www.fhi.no/en/hn/health-registries/medical-birth-registry-of-norway/ and \\ \underline{\text{http://statistikkbank.fhi.no/mfr/}}.$ 

### **Poland**

### **Sources:**

From 1995: Eurostat database. Data extracted on 23 June 2023.

Until 1994: Statistics Poland, published annually (Demographic Yearbook of Poland).

### Methodology:

- Statistics Poland sources of data are administrative registers and the individual documentation "Notification of death", secondarily used by national statistics.
- In Poland, the criteria for registration of live births are a minimum weight of 500 grams (or a minimum threshold of 22 weeks of gestation).

# **Further information:**

From 1995: http://ec.europa.eu/eurostat/data/database?node\_code=demo minfind.

Until 1994: http://stat.gov.pl/en/.

# Minimum threshold of 22 weeks:

Source: Statistics Poland, published annually (Demographic Yearbook of Poland).

**Methodology:** Statistics Poland sources of data are administrative registers and the individual documentation "Notification of death", secondarily used by national statistics.

• In Poland, the criteria for registration of live births are a minimum weight of 500 grams (or a minimum threshold of 22 weeks of gestation).

**Further information:** http://stat.gov.pl/en/.

# **Portugal**

Source: Eurostat database. Data extracted on 23 June 2023.

Further information: http://ec.europa.eu/eurostat/data/database?node code=demo minfind.

# Minimum threshold of 22 weeks/500 grams birthweight:

Source: General Directorate of Health.

**Coverage:** Live births and neonatal deaths of children whose mothers reside in Portugal. Cases (live births and neonatal deaths) in which birthweight is ignored were excluded.

**Methodology:** Total number of deaths of children up to 28 completed days after live birth with a birth weight of 500 grams and more, divided by the total number of live births with a birth weight of 500 grams and more, expressed per 1000 live births.

Further information: http://www.dgs.pt.

# **Slovak Republic**

Source: Eurostat database. Data extracted on 23 June 2023.

Break in time series in 1965: Until 1964, live birth was defined as a birth of a fetus that showed signs of life (breathing or a heartbeat), born after 28 weeks of gestation, longer than 35 cm and weighing at least 1000 grams. All fetuses not meeting the criteria of live birth but surviving at least 24 hours were considered live births. Those surviving less than 24 hours were registered as spontaneous abortions. A fetus, of at least 28 weeks gestation, that was not breathing, with a body length of at least 35 cm and with a birth weight of at least 1000 grams was considered a stillbirth. In 1965, the former Czechoslovakia started using the internationally recommended definition of live birth. Such change in definition resulted in a sudden jump in infant mortality rates between 1964 and 1965 in both the Czech Republic and Slovak Republic.

Further information: http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind.

# Minimum threshold of 22 weeks:

Source: Statistical Office of the Slovak Republic.

**Methodology:** Number of children who died up to 28 days of age, with a minimum birthweight of 500g.

**Further information:** 

https://slovak.statistics.sk/wps/portal/ext/themes/demography/population/metadata/, and also https://datacube.statistics.sk.

### Slovenia

Source: Eurostat database. Data extracted on 23 June 2023.

Further information: <a href="http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind">http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind</a>.

# Minimum threshold of 22 weeks:

**Source:** National Institute of Public Health, Slovenia (Perinatal information system of the Republic of Slovenia, Notification of death, Medical Certificate of Death and Cause of Death).

**Methodology:** The minimum threshold of 22 weeks (or 500 g weight) is calculated as: [The number of deaths of children up to 28 completed days after live birth based on a minimum threshold of 22 completed weeks of gestation in a given year] / [expressed per 1000 live births (22 completed weeks of gestation)].

# **Spain**

Source: Eurostat database. Data extracted on 23 June 2023.

# Methodology:

• Until 1975, "the foetus could only be considered born if it had a human figure and lived for twenty four hours completely separate from the womb" (Art. 30 Civil Code). The statistics on births and deaths carried out until 1975 did not meet the demographic concepts recognised internationally, as these did not include those born alive who died within 24 hours of birth (which in the Civil Code are called "aborted babies" (Art. 745)).

- Since 1975 the definition of live births follows the WHO definition.

 $\textbf{Further information:} \ \underline{\text{http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind.}}$ 

# Minimum threshold of 22 weeks:

Source: National Statistics Institute. Deaths statistics according to causes of death.

Methodology: Databases of births and deaths have been linked in order to extract the information required.

Further information: <a href="https://www.ine.es/en/metodologia/t20/metodologia/idb-en.pdf">https://www.ine.es/en/metodologia/t20/metodologia/idb-en.pdf</a>.

# Sweden

Source: Eurostat database. Data extracted on 23 June 2023.

Further information: http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind.

Minimum threshold of 22 weeks:

Source: The Swedish Medical Birth Register.

**Methodology:** The lowest gestational age in the register is 22 weeks.

### **Switzerland**

**Source: Eurostat database**. Data extracted on 23 June 2023.

Further information: <a href="http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind">http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind</a>.

Minimum threshold of 22 weeks:

**Source: Federal Statistical Office**, Neuchâtel, Vital Statistics. <u>From 2015 to 2019</u>: **European Perinatal Health Report 2015-2019**. <u>From 2007 to 2012</u>: **European Perinatal Health Report 2010**.

# Methodology:

- Gestational age is available only since 2007.
- Small discrepancies with 2010 and 2022 data published by Euro-Peristat are possible, due to special inclusion criteria applied for Euro-Peristat data. In Euro-Peristat data:
  - birth and death cases with missing gestational ages were included for the 22 weeks threshold if they had a minimum birthweight of 500 grams;
  - infant deaths following a termination of pregnancy were counted as stillbirths and therefore excluded from live births, neonatal and infant deaths cases;
  - in a few cases, where the birth of a baby was included in the official statistics, but not his/her death or the contrary, the birth inclusion status was applied to both. Here, births and deaths are counted if they are included in the official statistics, irrespective of the inclusion of the other.

Further information: <a href="http://www.bfs.admin.ch/bfs/portal/en/index.html">http://www.bfs.admin.ch/bfs/portal/en/index.html</a> and <a href="http://www.europeristat.com/">http://www.europeristat.com/</a>.

# **Türkiye**

# **Sources:**

2012 onwards: Ministry of Health, General Directorate of Public Health.

1988, 1993, 1998, 2003 and 2008: **Hacettepe University, the Institute of Population Studies** and **the Ministry of Health**, The Türkiye Demographic and Health Surveys. TDHS (The Türkiye Demographic and Health Survey) reflects the average value of the 5 years prior to the survey date.

### Minimum threshold of 22 weeks:

Source: Ministry of Health, General Directorate of Public Health.

# Methodology:

<u>2009-2011</u>: Rates calculated based on the number of deaths of children under 28 days of age based on a minimum threshold of 22 completed weeks of gestation (or 500 grams birthweight if gestational age is not available).

# **United Kingdom**

Source: Office of National Statistics (ONS).

Break in time series in 1992: 1 October 1992: In the UK, the definition of a stillbirth was amended to cover 24 weeks gestation or more (but voluntary notification at 22 and 23 weeks is possible). Before 1992, it was 28 weeks.

# **Further information:**

- England and Wales: http://www.statistics.gov.uk/.
- Scotland: http://www.nrscotland.gov.uk.
- Northern Ireland: http://www.nisra.gov.uk.

Minimum threshold of 22 weeks: Data available only from 2006 onwards. See above for the metadata.

### **United States**

### **Sources:**

1995 onwards: U.S. Department of Health and Human Services/Centers for Disease Control and

Prevention/National Center for Health Statistics. Deaths: Linked Birth/Infant Deaths final data (several years).

1980 to 1994: U.S. Department of Health and Human Services/Centers for Disease Control and

**Prevention/National Center for Health Statistics**. Vital Statistics of the United States, Volume II, Mortality, and Part A (published annually).

1960-1979: U.S. Department of Health and Human Services/Centers for Disease Control and

Prevention/National Center for Health Statistics. Vital Statistics of the United States, Vol. II Mortality.

Unpublished data.

Coverage: National Vital Statistics Registration System.

Further information: NCHS Vital Statistics website, http://www.cdc.gov/nchs/nvss.htm.

Minimum threshold of 22 weeks:

Source: U.S. Department of Health and Human Services/Centers for Disease Control and

Prevention/National Center for Health Statistics. Linked birth/infant death dataset (various years). Available

from http://www.cdc.gov/nchs/data\_access/VitalStatsOnline.htm.

Coverage: National Vital Statistics Registration System.

**Methodology:** Estimates exclude events with unknown (non-stated) gestational age.

Further information: Linked birth/infant death data set's website available at http://www.cdc.gov/nchs/linked.htm.

### **NON-OECD ECONOMIES**

# **Argentina**

Source: The World Bank, World Development Indicators online (accessed on 29 June 2023).

https://databank.worldbank.org/reports.aspx?source=2&series=SH.DYN.NMRT&country=.

Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division) at <a href="https://www.childmortality.org">www.childmortality.org</a>. Projected data are from the United Nations Population Division's World Population Prospects; and may in some cases not be consistent with data before the current year.

Further information: https://databank.worldbank.org/source/world-development-indicators.

# **Brazil**

Source: The World Bank, World Development Indicators online (accessed on 29 June 2023).

https://databank.worldbank.org/reports.aspx?source=2&series=SH.DYN.NMRT&country=.

Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division) at <a href="https://www.childmortality.org">www.childmortality.org</a>. Projected data are from the United Nations Population Division's World Population Prospects; and may in some cases not be consistent with data before the current year.

**Further information:** https://databank.worldbank.org/source/world-development-indicators.

# Bulgaria

**Source: Eurostat database**. Data extracted on 23 June 2023.

 $\textbf{Further information:} \ \underline{\text{http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind.}}$ 

### Croatia

**Source: Eurostat database**. Data extracted on 23 June 2023.

Further information: <a href="http://ec.europa.eu/eurostat/data/database?node">http://ec.europa.eu/eurostat/data/database?node</a> code=demo minfind.

Minimum threshold of 22 weeks: Data not available.

# China

Source: The World Bank, World Development Indicators online (accessed on 29 June 2023).

https://databank.worldbank.org/reports.aspx?source=2&series=SH.DYN.NMRT&country=.

Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division) at <a href="https://www.childmortality.org">www.childmortality.org</a>. Projected data are from the United Nations Population Division's World Population Prospects; and may in some cases not be consistent with data before the current year.

Further information: https://databank.worldbank.org/source/world-development-indicators.

### India

Source: The World Bank, World Development Indicators online (accessed on 29 June 2023).

https://databank.worldbank.org/reports.aspx?source=2&series=SH.DYN.NMRT&country=.

Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division) at <a href="https://www.childmortality.org">www.childmortality.org</a>. Projected data are from the United Nations Population Division's World Population Prospects; and may in some cases not be consistent with data before the current year. **Further information:** <a href="https://databank.worldbank.org/source/world-development-indicators">https://databank.worldbank.org/source/world-development-indicators</a>.

### Indonesia

Source: The World Bank, World Development Indicators online (accessed on 29 June 2023).

https://databank.worldbank.org/reports.aspx?source=2&series=SH.DYN.NMRT&country=.

Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division) at <a href="https://www.childmortality.org">www.childmortality.org</a>. Projected data are from the United Nations Population Division's World Population Prospects; and may in some cases not be consistent with data before the current year. **Further information:** <a href="https://databank.worldbank.org/source/world-development-indicators">https://databank.worldbank.org/source/world-development-indicators</a>.

### Peru

Source: The World Bank, World Development Indicators online (accessed on 29 June 2023).

https://databank.worldbank.org/reports.aspx?source=2&series=SH.DYN.NMRT&country=.

Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division) at <a href="https://www.childmortality.org">www.childmortality.org</a>. Projected data are from the United Nations Population Division's World Population Prospects; and may in some cases not be consistent with data before the current year.

**Further information:** <a href="https://databank.worldbank.org/source/world-development-indicators">https://databank.worldbank.org/source/world-development-indicators</a>.

### Romania

Source: Eurostat database. Data extracted on 23 June 2023.

Further information: <a href="http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind">http://ec.europa.eu/eurostat/data/database?node\_code=demo\_minfind</a>.

# Minimum threshold of 22 weeks:

Source: INS Romania - Vital statistics.

**Coverage:** From 2013 onwards, data refer to live-births and deceased under 28 days of age whose mothers (legal tutor) had their usual residence in Romania. 2012 data refer to permanent residence or usual residence. Up until 2011, data refer to live-births and under 28 days of age whose mothers (legal tutor) had their permanent residence in Romania.

**Methodology:** Number of deaths of children under 28 days of age that occurred in a given year, expressed per 1000 live births, on a minimum threshold of 500 grams birthweight.

**Further information:** http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table.

# **Russian Federation**

**Source: The World Bank, World Development Indicators online** (accessed on 29 June 2023). <a href="https://databank.worldbank.org/reports.aspx?source=2&series=SH.DYN.NMRT&country">https://databank.worldbank.org/reports.aspx?source=2&series=SH.DYN.NMRT&country</a>=.

Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division) at <a href="https://www.childmortality.org">www.childmortality.org</a>. Projected data are from the United Nations Population Division's World Population Prospects; and may in some cases not be consistent with data before the current year. **Further information:** <a href="https://databank.worldbank.org/source/world-development-indicators">https://databank.worldbank.org/source/world-development-indicators</a>.

# **South Africa**

Source: The World Bank, World Development Indicators online (accessed on 29 June 2023). <a href="https://databank.worldbank.org/reports.aspx?source=2&series=SH.DYN.NMRT&country=">https://databank.worldbank.org/reports.aspx?source=2&series=SH.DYN.NMRT&country=</a>. Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division) at <a href="https://www.childmortality.org">www.childmortality.org</a>. Projected data are from the United Nations Population Division's World Population Prospects; and may in some cases not be consistent with data before the current year. <a href="https://databank.worldbank.org/source/world-development-indicators">https://databank.worldbank.org/source/world-development-indicators</a>.

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