

Health Equity Monitor

INTERACTIVE DATA VISUALIZATION

TECHNICAL NOTES

July 2020



Data sources

Health indicator and dimension of inequality data were sourced from publicly available Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), and Reproductive Health Surveys (RHS). DHS, MICS and RHS are large-scale, nationally representative household surveys that collect data through standardized, face-to-face interviews with women aged 15–49 years in especially low- and middle-income countries. The survey tools used by DHS, MICS and RHS permit direct comparisons between surveys, and it is assumed that the survey design and implementation quality are sufficiently similar between DHS, MICS and RHS, across countries and over time.

Country income group was determined using the World Bank classification as of July 2020.

Health indicators

Table 1 provides an overview of the reproductive, maternal, newborn and child health indicators included in the interactive visuals. Detailed information about the criteria used to calculate the numerator and denominator values for each indicator are available in the indicator compendium of the WHO Health Equity Monitor database and in the WHO Indicator Metadata Registry.

Table 1 Reproductive, maternal, newborn and child health indicators

Indicator type	Indicator name
Reproductive health interventions	Contraceptive prevalence - modern and traditional methods (%)
	Contraceptive prevalence - modern methods (%)
	Demand for family planning satisfied - modern and traditional methods (%)
	Demand for family planning satisfied - modern methods (%)
Maternal health interventions	Antenatal care coverage - at least four visits (in the five years preceding the survey) (%)
	Antenatal care coverage - at least four visits (in the two or three years preceding the survey) (%)
	Antenatal care coverage - at least one visit (in the five years preceding the survey) (%)
	Antenatal care coverage - at least one visit (in the two or three years preceding the survey) (%)
	Births attended by skilled health personnel (in the five years preceding the survey) (%)
	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)
	Births by caesarean section (in the five years preceding the survey) (%)
	Births by caesarean section (in the two or three years preceding the survey) (%)
	Pregnant women sleeping under insecticide-treated nets (%)
Newborn and child health interventions	BCG immunization coverage among one-year-olds (%)
	Children aged < 5 years sleeping under insecticide-treated nets (%)
	Children aged < 5 years with diarrhoea receiving oral rehydration salts (%)
	Children aged < 5 years with diarrhoea receiving oral rehydration therapy and continued feeding (%)
	Children aged < 5 years with pneumonia symptoms taken to a health facility (%)
	Children aged 6-59 months who received vitamin A supplementation (%)

	DTP3 immunization coverage among one-year-olds (%)
	Early initiation of breastfeeding (in the two years preceding the survey) (%)
	Full immunization coverage among one-year-olds (%)
	Measles immunization coverage among one-year-olds (%)
	Polio immunization coverage among one-year-olds (%)
RMNCH interventions, combined	Composite coverage index (%)
Child malnutrition	Overweight prevalence in children aged < 5 years (%)
	Severe wasting prevalence in children aged < 5 years (%)
	Stunting prevalence in children aged < 5 years (%)
	Underweight prevalence in children aged < 5 years (%)
	Wasting prevalence in children aged < 5 years (%)
Child mortality	Infant mortality rate (deaths per 1000 live births)
	Neonatal mortality rate (deaths per 1000 live births)
	Under-five mortality rate (deaths per 1000 live births)
Fertility	Adolescent fertility rate (births per 1000 women aged 15-19 years)
	Total fertility rate (births per woman)
Obesity in non-pregnant women	Obesity prevalence in non-pregnant women aged 15-49 years, BMI \geq 30 (%)

Inequality dimensions

Health indicators were disaggregated by five dimensions of inequality: economic status, education, place of residence as well as age and sex (where applicable).

Economic status was determined using a wealth index. Country-specific indices were based on owning selected assets and having access to certain services, and constructed using principal component analysis. For wealth quintiles, within each country the index was divided into five equal subgroups that each account for 20% of the population. For wealth deciles, within each country the index was divided into ten equal subgroups that each account for 10% of the population. Note that certain indicators have denominator criteria that do not include all households and/or are more likely to include households from a specific quintile or decile; thus the quintile or decile share of the population for a given indicator may not equal 20% or 10%, respectively.

Education refers to the highest level of schooling attained by the woman (or the mother, in the case of newborn and child health interventions, child malnutrition and child mortality indicators).

For place of residence, country-specific criteria were applied.

Table 2 Inequality dimensions and subgroups

Dimension	Subgroups
Age	[Reproductive health interventions] 2 subgroups: 15–19 years and 20–49 years [Child malnutrition] 2 subgroups: 0-2 years and 2-5 years
Economic status (wealth quintiles)	5 subgroups: quintile 1 (poorest), quintile 2, quintile 3, quintile 4, quintile 5 (richest)

Economic status (wealth deciles)	10 subgroups: decile 1 (poorest), decile 2, decile 3, decile 4, decile 5, decile 6, decile 7, decile 8, decile 9, decile 10 (richest)
Education	3 subgroups: no education, primary school , secondary school +
Place of residence	2 subgroups: rural, urban
Sex	2 subgroups: female, male

Study countries

Countries were selected on the basis of data availability and survey year. When a survey was conducted over more than one calendar year, the year of survey was assigned based on the initial year of data collection. Countries were excluded on a case-by-case basis if data about the relevant health indicator and/or the inequality dimension were not available or if the sample size was too low to report a valid estimate for one or more of the relevant subgroups. Situations of low sample size were noted.

Countries with a survey dating from the past 10 years were selected to illustrate the “latest situation” of inequality. Latest-situation analyses were possible for 99 countries with the year of their most recent survey falling between 2009 and 2018.

“Change over time” was analyzed for study countries that had surveys from two time points (a recent survey falling between 2009 and 2018 and an older survey falling between 1999 and 2008), and reflects the change in national averages and inequalities within countries over a period of about 10 years. Change-over-time analyses were possible for 83 countries. The number of years between surveys within countries ranged from 5 to 15 years, as per data availability. When more than one older survey was available, the survey closest to 10 years prior to the most recent survey was selected.

Data analysis

Disaggregated data

Disaggregated data are the product of a reanalysis of DHS, MICS and RHS micro-data by the WHO Collaborating Center for Health Equity Monitoring (International Center for Equity in Health based in the Federal University of Pelotas, Brazil). Disaggregated child malnutrition indicator data are from the Joint Child Malnutrition Estimates compiled by UNICEF, WHO and the World Bank. Survey design specifications were taken into consideration during the analysis. The same methods of calculation for data analysis were applied across all surveys to generate comparable estimates across countries and over time. In a few cases there may be minor differences between the data reported here and in previous DHS, MICS or RHS country reports due to small discrepancies in the definition and calculation of some indicators.

Point estimates of disaggregated data are presented alongside 95% confidence intervals and the population share of each subgroup. For each indicator, the population share of a subgroup represents the percentage of the affected population in that subgroup out of the entire affected population in that country (the indicator denominator).

The disaggregated data presented in the interactive visuals can be freely accessed from the [WHO Health Equity Monitor database](#) (2020 update).

Summary measures

Summary measures were calculated based on the disaggregated data.

For “latest situation” analyses, difference and ratio measures show absolute and relative inequality, respectively, between two population subgroups. For inequality dimensions with more than two subgroups, the most-advantaged and most-disadvantaged subgroups are compared.

For “change over time” analyses, annual absolute change indicates the average change per year within a population subgroup. Annual absolute change was calculated as the difference in health at the two time points (most recent survey data minus older survey data), divided by the gap between survey years.

Annual absolute excess change compares the pace of change in the most-disadvantaged subgroup with that in the most-advantaged subgroup. It is calculated as the annual absolute change in the disadvantaged subgroup minus the annual absolute change in the advantaged subgroup.

Point estimates of summary measures are presented alongside 95% confidence intervals.