

TECHNICAL NOTES

Potential for improvement in RMNCH interventions

Data sources

Health indicator and dimension of inequality data were sourced from publicly available Demographic and Health Surveys (DHS) – rounds three, four, five and six – and Multiple Indicator Cluster Surveys (MICS) – rounds three and four. DHS and MICS are large-scale, nationally representative household surveys that collect data through standardized, face-to-face interviews with women aged 15–49 years in low- and middle-income countries. Country income group was determined using the World Bank classification as of July 2014.

The disaggregated data are the product of a reanalysis of DHS and MICS micro-data by the International Center for Equity in Health based in the Federal University of Pelotas, Brazil, and can be freely accessed from the WHO Health Equity Monitor database (www.who.int/gho/health_equity/en/).

The survey tools used by DHS and MICS permit direct comparisons between surveys, and it is assumed that the survey design and implementation quality are sufficiently similar between DHS and MICS, across countries and over time. The data were taken from rounds of DHS and MICS that were not conducted in the same year in all countries. In a few cases there may be minor differences between the data reported here and in previous DHS or MICS country reports due to small discrepancies in the time span, definition and/or calculation of some indicators.

Health indicators

Reproductive, maternal, newborn and child health interventions include the following 17 indicators: contraceptive prevalence (modern and traditional methods), contraceptive prevalence (modern methods), demand for family planning satisfied, antenatal care (at least one visit), antenatal care (at least four visits), births attended by skilled health personnel, early initiation of breastfeeding, children aged 6–59 months who received vitamin A supplementation, BCG immunization coverage among one-year-olds, measles immunization coverage among one-year-olds, polio immunization coverage among one-year-olds, DTP3 immunization coverage among one-year-olds, full immunization coverage among one-year-olds, children aged less than five years with diarrhoea receiving oral rehydration salts, children aged less than five years with diarrhoea receiving oral rehydration therapy and continued feeding, children aged less than five years with pneumonia symptoms taken to a health facility, and the composite coverage index.

Detailed information about the criteria used to calculate the numerator and denominator values for each indicator is available in the WHO Indicator and Measurement Registry, under the topic “Health Equity Monitor” (www.who.int/gho/indicator_registry/en/).

Dimensions of inequality

Health data were disaggregated by economic status, education level, and place of residence. Economic status was determined at the household level, 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. Within each country the index was used to create

quintiles, thereby identifying five equal subgroups that each account for 20% 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; thus the share of the population for a given indicator may not equal 20%. Education level refers to the highest level of schooling attained by the woman, or in the case of newborn and child health interventions, the mother. Three subgroups were defined: no education, primary school, and secondary school or higher. For place-of-residence classifications (that is, urban or rural), country-specific criteria were applied.

Country selection

Countries were selected for inclusion based on data availability and survey year, with priority given to the most recent survey (DHS or MICS) conducted in the past 10 years. 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. Eighty-six low- and middle-income countries, representing all WHO regions, with the year of their most recent survey falling between 2005 and 2013 were selected to illustrate the “latest situation” of inequality.

Study countries were excluded on a case-by-case basis if data about the relevant health indicator and/or the dimension of inequality were not available or if the sample size was too low to report a valid estimate for one or more of the relevant subgroups (that is, less than 25 cases). Situations of low sample size (that is, 25–49 cases) were noted.

In five MICS, education was classified according to different criteria than applied to other surveys, and data could not be reasonably compared with those of other study countries. Data from these five surveys were thus excluded from subsequent disaggregation and analyses by education. The composite coverage index for a given subgroup was not calculated when any of the eight component indicators had a sample size of less than 25 cases.

Analysis

Micro-level DHS and MICS data were used to generate national average and disaggregated estimates for each indicator. Survey design specifications were taken into consideration in the estimation. The same methods of calculation were applied across all surveys to generate comparable estimates across countries and over time.

Point estimates of disaggregated data are presented alongside 95% confidence intervals (CIs), and the population share of the subgroup. The population share for each indicator is the percentage of the affected population – the indicator denominator – represented by the subgroup in a given country.

Population attributable risk (potential for improvement) was calculated as the difference between the level of intervention coverage in the most-advantaged subgroup (that is, richest quintile, secondary school or higher, and urban residing) and the national average. Generally, the subtraction yielded a positive value; however, in exceptional cases the result was negative (indicating that coverage in the most-advantaged subgroup was lower than the national average). Negative values were reassigned to zero to convey that there would be no improvement in national average intervention coverage if the whole population were to achieve the same level of coverage as the most-advantaged subgroup.