

BACKGROUND NOTE: Each year WHO and UNICEF jointly review reports submitted by Member States regarding national immunization coverage, finalized survey reports as well as data from the published and grey literature. Based on these data, with due consideration to potential biases and the views of local experts, WHO and UNICEF attempt to distinguish between situations where the available empirical data accurately reflect immunization system performance and those where the data are likely to be compromised and present a misleading view of immunization coverage while jointly estimating the most likely coverage levels for each country.

WHO and UNICEF estimates are country-specific; that is to say, each country's data are reviewed individually, and data are not borrowed from other countries in the absence of data. Estimates are not based on ad hoc adjustments to reported data; in some instances empirical data are available from a single source, usually the nationally reported coverage data. In cases where no data are available for a given country/vaccine/year combination, data are considered from earlier and later years and interpolated to estimate coverage for the missing year(s). In cases where data sources are mixed and show large variation, an attempt is made to identify the most likely estimate with consideration of the possible biases in available data. For methods see:

*Burton et al. 2009. WHO and UNICEF estimates of national infant immunization coverage: methods and processes.

*Burton et al. 2012. A formal representation of the WHO and UNICEF estimates of national immunization coverage: a computational logic approach.

*Brown et al. 2013. An introduction to the grade of confidence used to characterize uncertainty around the WHO and UNICEF estimates of national immunization coverage.

DATA SOURCES.

ADMINISTRATIVE coverage: Reported by national authorities and based on aggregated administrative reports from health service providers on the number of vaccinations administered during a given period (numerator data) and reported target population data (denominator data). May be biased by inaccurate numerator and/or denominator data.

OFFICIAL coverage: Estimated coverage reported by national authorities that reflects their assessment of the most likely coverage based on any combination of administrative coverage, survey-based estimates or other data sources or adjustments. Approaches to determine OFFICIAL coverage may differ across countries.

SURVEY coverage: Based on estimated coverage from population-based household surveys among children aged 12-23 months or 24-35 months following a review of survey methods and results. Information is based on the combination of vaccination history from documented evidence or caregiver recall. Survey results are considered for the appropriate birth cohort based on the period of data collection.

ABBREVIATIONS

BCG: percentage of births who received one dose of Bacillus Calmette Guerin vaccine.

DTP1 / DTP3: percentage of surviving infants who received the 1st / 3rd dose, respectively, of diphtheria and tetanus toxoid with pertussis containing vaccine.

Pol3: percentage of surviving infants who received the 3rd dose of polio containing vaccine. May be either oral or inactivated polio vaccine.

IPV1: percentage of surviving infants who received at least one dose of inactivated polio vaccine. In countries utilizing an immunization schedule recommending either (i) a primary series of three doses of oral polio vaccine (OPV) plus at least one dose of IPV where OPV is included in routine

immunization and/or campaign or (ii) a sequential schedule of IPV followed by OPV, WHO and UNICEF estimates for IPV1 reflect coverage with at least one routine dose of IPV among infants <1 year of age among countries. For countries utilizing IPV containing vaccine use only, i.e., no recommended dose of OPV, the WHO and UNICEF estimate for IPV1 corresponds to coverage for the 1st dose of IPV.

Production of IPV coverage estimates, which begins in 2015, results in no change of the estimated coverage levels for the 3rd dose of polio (Pol3). For countries recommending routine immunization with a primary series of three doses of IPV alone, WHO and UNICEF estimated Pol3 coverage is equivalent to estimated coverage with three doses of IPV. For countries with a sequential schedule, estimated Pol3 coverage is based on that for the 3rd dose of polio vaccine regardless of vaccine type.

MCV1: percentage of surviving infants who received the 1st dose of measles containing vaccine. In countries where the national schedule recommends the 1st dose of MCV at 12 months or later based on the epidemiology of disease in the country, coverage estimates reflect the percentage of children who received the 1st dose of MCV as recommended.

MCV2: percentage of children who received the 2nd dose of measles containing vaccine according to the nationally recommended schedule.

RCV1: percentage of surviving infants who received the 1st dose of rubella containing vaccine. Coverage estimates are based on WHO and UNICEF estimates of coverage for the dose of measles containing vaccine that corresponds to the first measles-rubella combination vaccine. Nationally reported coverage of RCV is not taken into consideration nor are the data represented in the accompanying graph and data table.

HepBB: percentage of births which received a dose of hepatitis B vaccine within 24 hours of delivery. Estimates of hepatitis B birth dose coverage are produced only for countries with a universal birth dose policy. Estimates are not produced for countries that recommend a birth dose to infants born to HepB virus-infected mothers only or where there is insufficient information to determine whether vaccination is within 24 hours of birth.

HepB3: percentage of surviving infants who received the 3rd dose of hepatitis B containing vaccine following the birth dose.

Hib3: percentage of surviving infants who received the 3rd dose of Haemophilus influenzae type b containing vaccine.

RotaC: percentage of surviving infants who received the final recommended dose of rotavirus vaccine, which can be either the 2nd or the 3rd dose depending on the vaccine.

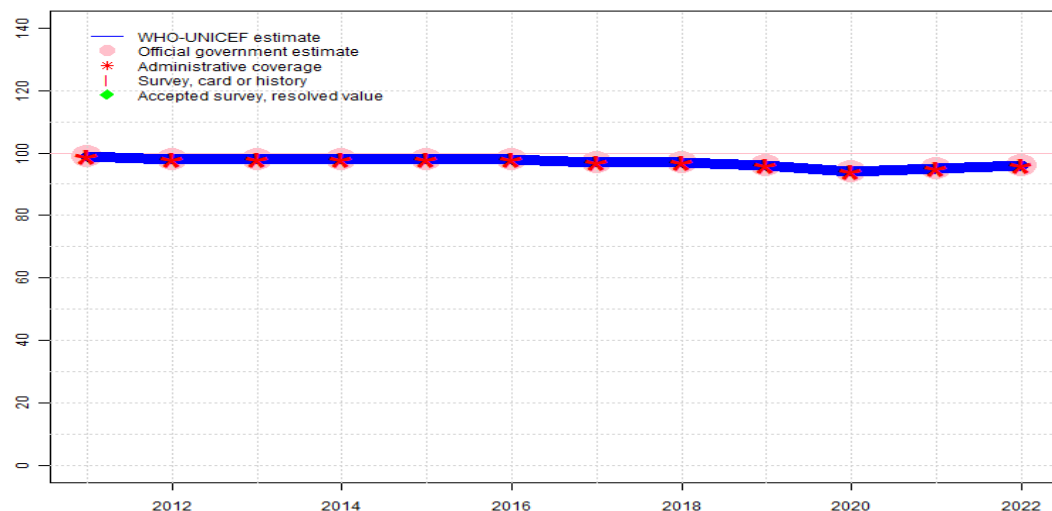
PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect the percentage of surviving infants who received two doses of PcV prior to the 1st birthday.

YFV: percentage of surviving infants who received one dose of yellow fever vaccine in countries where YFV is part of the national immunization schedule for children or is recommended in at risk areas; coverage estimates are annualized for the entire cohort of surviving infants.

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Azerbaijan - BCG

AZE - BCG



Description:

- 2022: Estimate informed by reported data. WHO and UNICEF are aware of a 2023 MICS survey and await the results. Unexplained increase of 11 percent in the reported target population between 2021 and 2022. GoC=R+ D+
- 2021: Estimate informed by reported data. A decline in reported number of doses administered between 2020 and 2021 is not reflected in reported coverage. Reported target population has declined 32 percent between 2016 and 2021. Estimate challenged by: D-
- 2020: Estimate informed by reported data. WHO and UNICEF are aware of a vaccination coverage surveys conducted in 2018 and 2019. However, available information suggests use of a convenience sample of districts and insufficient information on sampling of children. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Estimate challenged by: D-
- 2015: Estimate informed by reported data. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Estimate challenged by: D-
- 2013: Estimate follows reported official government estimate. National programme revised target population estimates during 2013. GoC=Assigned by working group. GoC assigned to maintain consistency across vaccines.
- 2012: Estimate informed by reported data. Estimate challenged by: D-
- 2011: Estimate informed by reported data. Estimate challenged by: D-

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	99	98	98	98	98	98	97	97	96	94	95	96
Estimate GoC	•	•	•	•	•	•	••	••	••	••	•	••
Official	99	98	98	98	98	98	97	97	96	94	95	96
Administrative	99	98	98	98	98	98	97	97	96	94	95	96
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

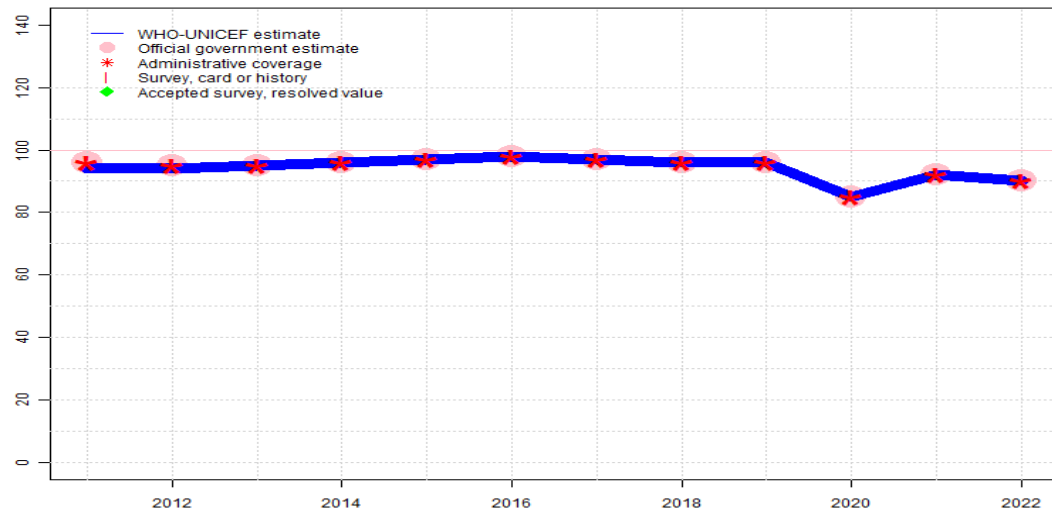
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Azerbaijan - DTP1

AZE - DTP1



Description:

- 2022: Estimate informed by reported data. WHO and UNICEF are aware of a 2023 MICS survey and await the results. Unexplained increase of 11 percent in the reported target population between 2021 and 2022. GoC=R+ D+
- 2021: Estimate informed by reported data. A decline in reported number of doses administered between 2020 and 2021 is not reflected in reported coverage. Reported target population has declined 32 percent between 2016 and 2021. Estimate challenged by: D-
- 2020: Estimate informed by reported data. WHO and UNICEF are aware of a vaccination coverage surveys conducted in 2018 and 2019. However, available information suggests use of a convenience sample of districts and insufficient information on sampling of children. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Estimate challenged by: D-
- 2015: Estimate informed by reported data. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Estimate challenged by: D-
- 2013: Estimate follows reported official government estimate. National programme revised target population estimates during 2013. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 and 2013 levels. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 and 2013 levels. Estimate challenged by: D-R-

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	94	94	95	96	97	98	97	96	96	85	92	90
Estimate GoC	•	•	•	•	•	•	••	••	••	••	•	••
Official	96	95	95	96	97	98	97	96	96	85	92	90
Administrative	96	95	95	96	97	98	97	96	96	85	92	90
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

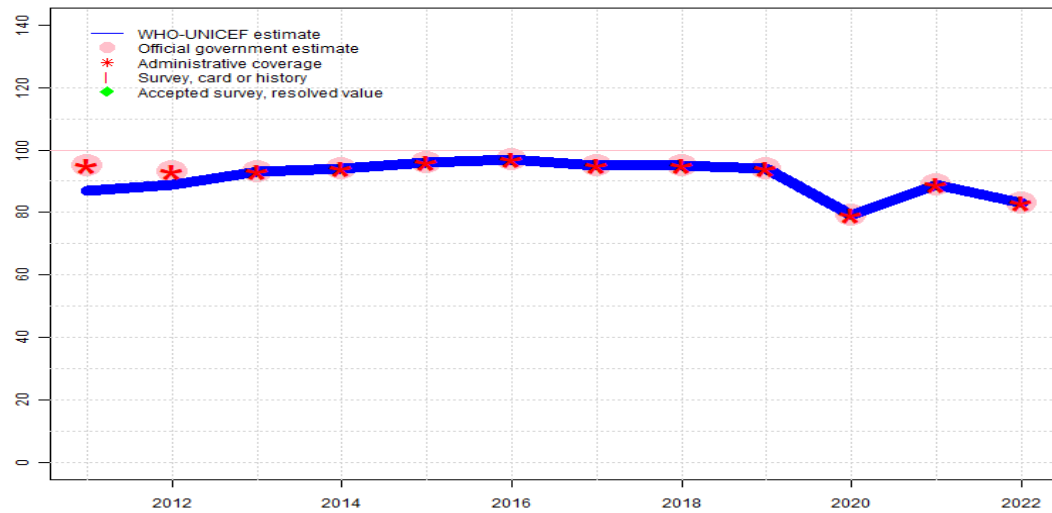
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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Azerbaijan - DTP3

AZE - DTP3



Description:

- 2022: Estimate informed by reported data. WHO and UNICEF are aware of a 2023 MICS survey and await the results. Unexplained increase of 11 percent in the reported target population between 2021 and 2022. GoC=R+ D+
- 2021: Estimate informed by reported data. A decline in reported number of doses administered between 2020 and 2021 is not reflected in reported coverage. Reported target population has declined 32 percent between 2016 and 2021. Estimate challenged by: D-
- 2020: Estimate informed by reported data. WHO and UNICEF are aware of a vaccination coverage surveys conducted in 2018 and 2019. However, available information suggests use of a convenience sample of districts and insufficient information on sampling of children. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Estimate challenged by: D-
- 2015: Estimate informed by reported data. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Estimate challenged by: D-
- 2013: Estimate follows reported official government estimate. National programme revised target population estimates during 2013. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 and 2013 levels. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 and 2013 levels. Estimate challenged by: D-R-

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	87	89	93	94	96	97	95	95	94	79	89	83
Estimate GoC	•	•	•	•	•	•	••	••	••	••	•	••
Official	95	93	93	94	96	97	95	95	94	79	89	83
Administrative	95	93	93	94	96	97	95	95	94	79	89	83
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

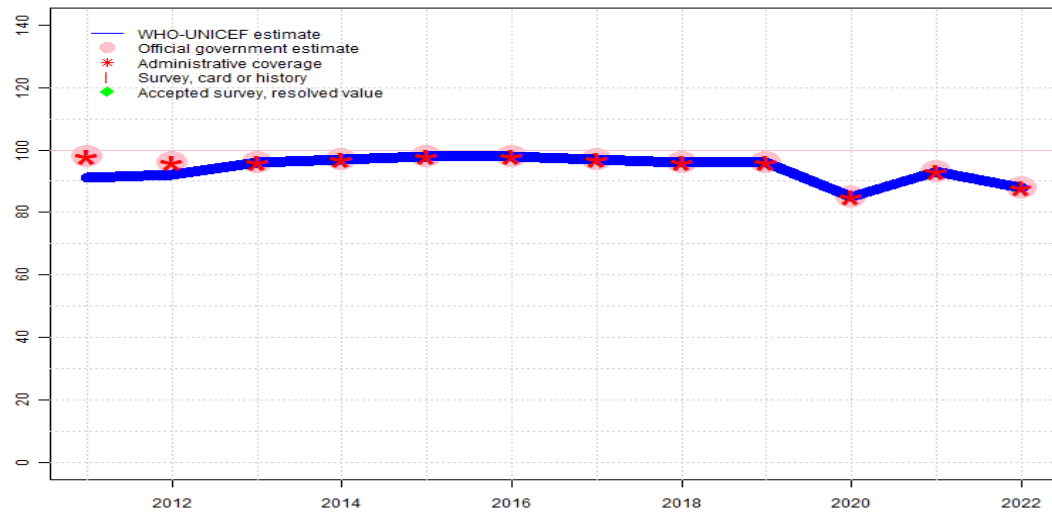
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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Azerbaijan - Pol3

AZE - Pol3



Description:

- 2022: Estimate informed by reported data. WHO and UNICEF are aware of a 2023 MICS survey and await the results. Unexplained increase of 11 percent in the reported target population between 2021 and 2022. GoC=R+ D+
- 2021: Estimate informed by reported data. A decline in reported number of doses administered between 2020 and 2021 is not reflected in reported coverage. Reported target population has declined 32 percent between 2016 and 2021. Estimate challenged by: D-
- 2020: Estimate informed by reported data. WHO and UNICEF are aware of a vaccination coverage surveys conducted in 2018 and 2019. However, available information suggests use of a convenience sample of districts and insufficient information on sampling of children. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Estimate challenged by: D-
- 2015: Estimate informed by reported data. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Estimate challenged by: D-
- 2013: Estimate follows reported official government estimate. National programme revised target population estimates during 2013. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 and 2013 levels. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 and 2013 levels. Estimate challenged by: D-R-

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	91	92	96	97	98	98	97	96	96	85	93	88
Estimate GoC	•	•	•	•	•	•	••	••	••	••	•	••
Official	98	96	96	97	98	98	97	96	96	85	93	88
Administrative	98	96	96	97	98	98	97	96	96	85	93	88
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

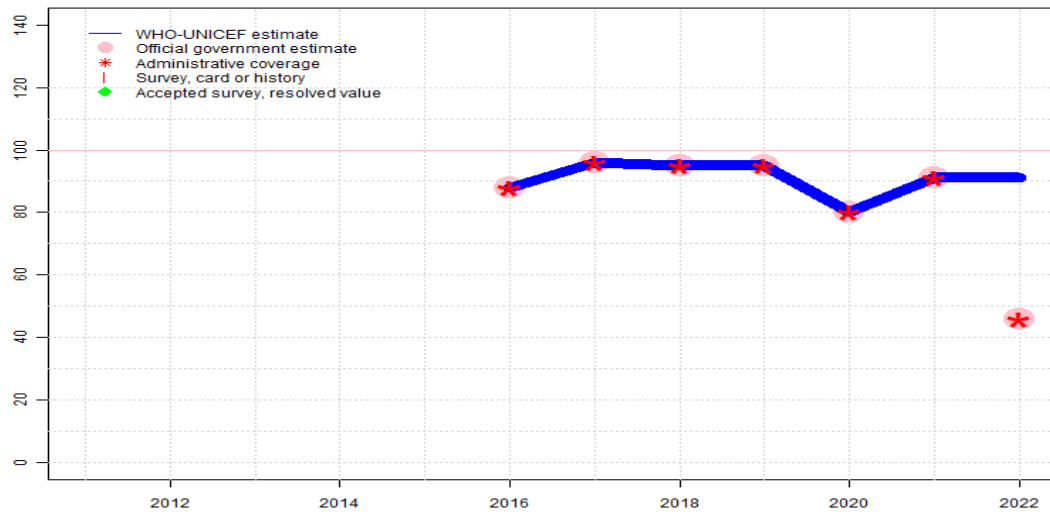
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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Azerbaijan - IPV1

AZE - IPV1



Description:

Estimates for a dose of inactivated polio vaccine (IPV) begin in 2015 following the Global Polio Eradication Initiative's Polio Eradication and Endgame Strategic Plan: 2013-2018 which recommended at least one full dose or two fractional doses of IPV into routine immunization schedules as a strategy to mitigate the potential consequences should any re-emergence of type 2 poliovirus occur following the planned withdrawal of Sabin type 2 strains from oral polio vaccine (OPV).

2022: Estimate informed by extrapolation from reported data. Reported data excluded due to sudden change in coverage from 91 level to 46 percent. WHO and UNICEF are aware of a 2023 MICS survey and await the results. Unexplained increase of 11 percent in the reported target population between 2021 and 2022. Estimate challenged by: D-

2021: Estimate informed by reported data. A decline in reported number of doses administered between 2020 and 2021 is not reflected in reported coverage. Reported target population has declined 32 percent between 2016 and 2021. Increase in reported coverage aligns with recovery from COVID-19 pandemic service disruptions. Estimate challenged by: D-

2020: Estimate informed by reported data. WHO and UNICEF are aware of a vaccination coverage surveys conducted in 2018 and 2019. However, available information suggests use of a convenience sample of districts and insufficient information on sampling of children. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+

2019: Estimate informed by reported data. GoC=R+ D+

2018: Estimate informed by reported data. GoC=R+ D+

2017: Estimate informed by reported data. GoC=R+ D+

2016: Estimate informed by reported data. Inactivated polio vaccine introduced during 2016. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	NA	88	96	95	95	80	91	91
Estimate GoC	NA	NA	NA	NA	NA	••	••	••	••	••	•	•
Official	NA	NA	NA	NA	NA	88	96	95	95	80	91	46
Administrative	NA	NA	NA	NA	NA	88	96	95	95	80	91	46
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

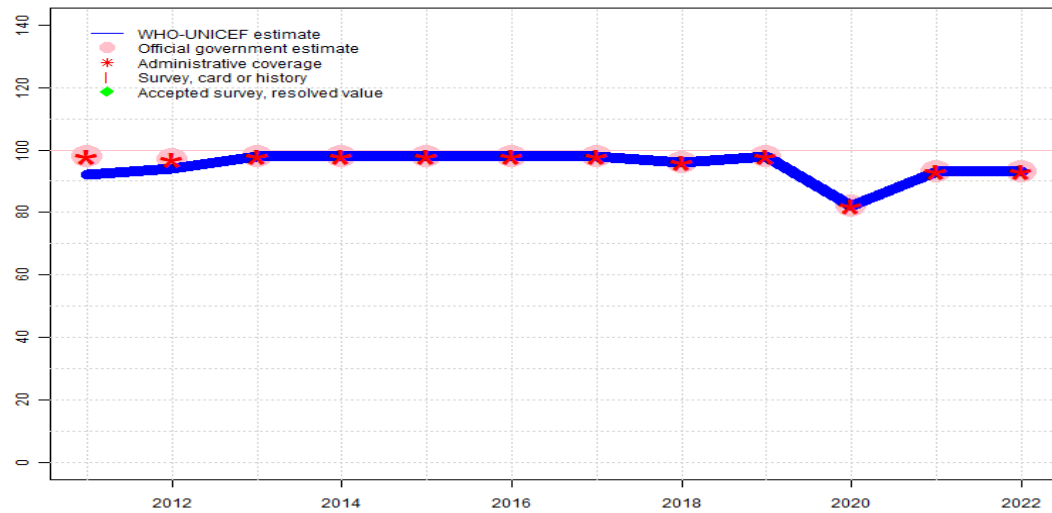
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- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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Azerbaijan - MCV1

AZE - MCV1



Description:

- 2022: Estimate informed by reported data. WHO and UNICEF are aware of a 2023 MICS survey and await the results. Unexplained increase of 11 percent in the reported target population between 2021 and 2022. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Increase in reported coverage aligns with recovery from COVID-19 pandemic service disruptions. GoC=R+ D+
- 2020: Estimate informed by reported data. WHO and UNICEF are aware of a vaccination coverage surveys conducted in 2018 and 2019. However, available information suggests use of a convenience sample of districts and insufficient information on sampling of children. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Estimate challenged by: D-
- 2013: Estimate follows reported official government estimate. National programme revised target population estimates during 2013. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 and 2013 levels. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 and 2013 levels. Estimate challenged by: D-R-

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	92	94	98	98	98	98	98	96	98	82	93	93
Estimate GoC	•	•	•	•	•	••	••	••	••	••	••	•
Official	98	97	98	98	98	98	98	96	98	82	93	93
Administrative	98	97	98	98	98	98	98	96	98	82	93	93
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

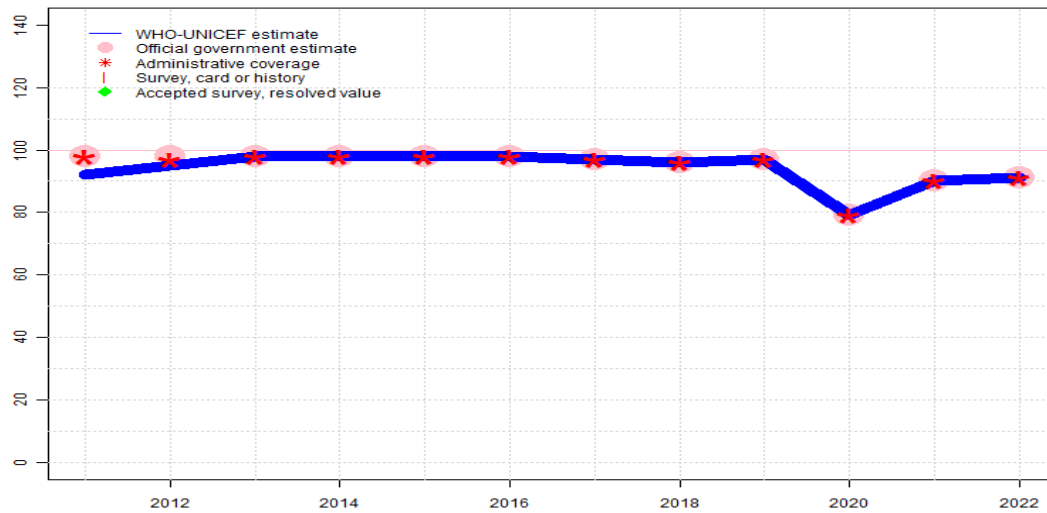
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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Azerbaijan - MCV2

AZE - MCV2



Description:

Coverage estimates for the second dose of measles containing vaccine are for children by the nationally recommended age.

2022: Estimate informed by reported data. WHO and UNICEF are aware of a 2023 MICS survey and await the results. Unexplained decrease of 12 percent in the reported target population between 2021 and 2022. GoC=R+ D+

2021: Estimate informed by reported data. Increase in reported coverage aligns with recovery from COVID-19 pandemic service disruptions. Estimate challenged by: D-

2020: Estimate informed by reported data. WHO and UNICEF are aware of a vaccination coverage surveys conducted in 2018 and 2019. However, available information suggests use of a convenience sample of districts and insufficient information on sampling of children. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. Estimate challenged by: D-

2019: Estimate informed by reported data. GoC=R+ D+

2018: Estimate informed by reported data. GoC=R+ D+

2017: Estimate informed by reported data. GoC=R+ D+

2016: Estimate informed by reported data. Estimate challenged by: D-

2015: Estimate informed by reported data. Estimate challenged by: D-

2014: Estimate informed by reported data. Estimate challenged by: D-

2013: Estimate follows reported official government estimate. National programme revised target population estimates during 2013. Estimate challenged by: D-

2012: Estimate of 95 percent assigned by working group. Estimated coverage follows the reported data calibrated based on MCV adjustment factor. Estimate challenged by: D-R-

2011: Estimate of 92 percent assigned by working group. Estimated coverage follows the reported data calibrated based on MCV adjustment factor. Estimate challenged by: D-R-

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	92	95	98	98	98	98	97	96	97	79	90	91
Estimate GoC	•	•	•	•	•	•	••	••	••	•	•	••
Official	98	98	98	98	98	98	97	96	97	79	90	91
Administrative	98	97	98	98	98	98	97	96	97	79	90	91
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

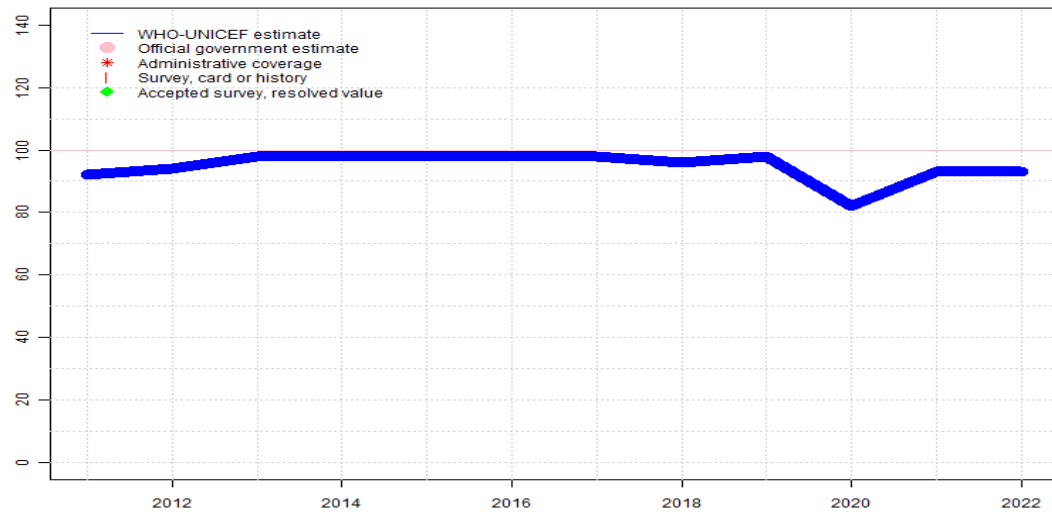
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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Azerbaijan - RCV1

AZE - RCV1



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	92	94	98	98	98	98	98	96	98	82	93	93
Estimate GoC	•	•	•	•	•	••	••	••	••	••	••	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

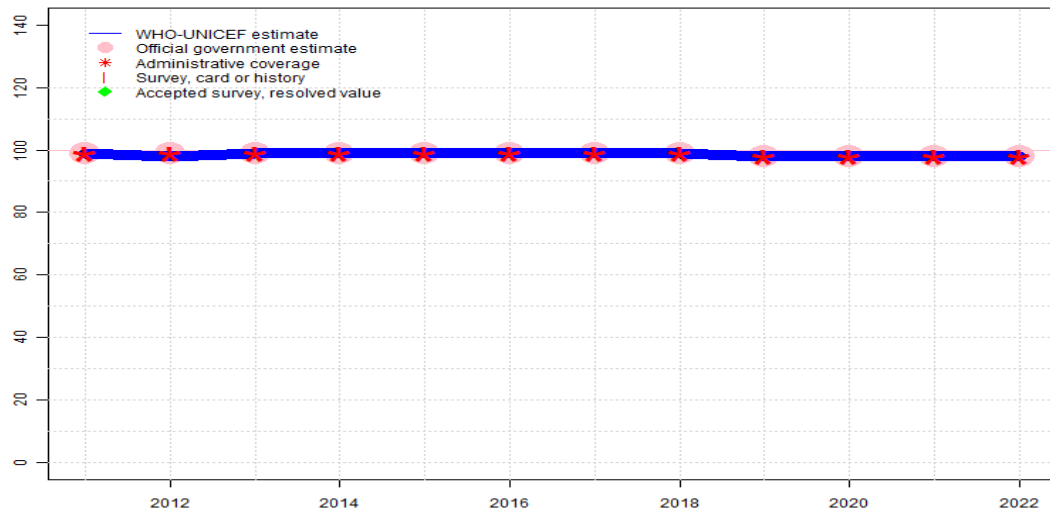
Description:

For this revision, coverage estimates for the first dose of rubella containing vaccine are based on WHO and UNICEF estimates of coverage of measles containing vaccine. Nationally reported coverage of rubella containing vaccine is not taken into consideration nor are they represented in the the accompanying graph and data table.

- 2022: Estimate based on estimated MCV1. WHO and UNICEF are aware of a 2023 MICS survey and await the results. Estimate challenged by: D-
- 2021: Estimate based on estimated MCV1. GoC=R+ D+
- 2020: Estimate based on estimated MCV1. WHO and UNICEF are aware of a vaccination coverage surveys conducted in 2018 and 2019. However, available information suggests use of a convenience sample of districts and insufficient information on sampling of children. GoC=R+ D+
- 2019: Estimate based on estimated MCV1. GoC=R+ D+
- 2018: Estimate based on estimated MCV1. GoC=R+ D+
- 2017: Estimate based on estimated MCV1. GoC=R+ D+
- 2016: Estimate based on estimated MCV1. GoC=R+ D+
- 2015: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2014: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2013: Estimate based on estimated MCV1. National programme revised target population estimates during 2013. Estimate challenged by: D-
- 2012: Estimate based on estimated MCV1. Estimate challenged by: D-R-
- 2011: Estimate based on estimated MCV1. Estimate challenged by: D-R-

Azerbaijan - HepBB

AZE - HepBB



Description:

- 2022: Estimate informed by reported data. WHO and UNICEF are aware of a 2023 MICS survey and await the results. GoC=R+ D+
- 2021: Estimate informed by reported data. A decline in reported number of doses administered between 2020 and 2021 is not reflected in reported coverage. Reported target population has declined 32 percent between 2016 and 2021. Estimate challenged by: D-
- 2020: Estimate informed by reported data. WHO and UNICEF are aware of a vaccination coverage surveys conducted in 2018 and 2019. However, available information suggests use of a convenience sample of districts and insufficient information on sampling of children. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Estimate challenged by: D-
- 2015: Estimate informed by reported data. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Estimate challenged by: D-
- 2013: Estimate follows reported official government estimate. National programme revised target population estimates during 2013. Estimate challenged by: D-
- 2012: Estimate of 98 percent assigned by working group. Estimated coverage follows the level of BCG; see note for 2006. Estimate challenged by: D-R-
- 2011: Estimated coverage follows the level of BCG; see note for 2006. Estimate challenged by: D-

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	99	98	99	99	99	99	99	99	98	98	98	98
Estimate GoC	•	•	•	•	•	•	••	••	••	••	•	••
Official	99	99	99	99	99	99	99	99	98	98	98	98
Administrative	99	99	99	99	99	99	99	99	98	98	98	98
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

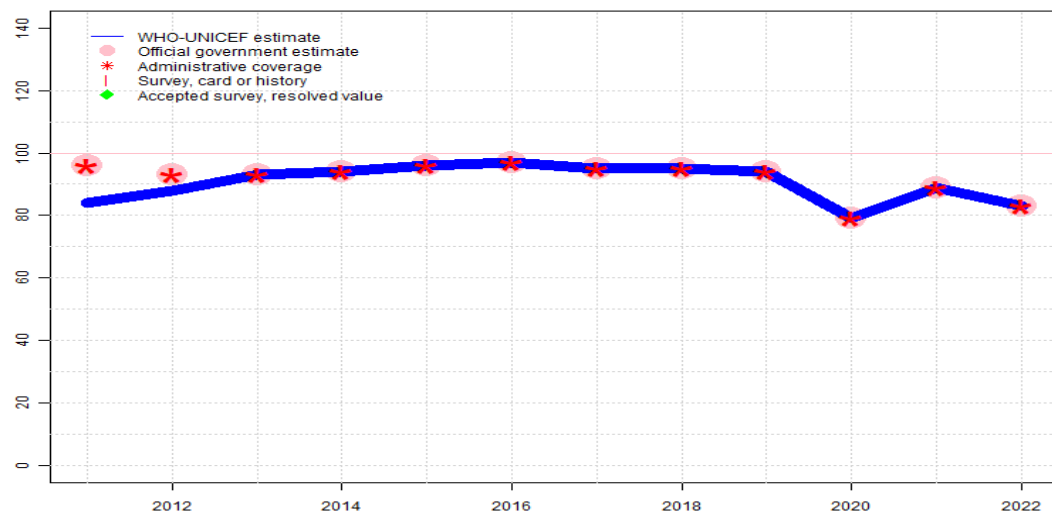
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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Azerbaijan - HepB3

AZE - HepB3



Description:

- 2022: Estimate informed by reported data. WHO and UNICEF are aware of a 2023 MICS survey and await the results. Unexplained increase of 11 percent in the reported target population between 2021 and 2022. GoC=R+ D+
- 2021: Estimate informed by reported data. A decline in reported number of doses administered between 2020 and 2021 is not reflected in reported coverage. Reported target population has declined 32 percent between 2016 and 2021. Estimate challenged by: D-
- 2020: Estimate informed by reported data. WHO and UNICEF are aware of a vaccination coverage surveys conducted in 2018 and 2019. However, available information suggests use of a convenience sample of districts and insufficient information on sampling of children. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Estimate challenged by: D-
- 2015: Estimate informed by reported data. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Estimate challenged by: D-
- 2013: Estimate follows reported official government estimate. National programme revised target population estimates during 2013. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 and 2013 levels. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 and 2013 levels. Estimate challenged by: D-R-

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	84	88	93	94	96	97	95	95	94	79	89	83
Estimate GoC	•	•	•	•	•	•	••	••	••	••	•	••
Official	96	93	93	94	96	97	95	95	94	79	89	83
Administrative	96	93	93	94	96	97	95	95	94	79	89	83
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

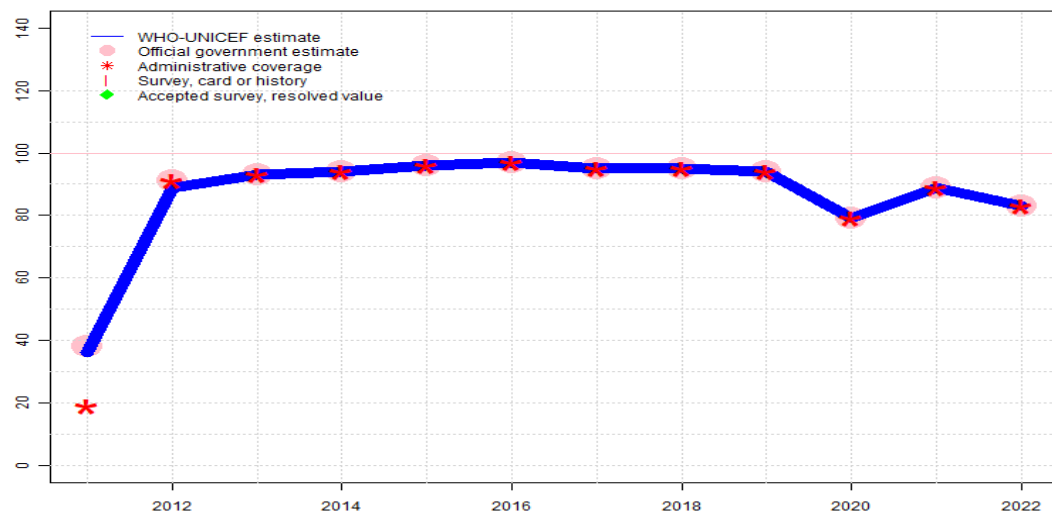
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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Azerbaijan - Hib3

AZE - Hib3



Description:

- 2022: Estimate informed by reported data. WHO and UNICEF are aware of a 2023 MICS survey and await the results. Unexplained increase of 11 percent in the reported target population between 2021 and 2022. GoC=R+ D+
- 2021: Estimate informed by reported data. A decline in reported number of doses administered between 2020 and 2021 is not reflected in reported coverage. Estimate challenged by: D-
- 2020: Estimate informed by reported data. WHO and UNICEF are aware of a vaccination coverage surveys conducted in 2018 and 2019. However, available information suggests use of a convenience sample of districts and insufficient information on sampling of children. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Estimate challenged by: D-
- 2015: Estimate informed by reported data. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Estimate challenged by: D-
- 2013: Estimate follows reported official government estimate National programme revised target population estimates during 2013. Estimate challenged by: D-
- 2012: Estimate of 89 percent assigned by working group. Vaccine presentation is DTP-HepB-Hib pentavalent. Estimate is set to level of DTP3 coverage. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2012 levels. Hib vaccine introduced in 2011. The presentation is DTP-HepB-Hib. Estimate challenged by: D-R-

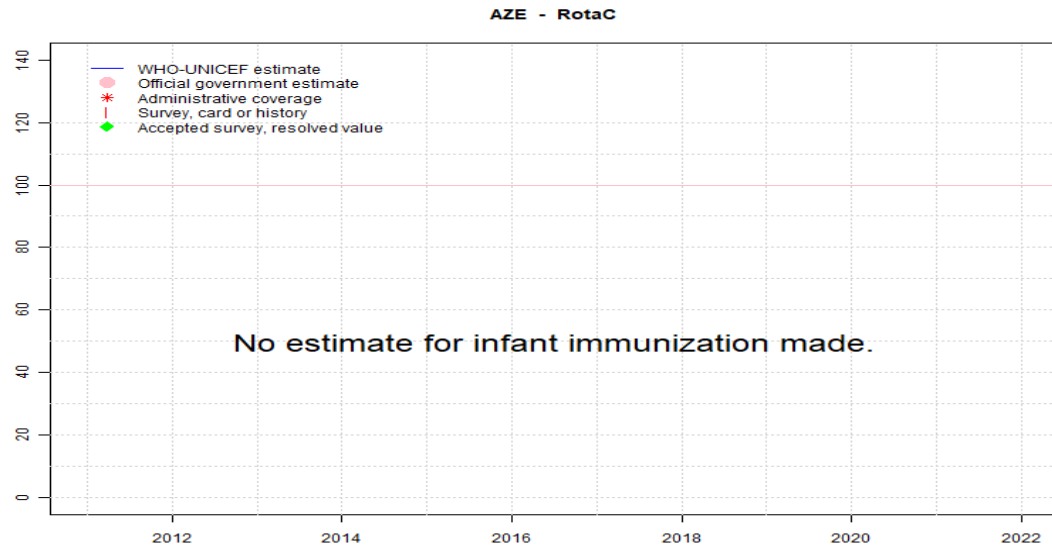
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	36	89	93	94	96	97	95	95	94	79	89	83
Estimate GoC	•	•	•	•	•	•	••	••	••	••	•	••
Official	38	91	93	94	96	97	95	95	94	79	89	83
Administrative	19	91	93	94	96	97	95	95	94	79	89	83
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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Azerbaijan - RotaC



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

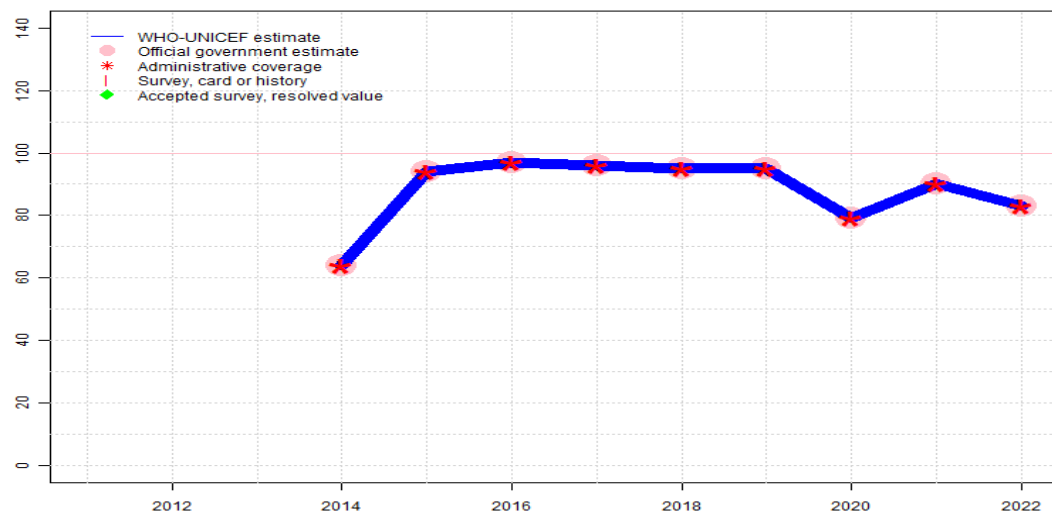
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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Azerbaijan - PcV3

AZE - PcV3



Description:

- 2022: Estimate informed by reported data. WHO and UNICEF are aware of a 2023 MICS survey and await the results. Unexplained increase of 11 percent in the reported target population between 2021 and 2022. GoC=R+ D+
- 2021: Estimate informed by reported data. A decline in reported number of doses administered between 2020 and 2021 is not reflected in reported coverage. Reported target population has declined 32 percent between 2016 and 2021. Estimate challenged by: D-
- 2020: Estimate informed by reported data. WHO and UNICEF are aware of a vaccination coverage surveys conducted in 2018 and 2019. However, available information suggests use of a convenience sample of districts and insufficient information on sampling of children. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Estimate challenged by: D-
- 2015: Estimate informed by reported data. GoC=Assigned by working group. GoC assigned to maintain consistency across vaccines.
- 2014: Estimate informed by reported data. Pneumococcal conjugate vaccine introduced during 2013. Reporting started during 2014. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	64	94	97	96	95	95	79	90	83
Estimate GoC	NA	NA	NA	••	•	•	••	••	••	••	•	••
Official	NA	NA	NA	64	94	97	96	95	95	79	90	83
Administrative	NA	NA	NA	64	94	97	96	95	95	79	90	83
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Azerbaijan - survey details

NOTE: A survey to measure vaccination coverage for infants (i.e., children aged 0 to 11 months) will sample children aged 12 to 23 months at the time of survey to capture the youngest annual cohort of children who should have completed the vaccination schedule. Because WUENIC are for infant vaccinations, survey data in this report are presented to reflect the birth year of the youngest survey cohort. For example, results for a survey conducted during December 2020 among children aged 12 to 23 months at the time of the survey reflect the immunization experience of children born in 2019. Depending on the timing of survey field work, results may reflect the immunization experience of children born and vaccinated 1 or 2 years prior to the survey field work.

2010 Azerbaijan Demographic and Health Survey 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	97.9	18-29 m	480	98
DTP1	Card or History	93.5	18-29 m	480	98
DTP3	Card or History	80.7	18-29 m	480	98
HepB1	Card or History	95.3	18-29 m	480	98
HepB3	Card or History	80.2	18-29 m	480	98
MCV1	Card or History	88.6	18-29 m	480	98
Pol1	Card or History	95.2	18-29 m	480	98
Pol3	Card or History	85.2	18-29 m	480	98

2005 Azerbaijan Demographic and Health Survey 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <18 months	80.3	18-29 m	467	72
BCG	Card	67.9	18-29 m	467	72
BCG	Card or History	81.6	18-29 m	467	72
BCG	History	13.7	18-29 m	467	72
DTP1	C or H <18 months	80.5	18-29 m	467	72
DTP1	Card	70.8	18-29 m	467	72

DTP1	Card or History	81.3	18-29 m	467	72
DTP1	History	10.5	18-29 m	467	72
DTP3	C or H <18 months	65.2	18-29 m	467	72
DTP3	Card	65.9	18-29 m	467	72
DTP3	Card or History	70.7	18-29 m	467	72
DTP3	History	4.8	18-29 m	467	72
HepB1	C or H <18 months	71.3	18-29 m	467	72
HepB1	Card	64.1	18-29 m	467	72
HepB1	Card or History	71.3	18-29 m	467	72
HepB1	History	7.2	18-29 m	467	72
HepB3	C or H <18 months	44	18-29 m	467	72
HepB3	Card	44.4	18-29 m	467	72
HepB3	Card or History	45.7	18-29 m	467	72
HepB3	History	1.3	18-29 m	467	72
MCV1	C or H <18 months	61.1	18-29 m	467	72
MCV1	Card	58.2	18-29 m	467	72
MCV1	Card or History	67.3	18-29 m	467	72
MCV1	History	9.1	18-29 m	467	72
Pol1	C or H <18 months	81.3	18-29 m	467	72
Pol1	Card	71.4	18-29 m	467	72
Pol1	Card or History	82.1	18-29 m	467	72
Pol1	History	10.7	18-29 m	467	72
Pol3	C or H <18 months	68.2	18-29 m	467	72
Pol3	Card	68.1	18-29 m	467	72
Pol3	Card or History	72.4	18-29 m	467	72
Pol3	History	4.3	18-29 m	467	72

1998 National Immunization Programme Evaluation Azerbaijan, 1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	94.6	15-26 m	2145	-
DTP3	Card or History	94.1	15-26 m	2145	-
MCV1	Card or History	88.4	15-26 m	2145	-
Pol3	Card or History	97	15-26 m	2145	-

Azerbaijan - survey details

Further information and estimates for previous years are available at:

<https://data.unicef.org/topic/child-health/immunization/>

<https://immunizationdata.who.int/listing.html>