# Data checking

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When the data arrives, AM and MD do visual checks going through the data from each sheet.

The aim of each check is to make sure of the provided data's validity

- data entry errors
- All fields of the instrument were answered
- That there are not any errors due to differences between indicator data collection in national registries vs. Euro-Peristat (i.e. inclusion criteria and TOP).

# Indicators on Child Health: C0-C5

**C0: Recording of births and deaths**

**C1: Fetal mortality**
**C2: Neonatal mortality**
**C3: Infant mortality**
• Number of fetal, neonatal and infant deaths by gestational age and birth weight
•Number of annual and cohort deaths

**C4: Distribution of birth weight**
**C5: Distribution of gestational age**
• Distribution of live births by gestational age and birth weight
• Distribution of live singleton births

We check:

- The inclusion criteria countries used for fetal deaths and live births is recorded.
- There are not any discrepancies in the number of deaths provided by gestational age and birth weight.
- It is clearly stated whether TOP are included as fetal deaths and that for each year data has been provided.

Comments:

- Instead of reporting on live singleton births, many countries have reported on all births.

We have had asked for adjusted data.

- Some countries provided annual data as cohort data.

# Maternal health and delivery: C6-C10

**C6 Maternal mortality**
**C7: Multiple maternity rate**
**C8: Distribution of maternal age**
**C9: Distribution of parity**
**C10: Mode of delivery**

We check:

•The years for which the maternal mortality was provided and that they are consecutive.

• The multiple maternity rate, and parity totals and concordance between total deliveries and total births.

•The denominator used for the mode of delivery is the same.

•For indicators C7-C10, we checked that data was provided using the correct denominator whether mothers or babies.

- Example: Multiple maternity rate

| | N women delivering live or stillborn babies |
|---|---|
| **Number of fetuses at delivery** | |
| Singleton | 613796 |
| Twin | 11553 |
| Triplet | 258 |
| Quadruplet+ | 8 |
| Unknown | 0 |
| Calculated total | 625615 |

C7 - Total of live and stillborn babies:

613,796 + 11,553*2 + 258*3+8*4 = 637,708

Check: Calculations are done to see if the sum of fetal deaths (C0/C1 )and live births (C4/5) is equal to the total number of live and stillborn babies in C7.

# Maternal health and delivery: C6-C10

Comments:

- Differences might be explained due to the use of two different data sources.

- Regarding maternal deaths by maternal age, most countries do not have data available by enhanced systems.

# Additional comments

- Countries can inform on the data provided (i.e. early neonatal deaths might be recorded as fetal deaths).

- We recorded the data source used for each indicator

- We asked countries to rate the quality of their data. Some countries did not report on this

- When different data sources were used, we asked countries to provide available data from both systems

Comments and questions about the data provided are noted in the queries sent out to each country.

The data instrument has worked in all countries.

# Euro-Peristat – EuroStat

Aim: Validate the Euro-Peristat data provided by identifying any major Euro-Peristat data entry or data counting errors.

Eurostat provides data on the national and regional level (NUTS2), the following variables could be cross-checked with Euro-Peristat :

- Total live births
- Infant mortality (Late fetal death, Early neonatal death, Late neonatal death, Infant death)

Eurostat does not have 2010 data for all countries.

# Comments on Eurostat cross check

- Small differences are expected due to reporting schedules or data source use

-  It was noted that for several countries Eurostat might overestimate the number of late fetal deaths.

- Eurostat collects data on late fetal deaths after 28 weeks GA. Euro-Peristat collects data on fetal deaths over or equal to 22 weeks of GA. However, for some countries, the numbers of fetal deaths reported in Euro-Peristat and Eurostat were the same.

# Sample Data Check

| Country: | XXX |
|---|---|
| | |
| Data provided for year: | 2009 |
| Data for maternal mortality provided for: | 2006-2010 |
| Data source (DS): | 1. The XXX Perinatal Registry |
| | 2. Central Statistical Office |
| | 3. Commission on Maternal Mortality |
| Inclusion criteria for fetal deaths: | >=22 weeks AND >= 500 grams |
| Inclusion criteria for live births: | >=22 weeks AND >= 500 grams |
| TOP | unclear |

| C1-C5: | by GA | by BW |
|---|---|---|
| Fetal deaths: DS1 | 291 | 291 |
| Annual neonatal deaths: DS2 | 170 | 170 |
| Cohort neonatal deaths: DS2 | 168 | 168 |
| Annual infant deaths: DS2 | 262 | 263 |
| Cohort infant deaths: DS2 | 264 | 264 |
| Live births: DS1 | 78698 | 78698 |
| Live singleton births: DS1 | 78742 | |
| Total births: DS1 | 78989 | 78989 |

| C7-C9: DS1 | |
|---|---|
| Women delivering | 77592 |
| singletons | 76226 |
| twins | 1336 |
| triplets | 29 |
| quadruplet+ | 1 |
| unknown | 0 |
| Total births | 78989 |

| C0: DS2 | FD | ND | ID | LB | TB |
|---|---|---|---|---|---|
| 22+wks + <500g | | 17 | 18 | 25 | 25 |
| 22+wks + 500+g | 291 | 153 | 245 | 78673 | 78964 |
| | 291 | 170 | 263 | 78698 | 78989 |
| Missing | | | | | |
| Total births | 291 | 170 | 263 | 78698 | 78989 |

| Indicator | DS | Queries | Answers to queries |
|---|---|---|---|
| C0: Recording of births and deaths | 1 | Data on fetal deaths and live births is based on DS1 and on neonatal and infant deaths is from DS2. The DS should read 3. Please comment. | |
| C1: Fetal mortality | 1 | No comment. | |
| C2: Neonatal mortality | 3 | Data on neonatal and infant deaths is from DS2. The DS should read 2. Please comment. | |
| C3: Infant mortality | 3 | Data on neonatal and infant deaths is from DS2. The DS should read 2. Please comment.<br><br>Could you explain why data is presented for 262 annual infant deaths by gestational age instead of 263? | |
| C4: Distribution of birth weight | 1 | Could you provide the mean birth weight at 40 weeks separately for boys and girls?<br><br>Data on birth weight distribution by gestational age should be provided for live singleton births instead of live births. Could you provide updated data? | |
| C5: Distribution of gestational age | 1 | No comment. | |
| C6: Maternal mortality | 2 | No comment. | |
| C7: Multiple maternity rate | 1 | No comment. | |
| C8: Distribution of maternal age | 1 | No comment. | |
| C9: Distribution of parity | 1 | No comment. | |
| C10: Mode of delivery | 1 | Could you please explain why the number of total births in the table by gestational age is 27,203 and not 78,989? Would it be possible to provide updated data for all live and stillbirths?. | |

# Next steps

- Recommended Indicators
- CI queries..