



C4.Distribution of birth weight

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Importance of birth weight

Birth weight reflects – among others – the health status of the fetus and the mother.

It is related to:

- Gestational age
- Multiplicity
- Maternal conditions before and during pregnancy, including chronic diseases, maternal complications during pregnancy
- Condition of the fetus (e.g. congenital anomalies)
- Gender of the fetus
- Parity
- Maternal height
- Maternal nutrition
- Maternal lifestyle - physical activity, smoking

The concept of the indicator

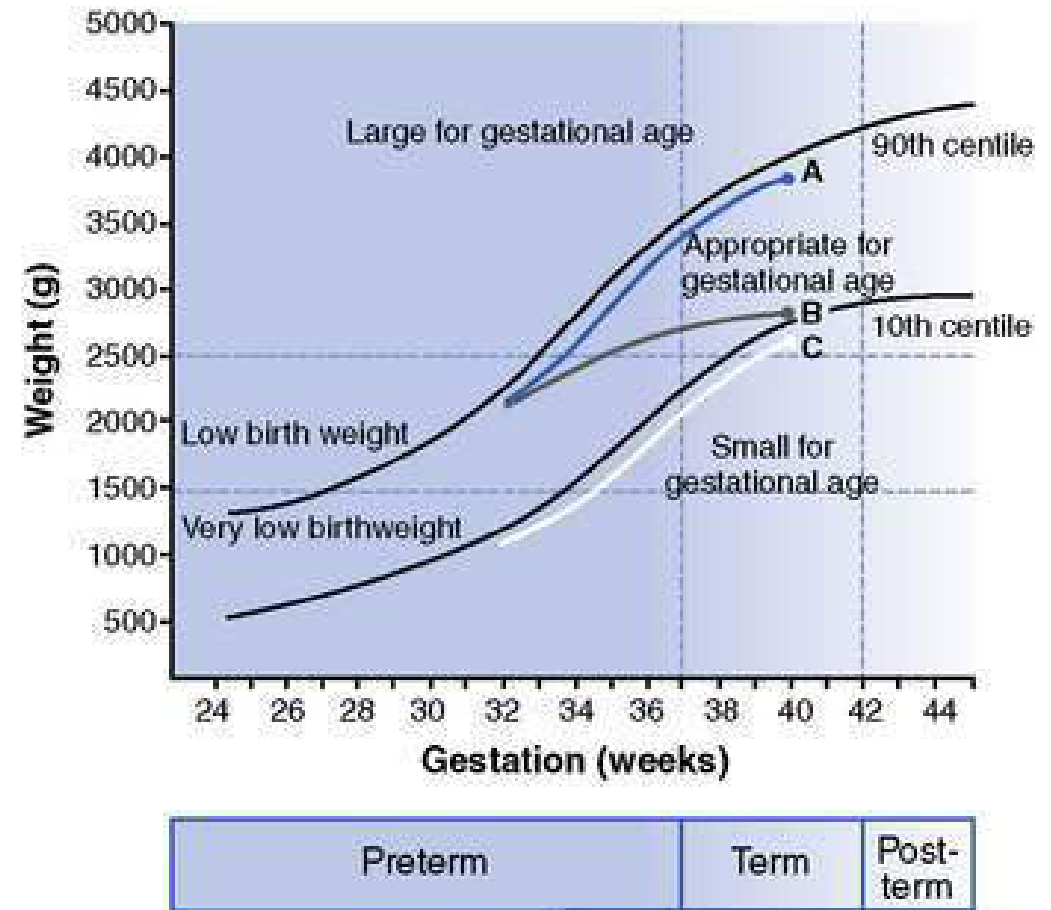
Birth weight <2500 g was considered as an indicator of „prematurity” as early as in 1907 (Macfarlane A., Mugford M. *Birth counts. The Stationery Office 2000.*)

That time only simple mechanical calculating devices were available.

However, birth weight depends both on gestational age and fetal growth and among LBW babies we may find those who are:

- Premature
- Born at term but small for gestational age
- Born at term and appropriate for gestational age
- Born at term and large for gestational age

Despite high availability of fast and capacious computers we still use LBW indicator.



Definition of indicator

- Number of births within each 500g weight interval expressed as a proportion of all live and stillbirths.
- *The indicator is calculated by gestational age and vital status at birth for singletons and multiples*
- *We focus on live births because registration of live births is more homogenous than the registration of stillbirths, and this indicator will thus be more comparable*

Countries able to provide the indicator

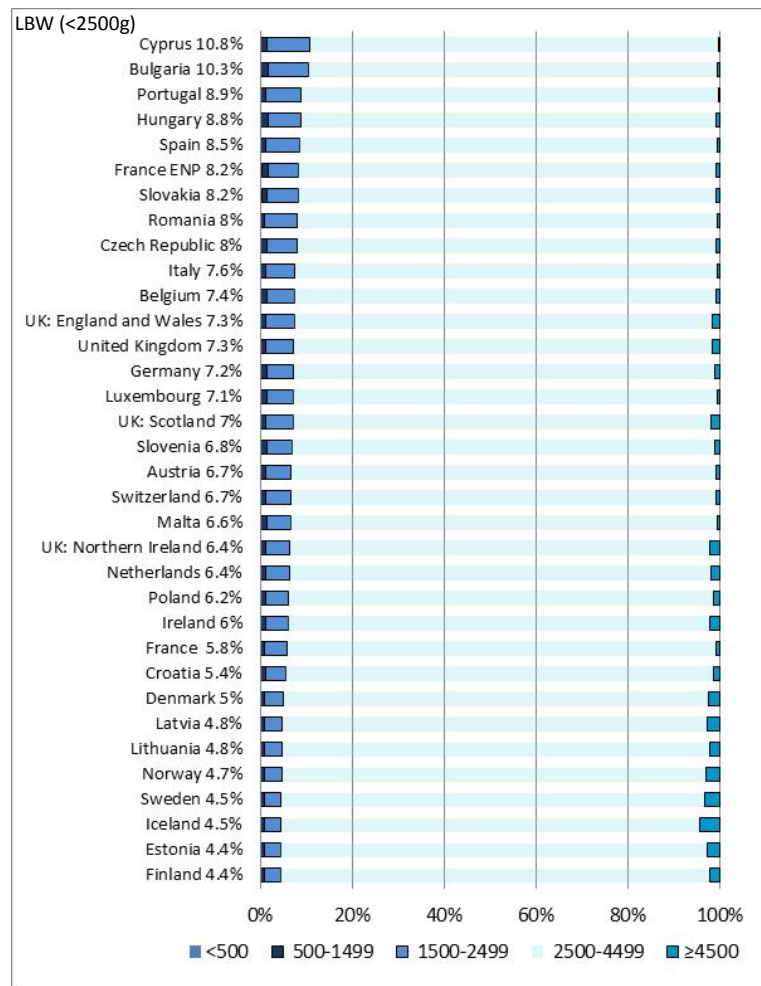
- All countries provided data for all births (live- and stillbirths) except one (Greece)
- Additionally, live births were not available for United Kingdom as a whole
- Additionally, live births by gestational age were not available for France as a whole

Quality questions

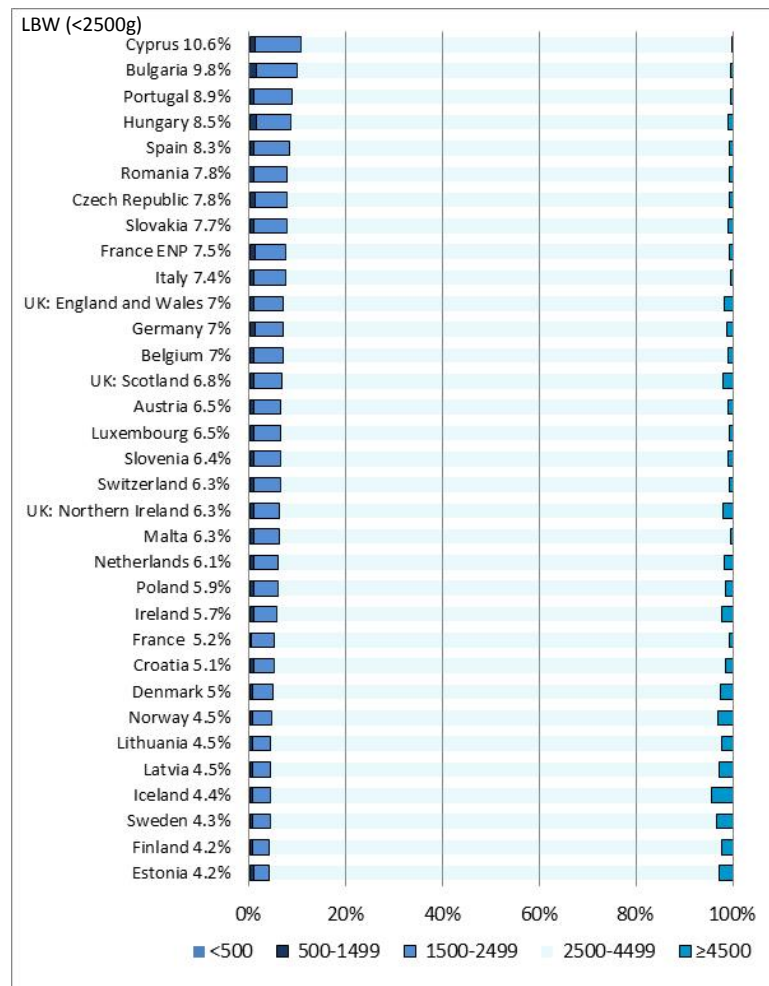
- Missing data on birth weight
 - One country (Bulgaria) - 32.1%
 - Three countries (Spain, France as a whole, Lithuania) - 5-10%
 - One country (Slovakia) – 2-5%
 - Four countries – 1-2%
 - Twenty four countries - <1%, however seven countries reported exactly 0 missing data (Ireland, Croatia, Latvia, Austria, Romania, Slovenia, Iceland)

Distribution of birth weight in Europe in 2015

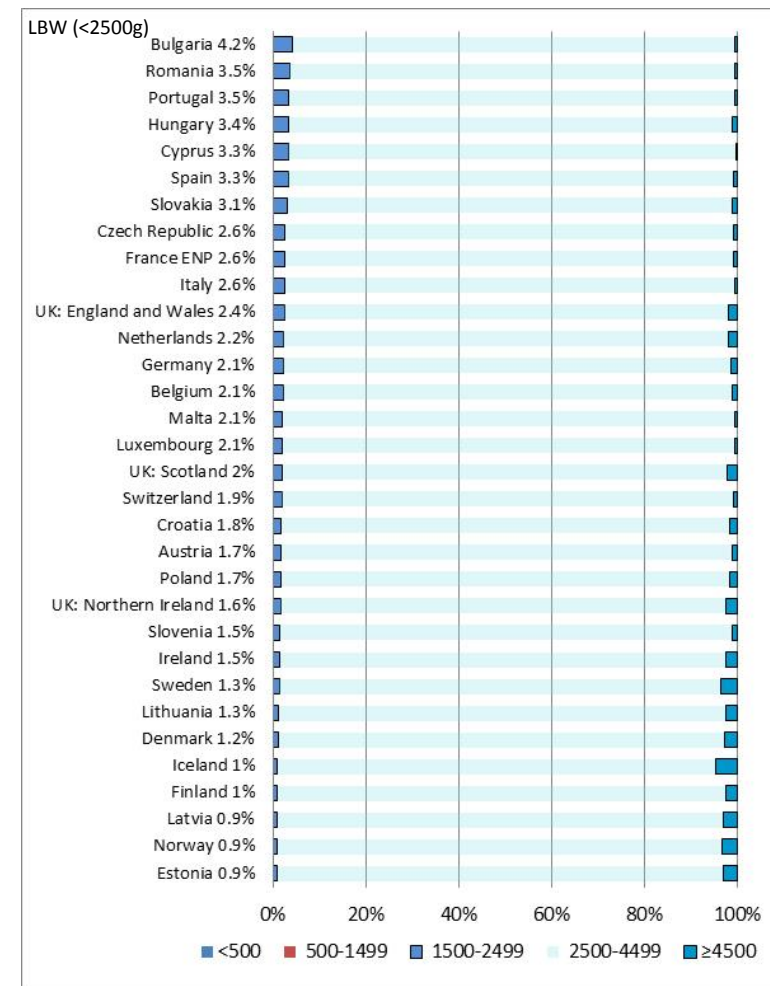
All births (live + still)



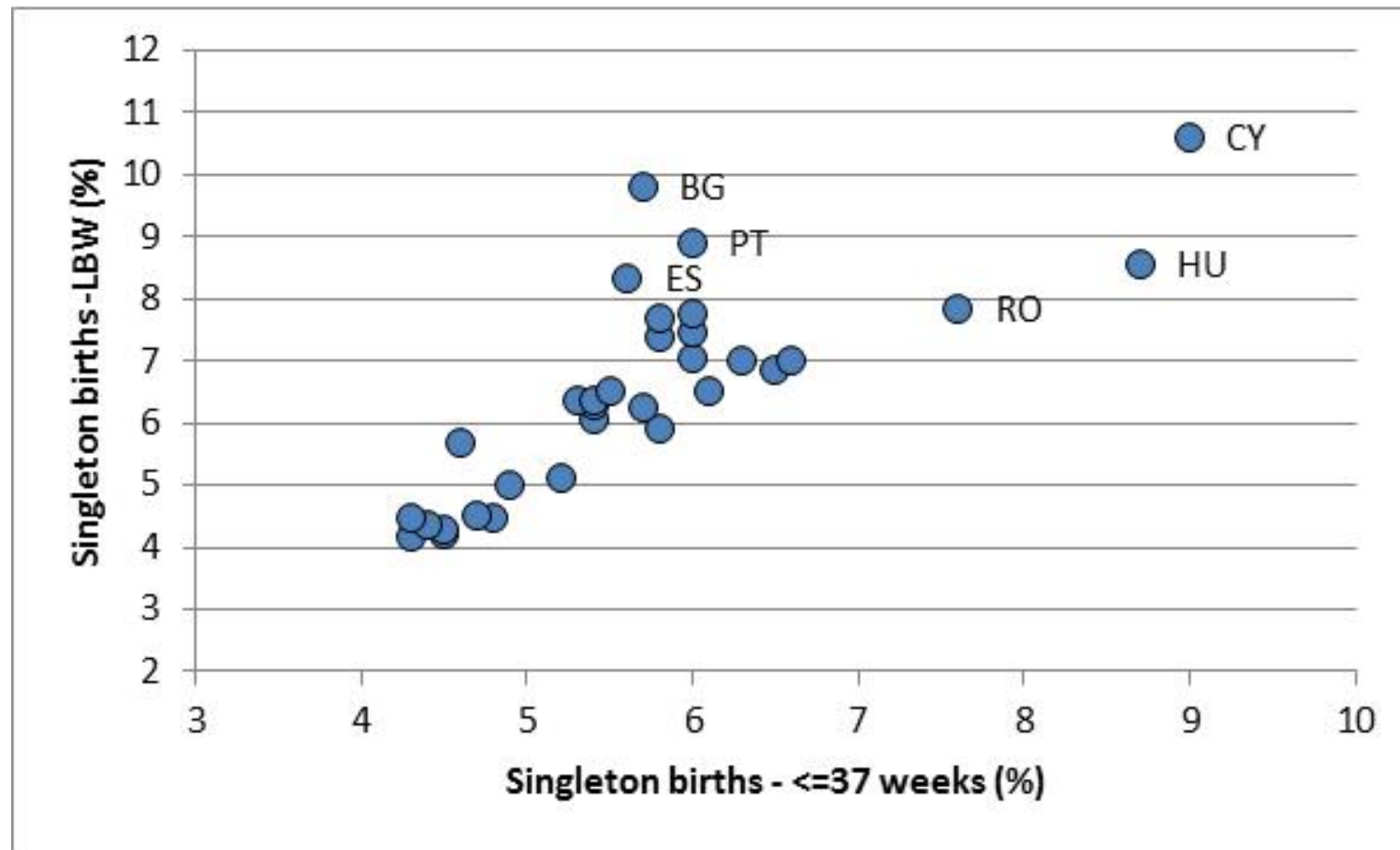
Live births



Live singleton births 37 weeks and over



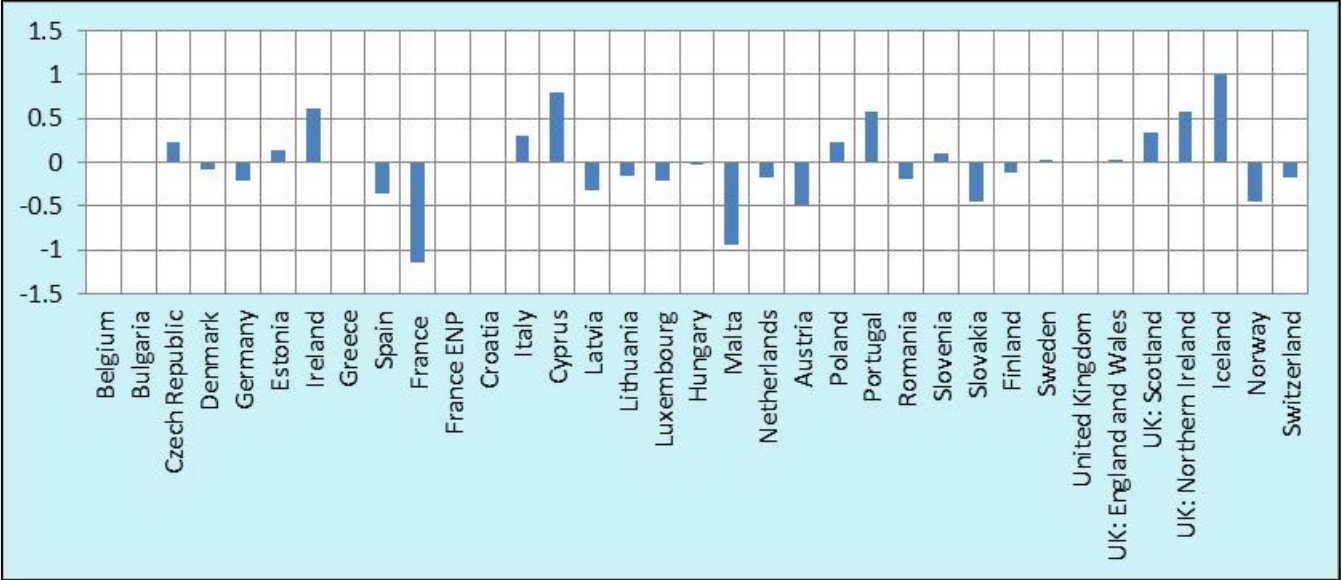
LBW and gestational age



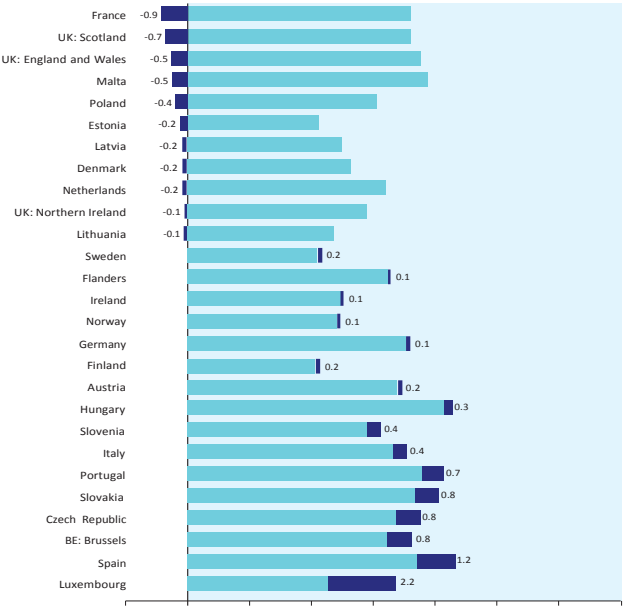
Trends in selected categories of BW (live births)

2010-2015

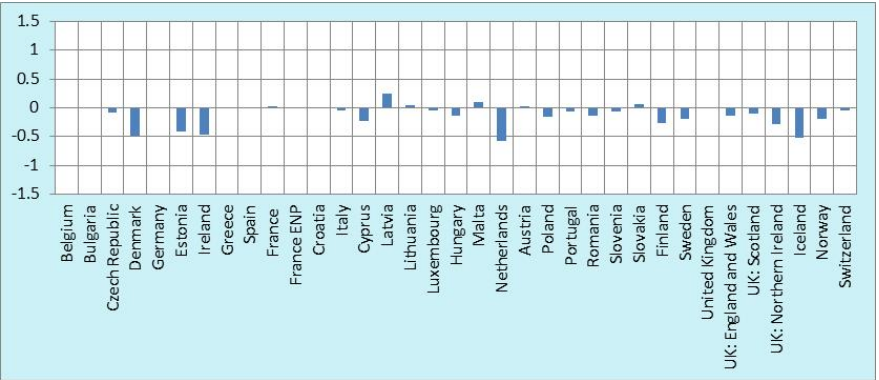
LBW
(<2500g)



2004-2010



HBW
(≥4500g)



Summary of findings

- Majority of children (90-93%) is born with birthweight between 2500-4500 g
- The proportion of birthweight less than 2500 g varies among countries from 4.4 to 10.8% of total births and from 4.4 to 10.8% of live births. The proportion of birthweight equal or greater than 4500 g varies among countries from 0.2 to 4.3% of total births and from 0.2 to 4.3% of live births.
- The North-South pattern of birthweight persists over time.
- The absolute changes in low birth weight proportion among live births between 2010-2015 do not exceed $\pm 1.5\%$ and values of this indicator are relatively stable over time.
- An indicator more closely related to fetal growth than LBW is needed.