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WHO and UNICEF estimates of national immunization coverage - next revision available July $15,\,2024$

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

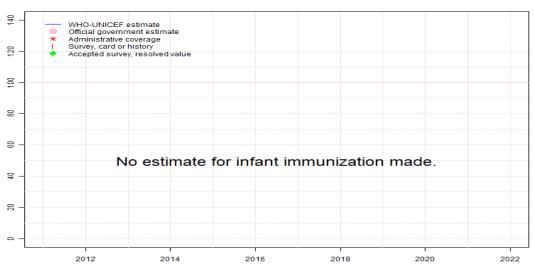
immunization and/or campaign or (ii) a sequential schedule of IPV followed by OPV, WHO and UNICEF estimates for IPV1 reflect coverage with at least one routine dose of IPV among infants <1 year of age among countries. For countries utilizing IPV containing vaccine use only, i.e., no recommended dose 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. Co verage 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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	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA											
Estimate GoC	NA											
Official	NA											
Administrative	NA											
Survey	NA											

- ••• 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.



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	98	99	99	97	94	98	98	96	98	79	84	79
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	93	90	99	97	94	91	77	96	101	NA	NA	79
Administrative	92	90	99	97	94	91	77	96	101	79	84	NA
Survey	NA											

- ••• 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.

- 2022: Estimate informed by reported data. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Consistency with GoC for other vaccine doses.
- 2021: Estimate informed by reported administrative data. Estimate of 84 percent changed from previous revision value of 79 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported administrative data. Programme reports a one month vaccine stockout at national and subnational levels. Estimate challenged by: D-
- 2019: DTP1 coverage estimated based on DTP3 coverage of 94. Reported data excluded because 101 percent greater than 100 percent. Estimate of 98 percent changed from previous revision value of 97 percent. Estimate challenged by: D-R-
- 2018: Estimate informed by reported data. Estimate challenged by: D-
- 2017: DTP1 coverage estimated based on DTP3 coverage of 96. Reported data excluded due to decline in reported coverage from 91 percent to 77 percent with increase to 96 percent. Estimate challenged by: D-R-
- 2016: DTP1 coverage estimated based on DTP3 coverage of 96. Estimate challenged by: D-R-
- 2015: Estimate informed by reported data. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Estimate challenged by: D-
- 2013: Estimate informed by reported data. Estimate challenged by: D-
- 2012: DTP1 coverage estimated based on DTP3 coverage of 97. Estimate challenged by: D-R-
- 2011: DTP1 coverage estimated based on DTP3 coverage of 95. Estimate challenged by: D-R-

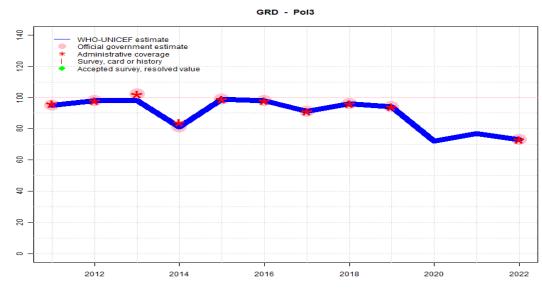


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	95	97	97	97	92	96	96	95	94	72	77	77
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	95	97	101	97	92	96	83	95	92	NA	NA	77
Administrative	94	97	101	97	92	96	83	95	94	72	77	77
Survey	NA											

- ••• 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.

- 2022: Estimate informed by reported data. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-
- 2021: Estimate informed by reported administrative data. Estimate of 77 percent changed from previous revision value of 72 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported administrative data. Programme reports a one month vaccine stockout at national and subnational levels. Estimate challenged by: D-
- 2019: Estimate informed by reported administrative data. Official estimate reported for DTP3 is different from admin and is inconsistent with that for other vaccine doses recommended at the same age. Estimate of 94 percent changed from previous revision value of 92 percent. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Estimate challenged by: D-
- 2017: Estimate informed by interpolation between reported data. Reported data excluded due to decline in reported coverage from 96 percent to 83 percent with increase to 95 percent. Estimate challenged by: 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 informed by interpolation between reported data. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: D-
- 2012: Estimate informed by reported data. Estimate challenged by: D-
- 2011: Estimate informed by reported data. Estimate challenged by: D-

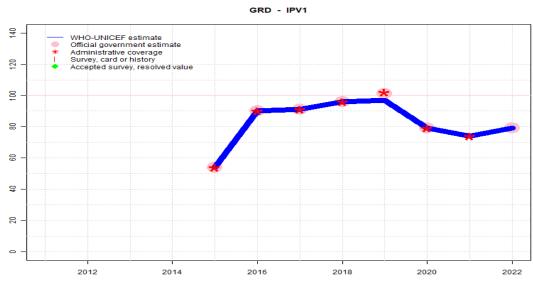


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	95	98	98	81	99	98	91	96	94	72	77	73
Estimate GoC	•	•	•	••	•	•	•	•	•	•	•	•
Official	95	98	102	81	99	98	91	96	94	NA	NA	73
Administrative	96	98	102	84	99	98	91	96	94	NA	NA	73
Survey	NA											

- ••• 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.

- 2022: Estimate informed by reported data. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-
- 2021: Estimate informed by estimated DTP3. Estimate of 77 percent changed from previous revision value of 72 percent. Estimate challenged by: D-
- 2020: Estimate based on DTP3. Programme reports a one month vaccine stockout at national and subnational levels. GoC=No accepted empirical data
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Estimate challenged by: D-
- 2017: Estimate informed by reported data. Programme reports one month stockout. Estimate challenged by: D-
- 2016: Estimate informed by reported data. Estimate challenged by: D-
- 2015: Estimate informed by reported data. Reported coverage suggests recovery from prior year stockout though programme reports three months stockout at national level during 2015. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Programme reports four months stockout at national level. GoC=R+ D+
- 2013: Estimated based on reported data from 2012. Reported data excluded because 102 percent greater than 100 percent. Estimate challenged by: D-R-
- 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	NA	NA	NA	NA	54	90	91	96	97	79	74	79
Estimate GoC	NA	NA	NA	NA	••	•	•	•	•	•	•	•
Official	NA	NA	NA	NA	54	90	91	96	101	79	NA	79
Administrative	NA	NA	NA	NA	54	90	91	96	102	79	74	NA
Survey	NA											

- ••• 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:

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 reported data. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Consistency with GoC for other vaccine doses.

2021: Estimate informed by reported administrative data. Estimate of 74 percent changed from previous revision value of 79 percent. Estimate challenged by: D-

2020: Estimate informed by reported data. Estimate based on reported coverage. Estimate challenged by: D-

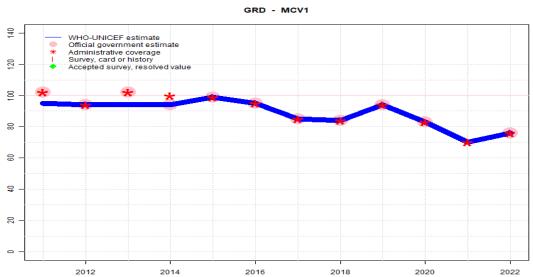
2019: Estimate based on DTP1 coverage. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: D-R-

2018: Estimate informed by reported data. Estimate challenged by: D-

2017: Estimate informed by reported data. Estimate challenged by: D-

2016: Estimate informed by reported data. Estimate is based on reported data following introduction. Estimate challenged by: D-

2015: Estimate informed by reported data. Inactivated polio vaccine introduced in June 2015. GoC=R+D+



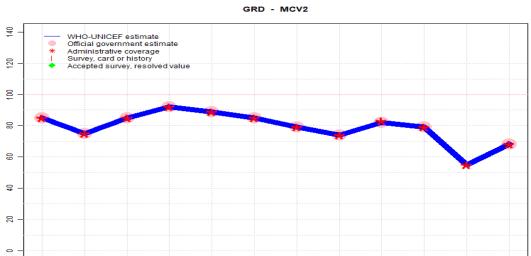
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	95	94	94	94	99	95	85	84	94	83	70	76
Estimate GoC	•	•	•	••	•	•	•	•	•	•	•	•
Official	102	94	102	94	99	95	85	84	94	83	NA	76
Administrative	102	94	102	100	99	95	85	84	94	83	70	76
Survey	NA											

- ••• 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.

- 2022: Estimate informed by reported data. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Programme reports two months vaccine stockout at national and subnational levels. Estimate challenged by: D-
- 2021: Estimate informed by reported administrative data. Programme reports one month vaccine stockout at national and subnational levels. Estimate of 70 percent changed from previous revision value of 83 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Estimate based on reported coverage. Estimate challenged by: D-
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Estimate challenged by: D-
- 2017: Estimate informed by reported data. Programme reports one month stockout. Estimate challenged by: 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. GoC=R+ D+
- 2013: Estimate informed by interpolation between reported data. Reported data excluded because 102 percent greater than 100 percent. Estimate challenged by: D-
- 2012: Estimate informed by reported data. Estimate challenged by: D-
- 2011: Estimate informed by interpolation between reported data. Reported data excluded because 102 percent greater than 100 percent. Estimate challenged by: D-

2022



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	85	75	85	92	89	85	79	74	82	79	55	68
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	85	75	85	92	89	85	79	74	82	79	NA	68
Administrative	85	75	85	92	89	85	79	74	83	79	55	68
Survey	NA											

2016

2018

2020

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:

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

2022: Estimate informed by reported data. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Programme reports two months vaccine stockout at national and subnational levels. Increase consistent with other vaccine doses. Estimate challenged by: D-

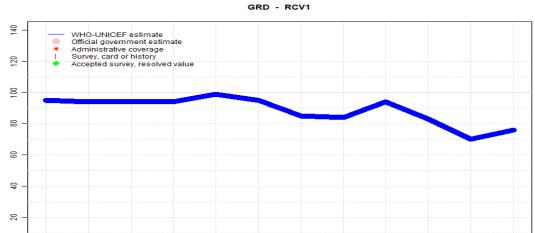
2021: Estimate informed by reported administrative data. Programme reports one month vaccine stockout at national and subnational levels. Estimate of 55 percent changed from previous revision value of 79 percent. Estimate challenged by: D-

- 2020: Estimate informed by reported data. Estimate challenged by: D-
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Estimate challenged by: D-
- 2017: Estimate informed by reported data. Programme reports one month stockout. Estimate challenged by: 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 informed by reported data. Estimate challenged by: D-
- 2012: Estimate informed by reported data. Estimate challenged by: D-
- 2011: Estimate informed by reported data. Estimate challenged by: D-

2012

2014

2022



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	95	94	94	94	99	95	85	84	94	83	70	76
Estimate GoC	•	•	•	••	•	•	•	•	•	•	•	•
Official	NA											
Administrative	NA											
Survey	NA											

2016

2018

2020

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. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-

2021: Estimate based on estimated MCV1. Estimate of 70 percent changed from previous revision value of 83 percent. Estimate challenged by: D-

2020: Estimate based on estimated MCV1. Estimate challenged by: D-

2019: Estimate based on estimated MCV1. Estimate challenged by: D-

2018: Estimate based on estimated MCV1. Estimate challenged by: D-

2017: Estimate based on estimated MCV1. Programme reports one month stockout. Estimate challenged by: D-

2016: Estimate based on estimated MCV1. Estimate challenged by: D-

2015: Estimate based on estimated MCV1. Estimate challenged by: D-

2014: Estimate based on estimated MCV1. GoC=R+ D+

2013: Estimate based on estimated MCV1. Estimate challenged by: D-

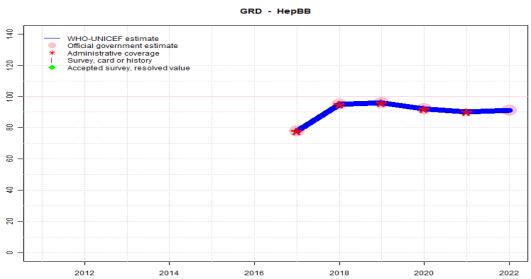
2012: Estimate based on estimated MCV1. Estimate challenged by: D-

2011: Estimate based on estimated MCV1. Estimate challenged by: D-

2012

2014

Grenada - HepBB



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	NA	NA	78	95	96	92	90	91
Estimate GoC	NA	NA	NA	NA	NA	NA	•	•	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	78	95	96	92	NA	91
Administrative	NA	NA	NA	NA	NA	NA	78	95	96	92	90	NA
Survey	NA											

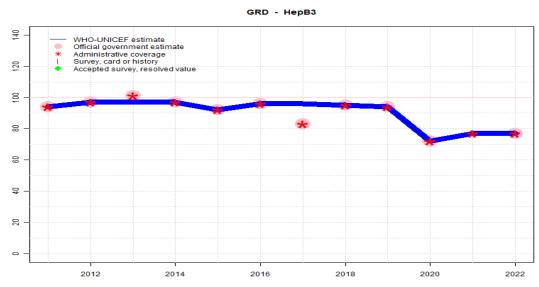
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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.

- 2022: Estimate informed by reported data. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Consistency with GoC for other vaccine doses.
- 2021: Estimate informed by reported administrative data. Estimate of 90 percent changed from previous revision value of 92 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Estimate challenged by: D-
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. . Estimate challenged by: D-
- 2017: Estimate informed by reported data. First dose of Hepatitis B vaccine introduced in 2017. Estimate challenged by: D-

Grenada - HepB3



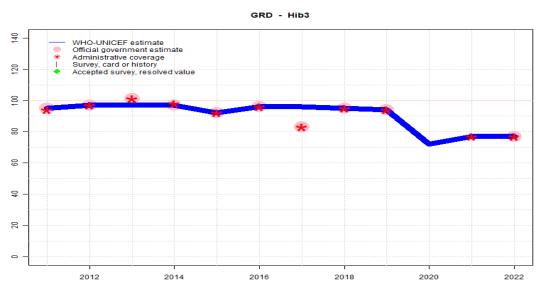
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	94	97	97	97	92	96	96	95	94	72	77	77
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	94	97	101	97	92	96	83	95	94	72	NA	77
Administrative	94	97	101	97	92	96	83	95	94	72	77	77
Survey	NA											

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.

- 2022: Estimate informed by reported data. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-
- 2021: Estimate informed by reported administrative data. Estimate of 77 percent changed from previous revision value of 72 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Programme reports a one month vaccine stockout at national and subnational levels. Estimate challenged by: D-
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Estimate challenged by: D-
- 2017: Estimate informed by interpolation between reported data. Reported data excluded due to decline in reported coverage from 96 percent to 83 percent with increase to 95 percent. Estimate challenged by: 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 informed by interpolation between reported data. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: D-
- 2012: Estimate informed by reported data. Estimate challenged by: D-
- 2011: Estimate informed by reported data. Estimate challenged by: D-



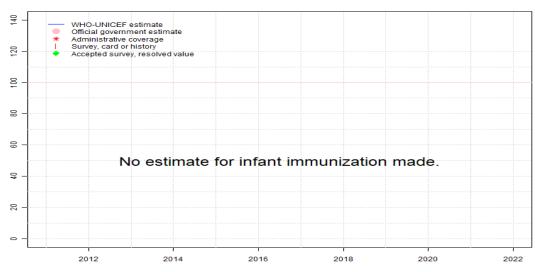
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	95	97	97	97	92	96	96	95	94	72	77	77
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	95	97	101	97	92	96	83	95	94	NA	NA	77
Administrative	94	97	101	98	92	96	83	95	94	NA	77	77
Survey	NA											

- ••• 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.
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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.

- 2022: Estimate informed by reported data. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-
- 2021: Estimate informed by reported administrative data. Estimate of 77 percent changed from previous revision value of 72 percent. Estimate challenged by: D-
- 2020: Estimate informed by estimated DTP3. Programme reports a one month vaccine stockout at national and subnational levels. GoC=No accepted empirical data
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Estimate challenged by: D-
- 2017: Estimate informed by interpolation between reported data. Reported data excluded due to decline in reported coverage from 96 percent to 83 percent with increase to 95 percent. Estimate challenged by: 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 informed by interpolation between reported data. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: D-
- 2012: Estimate informed by reported data. Estimate challenged by: D-
- 2011: Estimate informed by reported data. Estimate challenged by: D-



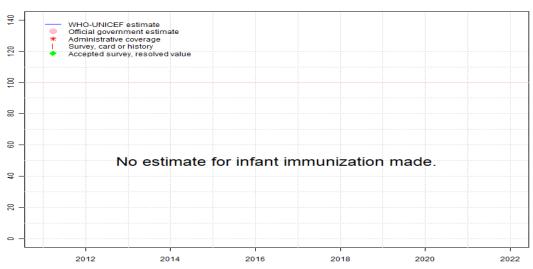


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA											
Estimate GoC	NA											
Official	NA											
Administrative	NA											
Survey	NA											

- ••• 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.





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

- ••• 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.
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- 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.

Grenada: WHO and UNICEF estimates of immunization coverage, 2022 revision

Further information and estimates for previous years are available at:

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

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