



Under-five mortality rate

Abbreviated name	Under-five mortality rate
Indicator name	Under-five mortality rate (probability of dying by age 5 per 1000 live births)
Domain	Health status
Subdomain	Reproductive, maternal, newborn, child and adolescent health
Associated terms	Mortality by age and sex
Definition	<p>The probability of a child born in a specific year or period dying before reaching the age of 5 years, if subject to age-specific mortality rates of that period, expressed per 1000 live births.</p> <p>The under-five mortality rate as defined here is, strictly speaking, not a rate (i.e. the number of deaths divided by the number of population at risk during a certain period of time) but a probability of death derived from a life table and expressed as a rate per 1000 live births.</p>
Numerator	Number of deaths among children aged 0–4 years (0–59 months of age), broken down by age groups.
Denominator	Number of live births (person-years of exposure).
Disaggregation/ additional dimension	Place of residence, sex, socioeconomic status <i>Also: by cause, including pneumonia or diarrhoea</i>
Method of measurement	<p>The most frequently used methods using the above-mentioned data sources are as follows:</p> <p>Civil registration: Number of deaths at age 0 and population of the same age are used to calculate death rates which are then converted into age-specific probability of dying.</p> <p>Census and surveys: An indirect method is used based on questions to each woman of reproductive age as to how many children she has ever given birth to and how many are still alive. The Brass method and model life tables are then used to obtain an estimate of infant mortality.</p> <p>Surveys: A direct method is used based on birth history – a series of detailed questions on each child a woman has given birth to during her lifetime. To reduce sampling errors, the estimates are often presented as period rates for five years preceding the survey. A synthetic cohort method developed by the Demographic and Health Surveys (DHS) is used to compute period rates.</p>
Method of estimation	<p>The UN-IGME produces trends of under-five mortality with a standardized methodology by group of countries depending on the type and quality of source of data available. For countries with adequate trend of data from civil registration, the calculations of under-five and infant mortality rates are derived from a standard period abridged life table. For countries with survey data, under-five mortality rates are estimated using the Bayesian B-splines bias-adjusted model. See the UN-IGME link for details. These under-five mortality rates have been estimated by applying methods to the available data from all Member States in order to ensure comparability across countries and time; hence they are not necessarily the same as the official national data.</p> <p>Predominant type of statistics: adjusted and predicted</p>
Measurement frequency	Annual if based on registration system; otherwise, less frequent (3–5 years based on surveys)
Monitoring and evaluation framework	Impact
Preferred data sources	Civil registration with high coverage
Other possible data sources	Household surveys, population census
Further information and related links	<p>Countdown to 2015. Monitoring maternal, newborn and child health: understanding key progress indicators. Geneva: World Health Organization; 2011 (http://apps.who.int/iris/bitstream/10665/44770/1/9789241502818_eng.pdf, accessed 29 March 2015).</p> <p>Indicators for monitoring the Millennium Development Goals: definitions, rationale, concepts and sources. New York (NY): United Nations; 2012 (http://mdgs.un.org/unsd/mi/wiki/MainPage.aspx, accessed 29 March 2015).</p> <p>UN-IGME estimation method for child mortality. New York (NY): United Nations Inter-agency Group for Child Mortality Estimation; 2014 (http://www.who.int/entity/gho/child_health/mortality/ChildCME_method.pdf.pdf, accessed 29 March 2015).</p> <p>World population prospects. New York (NY): United Nations; 2012 (http://esa.un.org/wpp/, accessed 29 March 2015).</p>