Neonatal mortality rate (per 1 000 live births)

Rationale for use

Neonatal deaths account for a large proportion of child deaths. Mortality during neonatal period is considered a useful indicator of both maternal and newborn health and care.

Definition

Number of deaths during the first 28 completed days* of life per 1 000 live births in a given year or period.

* Neonatal deaths may be subdivided into early neonatal deaths, occurring during the first seven days of life, and late neonatal deaths, occurring after the seventh day but before the 28 completed days of life.

Associated terms

The neonatal period commences at birth and ends 28 completed days after birth.

Live birth (see Probability of dying under age 5 years).

Data sources

Vital registration: The number of live births and number of neonatal deaths are used to calculate age specific rates.

Household surveys: Calculations are based on birth history - a series of detailed questions on each child a woman has given birth to during her lifetime. The estimates are generally presented as period rates for the five-year periods preceding the survey. The total number of births surveyed provides the denominator.

Methods of estimation

Empirical data are used. When no survey or registration data point is available, the neonatal mortality rate is estimated from the under-5 mortality using a regression adjusted for AIDS.

Disaggregation

By sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g. mother’s education level, wealth quintile).

References

- WHO Mortality Database: Estimated completeness of mortality data for latest year. (http://www.who.int/healthinfo/morttables)


Database

- Demographic and Health Surveys (DHS): (http://www.measuredhs.com)
- WHO, European Office. HFA database: (http://www.euro.who.int/hfadb)

Comments

The reliability of the neonatal mortality estimates depends on accuracy and completeness of reporting and recording of births and deaths. Underreporting and misclassification are common, especially for deaths occurring early on in life.

Perinatal mortality, defined as number of stillbirths and deaths in the first week of life per 1 000 live births, is a useful additional indicator, since majority of neonatal births occur during the first week of life.