



Health Inequality Data Repository

INDICATOR METADATA

Childhood immunization (DHS/MICS/RHS re-analyzed by ICEH)

October 2024

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About

This dataset is from the [WHO Health Inequality Data Repository](#).

This dataset contains data for childhood immunization indicators from household health surveys disaggregated by age, economic status, education, place of residence, sex and subnational region.

Data source

Data are based on the reanalysis of microlevel data from Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS) and Reproductive Health Surveys (RHS). The re-analysis was done by the WHO Collaborating Center for Health Equity Monitoring (International Center for Equity in Health, Federal University of Pelotas, Brazil).

Methodology

In general, standard indicator definitions were adopted, as published in DHS, MICS and RHS documentation. In a few cases in estimates produced by ICEH, 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. See the indicator metadata for further information.

Dataset metadata

Date of first publication	April 2023
Date of updated publication	October 2024
Expected frequency of update	Annual
Date of data extraction	01 October 2024
Temporal coverage	1991-2023
Spatial coverage	Global
Spatial granularity	National
Number of countries, territories or areas	120
Number of indicators	20
Number of dimensions of inequality	6

Inequality dimensions

The **age** dimension refers to the mother's current age.

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/territory the index was divided into five equal subgroups that each account for 20% of the population. For wealth deciles, within each country/territory the index was divided into ten equal subgroups that each account for 10% of the population. Note that certain

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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 education attained by the mother.

For **place of residence** and **subnational region**, context-specific criteria were applied.

Sex refers to the reported sex (male or female) of the child.

Disclaimer

The estimates presented may differ from, and should not be regarded as, the official national statistics of individual WHO Member States or official WHO estimates.

Please note that, in some cases, indicators may not be equivalent to similar indicators listed in the WHO Global Health Observatory, due to small discrepancies in the definition and calculation of numerator and denominator values. Detailed information about the indicator criteria applied in all WHO-defined categories is available in the WHO Global Health Observatory (<https://www.who.int/data/gho/data/indicators>).

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Indicator metadata

Indicator name	Disaggregation	Definition / Further information	Notes
BCG immunization coverage among one-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of one-year-olds who have received the Bacille Calmette-Guérin (BCG) vaccine in a given year. <u>Numerator</u> : Number of children aged 12–23 months who received the BCG vaccine. <u>Denominator</u> : Total number of children aged 12–23 months surveyed.	In certain countries the time period of 12–23 months was adjusted to align with alternative national immunization periods (18–29 months or 15–26 months).
BCG immunization coverage among two-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of two-year-olds who have received the Bacille Calmette-Guérin (BCG) vaccine in a given year. <u>Numerator</u> : Number of children aged 24–35 months who received the BCG vaccine. <u>Denominator</u> : Total number of children aged 24–35 months surveyed.	
DTP3 immunization coverage among one-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of one-year-olds who have received three doses of the combined diphtheria, tetanus toxoid and pertussis (DTP3) vaccine in a given year. <u>Numerator</u> : Number of children aged 12–23 months receiving three doses of the DTP vaccine. <u>Denominator</u> : Total number of children aged 12–23 months surveyed.	In certain countries the time period of 12–23 months was adjusted to align with alternative national immunization periods (18–29 months or 15–26 months).
DTP3 immunization coverage among two-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of two-year-olds who have received three doses of the combined diphtheria, tetanus toxoid and pertussis (DTP3) vaccine in a given year. <u>Numerator</u> : Number of children aged 24–35 months receiving three doses of the DTP vaccine. <u>Denominator</u> : Total number of children aged 24–35 months surveyed.	

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Indicator name	Disaggregation	Definition / Further information	Notes
Full immunization coverage among one-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of one-year-olds who have received one dose of Bacille Calmette-Guérin (BCG) vaccine, three doses of polio vaccine, three doses of the combined diphtheria, tetanus toxoid and pertussis (DTP3) vaccine, and one dose of measles vaccine. <u>Numerator:</u> Number of children aged 12–23 months receiving one dose of BCG vaccine, three doses of polio vaccine, three doses of DTP3 vaccine, and one dose of measles vaccine. <u>Denominator:</u> Total number of children aged 12–23 months surveyed.	In certain countries the time period of 12–23 months was adjusted to align with alternative national immunization periods (18–29 months or 15–26 months).
Full immunization coverage among two-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of two-year-olds who have received one dose of Bacille Calmette-Guérin (BCG) vaccine, three doses of polio vaccine, three doses of the combined diphtheria, tetanus toxoid and pertussis (DTP3) vaccine, and one dose of measles vaccine. <u>Numerator:</u> Number of children aged 24–35 months receiving one dose of BCG vaccine, three doses of polio vaccine, three doses of DTP3 vaccine, and one dose of measles vaccine. <u>Denominator:</u> Total number of children aged 24–35 months surveyed.	
Hib3 immunization coverage among one-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of one-year-olds who have received three doses of the Haemophilus influenzae type B vaccine. <u>Numerator:</u> Number of children aged 12–23 months receiving three doses of the Hib vaccine. <u>Denominator:</u> Total number of children aged 12–23 months surveyed.	In certain countries the time period of 12–23 months was adjusted to align with alternative national immunization periods (18–29 months or 15–26 months).
Hib3 immunization coverage among two-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of two-year-olds who have received three doses of the Haemophilus influenzae type B vaccine. <u>Numerator:</u> Number of children aged 24–35 months receiving three doses of the Hib vaccine. <u>Denominator:</u> Total number of children aged 24–35 months surveyed.	

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Measles immunization coverage among one-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of children aged 12–23 months who have received at least one dose of measles-containing vaccine in a given year. <u>Numerator</u> : Number of children aged 12–23 months receiving at least one dose of measles-containing vaccine. <u>Denominator</u> : Total number of children aged 12–23 months surveyed.	In certain countries the time period of 12–23 months was adjusted to align with alternative national immunization periods (18–29 months or 15–26 months).
Measles immunization coverage among two-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of children aged 24–35 months who have received at least one dose of measles-containing vaccine in a given year. <u>Numerator</u> : Number of children aged 24–35 months receiving at least one dose of measles-containing vaccine. <u>Denominator</u> : Total number of children aged 24–35 months surveyed.	
One-year-old children who did not receive any doses of the BCG, polio, DTP and measles vaccines (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	Percentage of children aged 12–23 months who have not received any doses of the DTP vaccine in a given year. <u>Numerator</u> : Number of children aged 12–23 months who did not receive any dose of the DTP vaccine. <u>Denominator</u> : Total number of children aged 12–23 months surveyed.	In certain countries the time period of 12–23 months was adjusted to align with alternative national immunization periods (18–29 months or 15–26 months).
One-year-old children who did not receive any doses of the DTP vaccine (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	Percentage of children aged 12–23 months who have not received any doses of the DTP vaccine in a given year. <u>Numerator</u> : Number of children aged 12–23 months who did not receive any dose of the DTP vaccine. <u>Denominator</u> : Total number of children aged 12–23 months surveyed.	In certain countries the time period of 12–23 months was adjusted to align with alternative national immunization periods (18–29 months or 15–26 months).
Polio immunization coverage among one-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of one-year-olds who have received three doses of polio vaccine in a given year. <u>Numerator</u> : Number of children aged 12–23 months receiving three doses of polio vaccine. <u>Denominator</u> : Total number of children aged 12–23 months surveyed.	In certain countries the time period of 12–23 months was adjusted to align with alternative national immunization periods (18–29 months or 15–26 months).

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Indicator name	Disaggregation	Definition / Further information	Notes
Polio immunization coverage among two-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of two-year-olds who have received three doses of polio vaccine in a given year. <u>Numerator</u> : Number of children aged 24–35 months receiving three doses of polio vaccine. <u>Denominator</u> : Total number of children aged 24–35 months surveyed.	
Rotavirus immunization coverage among one-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of one-year-olds who have received two or three doses of the rotavirus vaccine in a given year. <u>Numerator</u> : Number of children aged 12–23 months who have received two or three doses (depending on vaccine brand) of the rotavirus vaccine. <u>Denominator</u> : Total number of children aged 12–23 months surveyed.	In certain countries the time period of 12–23 months was adjusted to align with alternative national immunization periods (18–29 months or 15–26 months).
Rotavirus immunization coverage among two-year-olds (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of two-year-olds who have received two or three doses of the rotavirus vaccine in a given year. <u>Numerator</u> : Number of children aged 24–35 months who have received two or three doses of the rotavirus vaccine. <u>Denominator</u> : Total number of children aged 24–35 months surveyed.	
Tetanus toxoid immunization coverage at birth (%)	Age (mother's age at childbirth) Economic status Education (mother's education) Place of residence Sex Subnational region	The percentage of women who had a birth in the last two or five years and whose baby was protected from neonatal tetanus. <u>Numerator</u> : Number of women who had a birth in the last two or five years and received either: a) two tetanus toxoid injections during the pregnancy for her most recent live birth, or b) two or more injections before the last pregnancy (the last within 3 years of the most recent live birth), or c) three or more injections before the last pregnancy (the last within 5 years of the most recent live birth), or d) four or more injections before the last pregnancy (the last within 10 years of the most recent live birth), or	DHS data are based on the five years prior to the survey. MICS data are based on the two years prior to the survey.

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		<p>e) five or more injections at any time prior to the most recent live birth</p> <p><u>Denominator</u>: Total number of women who had a last birth in the last two or five years.</p>	
Tetanus toxoid immunization coverage during pregnancy (%)	Age (mother's age at childbirth) Economic status Education (mother's education) Place of residence Sex Subnational region	<p>The percentage of women who had a birth in the last five years who received two or more shots of tetanus vaccine during pregnancy.</p> <p><u>Numerator</u>: Number of women who had a birth in the last five years and received two or more shots of tetanus vaccine during pregnancy.</p> <p><u>Denominator</u>: Total number of women who had a last birth in the last five years.</p>	
Two-year-old children who did not receive any doses of the BCG, polio, DTP and measles vaccines (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	<p>Percentage of children aged 24–35 months who have not received any doses of the DTP vaccine in a given year.</p> <p><u>Numerator</u>: Number of children aged 24–35 months who did not receive any dose of the DTP vaccine.</p> <p><u>Denominator</u>: Total number of children aged 24–35 months surveyed.</p>	
Two-year-old children who did not receive any doses of the DTP vaccine (%)	Age (mother's current age) Economic status Education (mother's education) Place of residence Sex Subnational region	<p>Percentage of children aged 24–35 months who have not received any doses of the DTP vaccine in a given year.</p> <p><u>Numerator</u>: Number of children aged 24–35 months who did not receive any dose of the DTP vaccine.</p> <p><u>Denominator</u>: Total number of children aged 24–35 months surveyed.</p>	