

# MONITORING HEALTH INEQUALITY

An essential step for  
achieving health equity



ILLUSTRATIONS OF FUNDAMENTAL CONCEPTS

The examples in this publication draw from the topic of reproductive, maternal and child health, where comparable data across many countries are publicly available. Maps and figures are based on data that were derived from re-analysis of Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) micro-data. For more information about these data and the topic of health inequality please visit the Health Equity Monitor on the Global Health Observatory ([http://www.who.int/gho/health\\_equity/en/](http://www.who.int/gho/health_equity/en/)).

Detailed information about the criteria used to calculate the indicator numerator and denominator values used in these analyses is available in the WHO Indicator and Measurement Registry, under the topic Health Equity Monitor ([http://www.who.int/gho/indicator\\_registry/en/](http://www.who.int/gho/indicator_registry/en/)).

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This work is a collaboration between the Department of Health Statistics and Information Systems and the Gender, Equity and Human Rights (GER) Team, and is a product of GER mainstreaming. Ahmad Reza Hosseinpour, Nicole Bergen, Anne Schlottheuber and Humna Amjad contributed to the development of this publication and the accompanying videos. The maps were produced by Florence Rusciano.

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# THE HEALTH OF THE WORLD'S POPULATION IS IN A STATE OF INEQUALITY.

PEOPLE HAVE VASTLY DIFFERENT STORIES TO TELL ABOUT THEIR HEALTH DEPENDING ON THEIR ECONOMIC STATUS, LEVEL OF EDUCATION, PLACE OF RESIDENCE, SEX, AGE AND ANY OTHER POTENTIAL BASE FOR DISCRIMINATION.

Health inequalities exist across countries, but also within countries.

Looking beyond national averages reveals that health levels are different across subgroups of national populations.

Inequalities may change over time.

Inequalities in health should be reported to convey the current situation and change over time, which can be benchmarked to get a sense of how well a given country—or subnational region—is performing.

Inequalities in health have many faces.

It is not enough to say that health varies between the rich and the poor. There are also important differences between males and females, urban and rural residents, highly-educated and less-educated, old and young, etc.

The reduction of inequality should be an explicit aim of health agendas and goal-setting.

Policies, programmes and practices should prioritize the needs of subgroups that are falling behind. Improving the health of the worst-off translates into better national figures, and helps entire populations realize the right to health.

## HEALTH INEQUALITIES ARE WIDESPREAD.

WHILE NATIONAL AVERAGES CAN BE COMPARED TO SHOW INEQUALITIES ACROSS COUNTRIES, PRESENTING DATA ACCORDING TO DIFFERENT POPULATION SUBGROUPS ALSO REVEALS IMPORTANT WITHIN-COUNTRY INEQUALITIES.

### **Inequalities in child malnutrition are shown by level of mother's education.**

The following maps illustrate prevalence of stunting in children under five years of age in 72 low- and middle-income countries, by the level of mother's education: no education and secondary school or higher (intermediate category not shown).

The level of stunting varies across countries for a given education subgroup. Looking across the two maps, stunting prevalence within each country tended to be lower in the subgroup with a higher level of education.

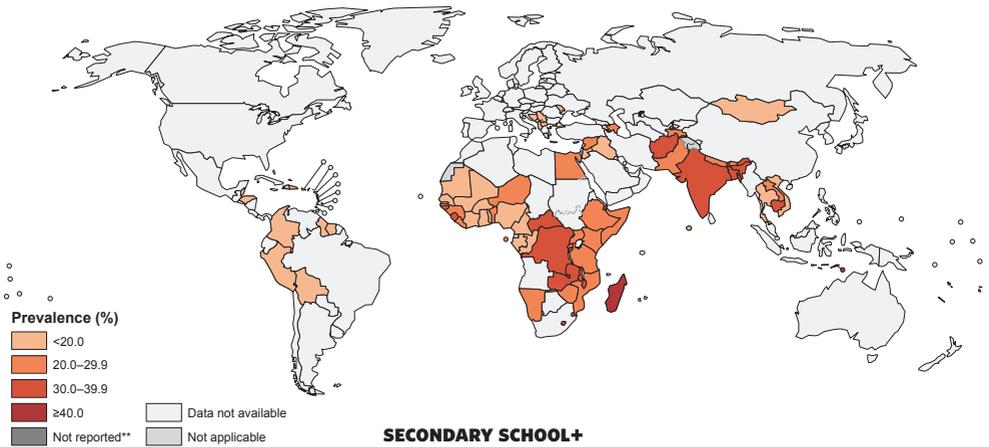
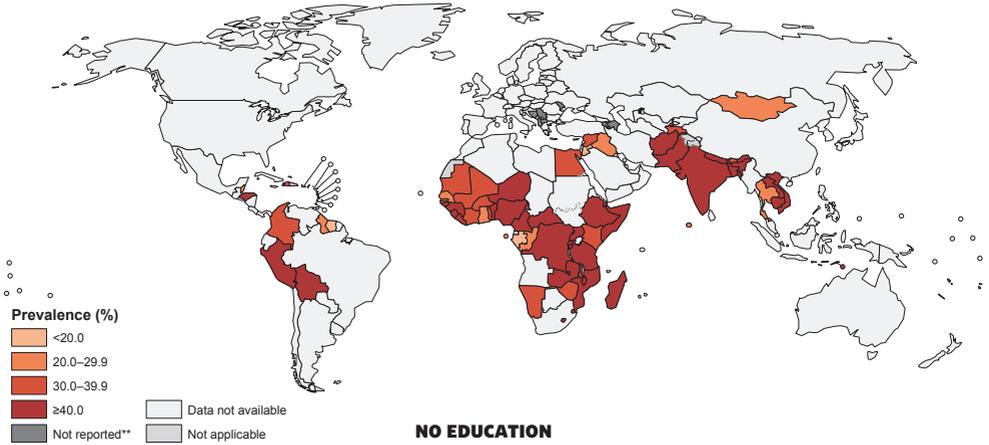
### **HOW MUCH DOES CHILD MALNUTRITION VARY ACROSS EDUCATION SUBGROUPS WITHIN COUNTRIES?**

EXPLORE THIS QUESTION BY SCANNING THE QR CODE TO VIEW  
A SHORT VIDEO CLIP.

To see all videos about health inequality monitoring visit:  
[www.who.int/gho/health\\_equity/videos/en/index.html](http://www.who.int/gho/health_equity/videos/en/index.html)



STUNTING PREVALENCE IN CHILDREN UNDER FIVE YEARS OF AGE IN 72 LOW- AND MIDDLE-INCOME COUNTRIES, BY MOTHER'S EDUCATION\*



\*Source: DHS and MICS, 2005–2012.

\*\*Estimate is based on fewer than 25 cases.

## HEALTH INEQUALITY IS MULTI- DIMENSIONAL.

FOR A GIVEN HEALTH INDICATOR, THE SITUATION OF INEQUALITY IS MORE FULLY CAPTURED BY CONSIDERING MULTIPLE DIMENSIONS SUCH AS ECONOMIC STATUS, EDUCATION, PLACE OF RESIDENCE AND SEX.

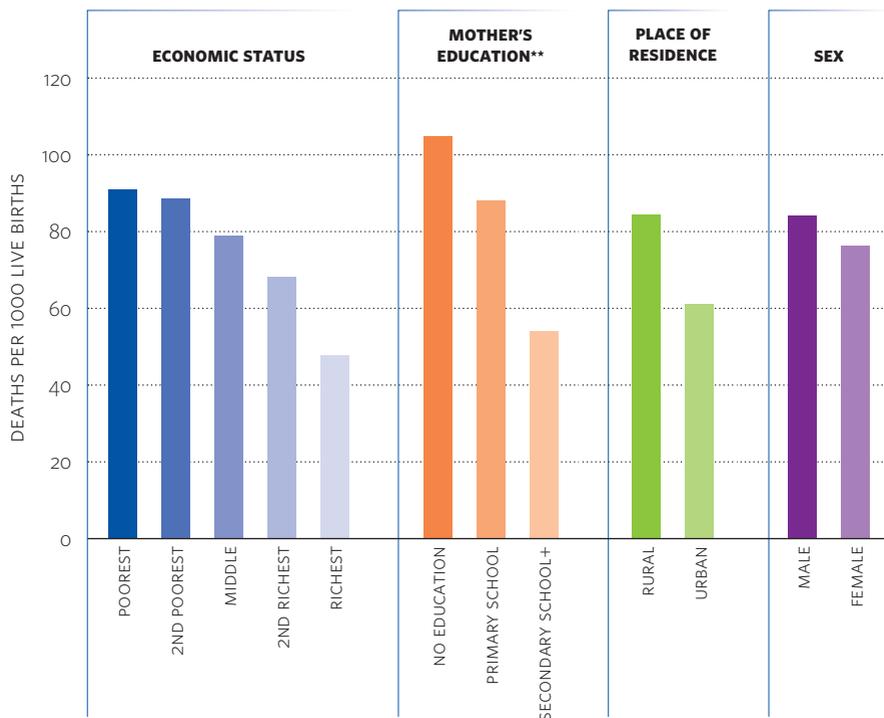
### **Inequalities in child mortality are shown by multiple dimensions of inequality.**

The following bar charts illustrate under-five mortality rate in 49 low- and-middle income countries, by economic status, mother's education, place of residence and sex.

The rate of mortality in children under five years of age was higher among the poorest than the richest subgroup, and the no education subgroup than the secondary school or higher subgroup. Inequality existed between rural and urban subgroups (higher mortality in rural subgroups), and to a lesser extent, between males and females (higher mortality in males).



UNDER-FIVE MORTALITY IN 49 LOW- AND MIDDLE-INCOME COUNTRIES (MEDIAN LEVELS),  
BY MULTIPLE DIMENSIONS OF INEQUALITY\*



\* Source: DHS, 2005–2012.

\*\*Data are not available for 10 countries.

**HOW DO SUBGROUP VARIATIONS IN UNDER-FIVE MORTALITY DIFFER BETWEEN LOW-INCOME COUNTRIES AND MIDDLE-INCOME COUNTRIES?**

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## **BENCHMARKING PUTS CHANGES IN INEQUALITY IN CONTEXT.**

COUNTRIES CAN BE BENCHMARKED AGAINST OTHERS IN THE SAME REGION OR COUNTRY INCOME GROUPING TO GET A SENSE OF WHETHER THE COUNTRY IS DOING WELL OR HAS ROOM FOR IMPROVEMENT.

### **Changes in inequality, together with national average, are shown for reproductive health.**

The following graph illustrates progress in modern contraceptive use according to both urban/rural inequality and national average, in 41 low- and middle-income countries.

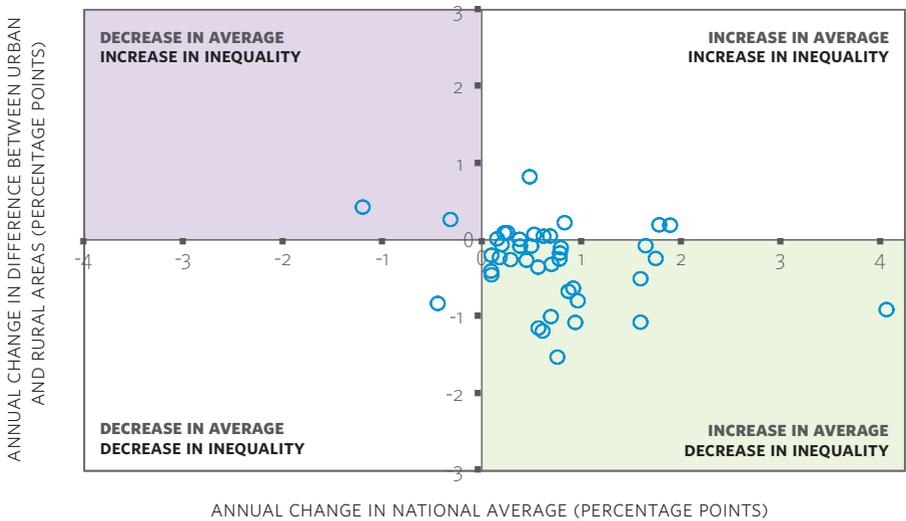
The four quadrant view facilitates easy identification of the best-performing countries: those countries with decreasing inequality of modern contraceptive use and increasing national prevalence are located in the bottom right quadrant of the graph. The countries in the top left quadrant reported an increase in inequality and a decrease in national prevalence; here, the situation is worsening.

In addition to national-level benchmarking using a group of countries in the same region or country income level grouping, benchmarking can be done to gauge relative performance among subnational regions like provinces, states, districts, etc.



CHANGE IN INEQUALITY AND NATIONAL AVERAGE OF MODERN CONTRACEPTIVE USE IN 41 LOW- AND MIDDLE-INCOME COUNTRIES\*

- The situation is improving for the countries in this quadrant.
- The situation is worsening for the countries in this quadrant.



Circles represent countries; each country is shown on the figure by one circle.

\*Source: DHS and MICS, 1995–2012. Data were taken from two time points (1995–2004 and 2005–2012), spanning on average, 10 years.

**WHICH COUNTRIES HAD INCREASED NATIONAL AVERAGE OF MODERN CONTRACEPTIVE USE AND DECREASED URBAN/RURAL INEQUALITY?**

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## HEALTH INEQUALITIES INFORM POLICY.

INEQUALITIES SPAN POPULATIONS, SO IT IS IMPORTANT TO CONSIDER THE GRADIENT OF HEALTH ACROSS ALL POPULATION SUBGROUPS. OBSERVING PATTERNS IN DISAGGREGATED DATA HELPS TO INDICATE APPROPRIATE APPROACHES TO ADDRESS INEQUALITY.

### **Patterns of inequality are shown across disaggregated data.**

Health service coverage is shown across subgroups of economic status, illustrating four distinct patterns of inequality.

The complete coverage pattern has coverage of 100%—or close to 100%—in all subgroups. Marginal exclusion is characterized by markedly lower coverage in the poorest subgroup than the other four subgroups. A linear pattern has gradual increases from the poorest to the richest subgroup, and mass deprivation has low or very low coverage in all subgroups except the richest.

PATTERNS OF INEQUALITY IN HEALTH SERVICE COVERAGE, BY ECONOMIC STATUS



- Complete coverage shows a need for continued monitoring.
- Marginal exclusion requires action targeted to the underserved.
- An incremental linear pattern requires a combined universal and targeted approach.
- Mass deprivation requires universal action oriented to the whole population.

**WHICH COUNTRIES DEMONSTRATE CHARACTERISTIC PATTERNS OF INEQUALITY IN BIRTHS ATTENDED BY SKILLED HEALTH PERSONNEL, DISAGGREGATED BY ECONOMIC STATUS?**

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# ESSENTIAL STEPS FORWARD FOR ACHIEVING HEALTH EQUITY

HEALTH INEQUALITIES PERSIST AND SHOULD BE MEASURED IN DIVERSE HEALTH TOPICS. IDENTIFYING HEALTH INEQUALITIES AND THEIR DRIVERS IS ESSENTIAL FOR ACHIEVING HEALTH EQUITY AS WELL AS GENDER EQUALITY AND THE RIGHT TO HEALTH.

## Health information systems are the foundation for monitoring health inequality.

Strengthening equity-oriented health information systems of member states requires capacity building for improved collection, analysis and reporting of health data from population subgroups.

- **Data collection.** Regularly-occurring and standardized data collection practices should strive to ensure that the data used for health inequality monitoring are reliable, of high-quality, and comparable across settings and over time. The two types of data required for health inequality monitoring—data about health and data about dimensions of inequality, like economic status, education level, place of residence and sex—should be collected from a single source, or linked together from different sources.
- **Data analysis.** Developing the proficiency to conduct regular health inequality analyses requires dedicated resources to build the specialized technical knowledge, analytic skills and best practices that inform data analyses.
- **Reporting.** Clear and salient messages from health inequality data analyses should be reported, achieving a balance between presenting comprehensible messages and maintaining sufficient technical accuracy and rigor. Reporting should be targeted to the needs and abilities of the audience to which the messages are presented.



Visualization technologies make health data accessible, easy-to-navigate and meaningful to diverse audiences.

Diverse audiences (policy makers, health professionals, researchers, media, public, etc.) can engage in data exploration and benchmarking, creating customized data views according to their interests.

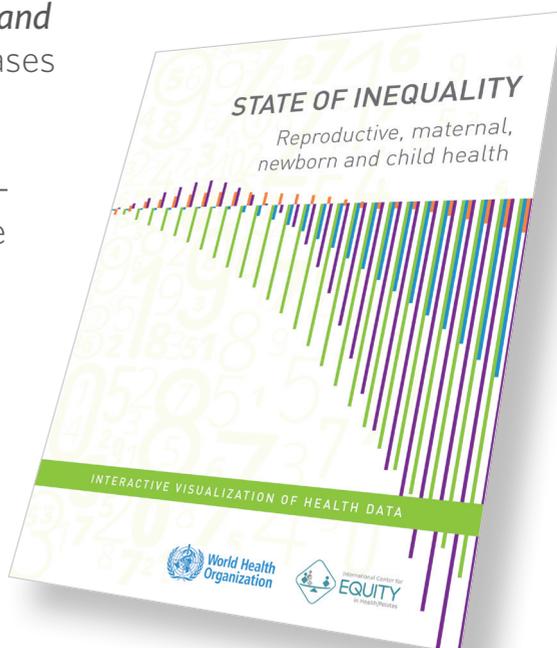
**HOW CAN HEALTH INEQUALITY DATA BE PRESENTED INTERACTIVELY?**

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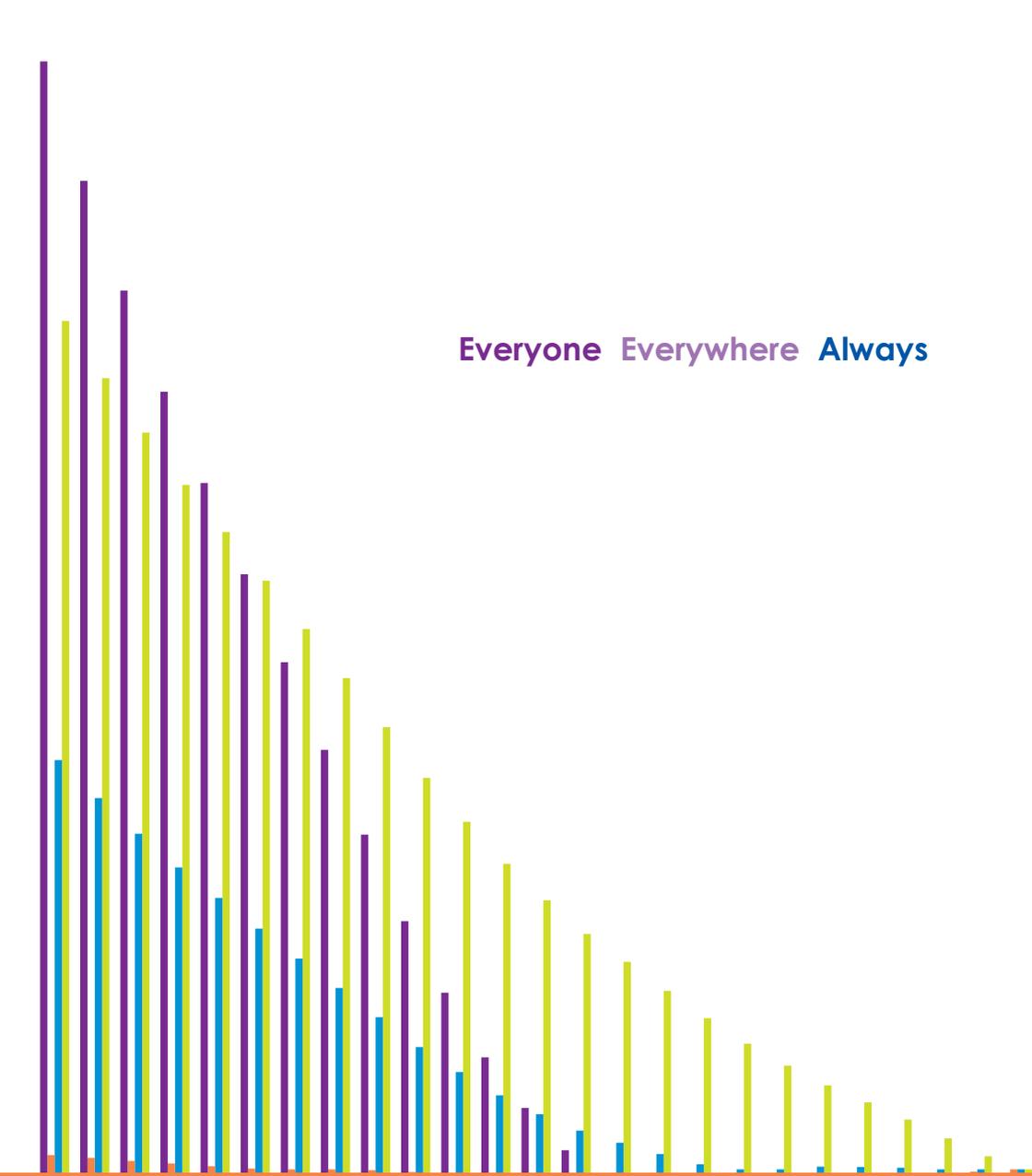
The 2015 report ***State of inequality: reproductive, maternal, newborn and child health*** showcases best practices in reporting the state of inequality in low- and middle-income countries.



To access the full report and accompanying electronic visualization components, please visit [www.who.int/gho/health\\_equity/report\\_2015/](http://www.who.int/gho/health_equity/report_2015/)







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