

Bhutan: WHO and UNICEF estimates of immunization coverage: 2024 revision

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 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 available empirical data accurately reflect immunization system performance and those where the data are likely compromised and present a misleading view of coverage.

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. Bull World Health Organ. * Burton et al. 2012. PLoS One.
* Brown et al. 2013. Open Pub Health Journal. * Danovaro-Holliday et al. 2021. Gates Open Res.

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 6-11, 12-23 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 data collection period.

ABBREVIATIONS AND DEFINITIONS

BCG: percentage of births who received one dose of Bacillus Calmette Guérin 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. For countries utilizing IPV containing vaccine only, i.e., no recommended dose of OPV, 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.

IPV2: percentage of surviving infants who received a 2nd dose of inactivated polio vaccine. IPV2 coverage estimates produced for OPV using countries.

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 in the production of the estimate.

HEPB3: 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.

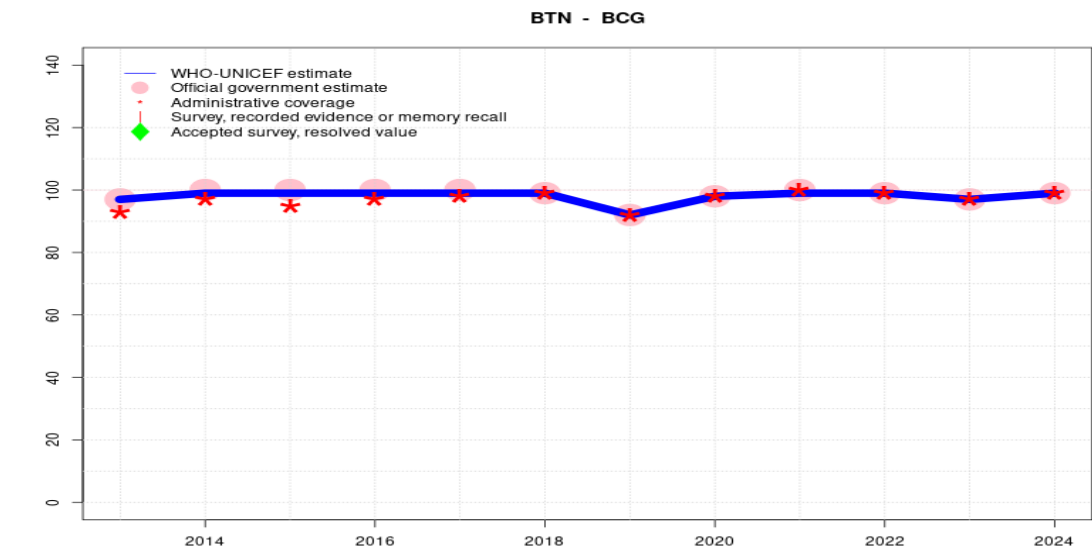
ROTAC: percentage of surviving infants who received the final recommended dose of rotavirus vaccine, which can be either the 2nd or the 3rd dose depending on the vaccine.

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 if coverage for the booster dose is not reported.

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.

MENGA: percentage of children who received one dose of meningococcal A conjugate vaccine. MENGA coverage estimates produced for countries in the meningitis belt of sub-Saharan Africa.

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Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by reported data. GoC=R+ D+
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2020 and 2021. Results from the 2023 National Health Survey (NHS) suggests coverage levels of over 98 percent for all childhood vaccines. 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. Fluctuations in target population of surviving infants with unexplained decline between 2017 and 2018. Estimate challenged by: D-
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2015: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2014: Estimate informed by reported data. Programme reports that official government estimate is based in part on the 2012 National Health Survey. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ S+ D+

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	97	99	99	99	99	99	92	98	99	99	97	99
Estimate GoC	●●●	●●	●●	●●	●●	●	●	●	●	●●	●●	●●
Official	97	100	100	100	100	99	92	98	100	99	97	99
Administrative	93	97	95	97	98	99	92	98	100	99	97	99
Survey	-	-	-	-	-	-	-	-	-	-	-	-

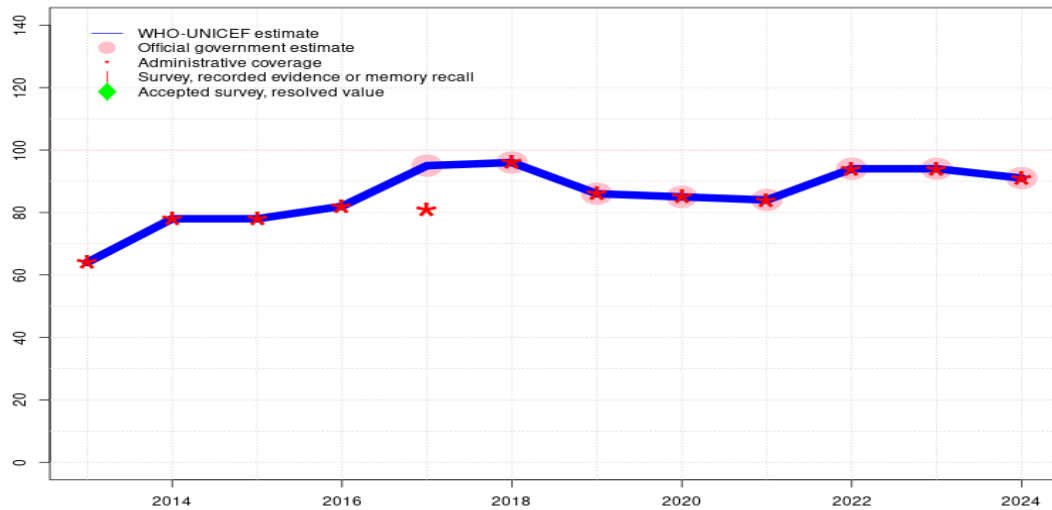
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2024 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.

Bhutan - HEPBB

BTN - HEPBB



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	64	78	78	82	95	96	86	85	84	94	94	91
Estimate GoC	●●	●●	●●	●●	●●	●	●	●●	●	●●	●●	●●
Official	-	-	-	-	95	96	86	85	84	94	94	91
Administrative	64	78	78	82	81	96	86	85	84	94	94	91
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

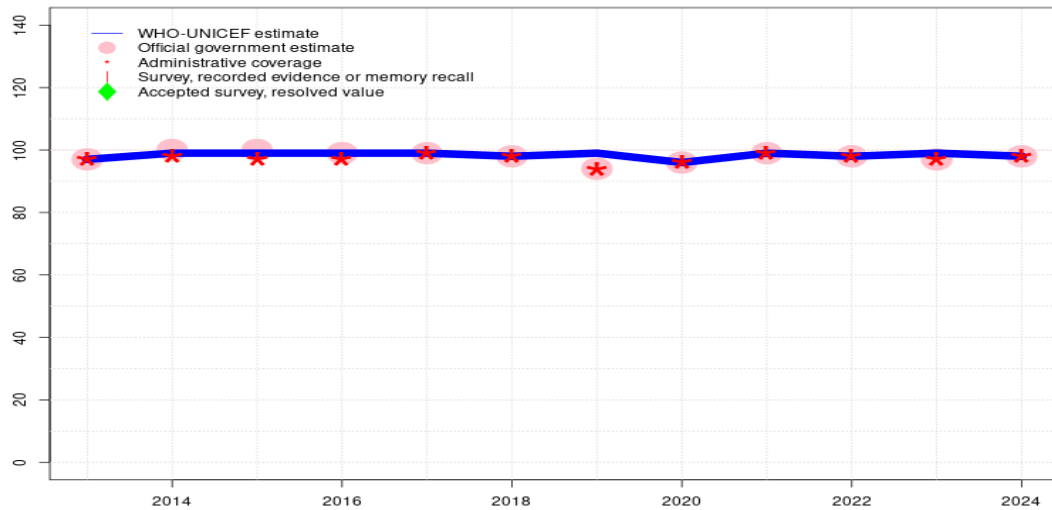
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Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by reported data. GoC=R+ D+
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2020 and 2021. Results from the 2023 National Health Survey (NHS) suggests coverage levels of over 98 percent for all childhood vaccines. Estimate challenged by: D-
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2017 and 2018. Estimate challenged by: D-
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported administrative data. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2015: Estimate informed by reported administrative data. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2014: Estimate informed by reported administrative data. Programme reports that official government estimate is based in part on the 2012 National Health Survey. Estimate informed by reported data consistent with other vaccines. GoC=R+ D+
- 2013: Estimate informed by reported administrative data. GoC=R+ D+

Bhutan - DTP1

BTN - DTP1



Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate based on DTP3 coverage of 99. Estimate challenged by: R-
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2020 and 2021. Results from the 2023 National Health Survey (NHS) suggests coverage levels of over 98 percent for all childhood vaccines. Estimate challenged by: D-
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by estimated DTP3 coverage adjusted for dropout. Estimate challenged by: D-R-
- 2018: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2017 and 2018. Estimate challenged by: D-
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2015: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2014: Estimate informed by reported data. Programme reports that official government estimate is based in part on the 2012 National Health Survey. GoC=R+ D+
- 2013: Estimate informed by reported data. Estimate challenged by: D-

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	97	99	99	99	99	98	99	96	99	98	99	98
Estimate GoC	●	●●	●●	●●	●●	●	●	●●	●	●●	●	●●
Official	97	100	100	99	99	98	94	96	99	98	97	98
Administrative	97	98	97	97	99	98	94	96	99	98	97	98
Survey	-	-	-	-	-	-	-	-	-	-	-	-

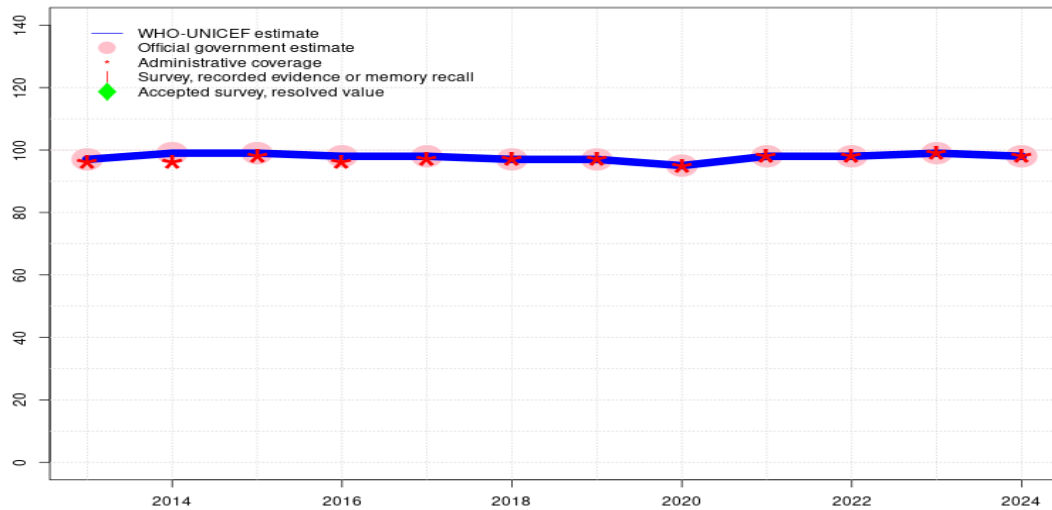
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Bhutan - DTP3

BTN - DTP3



Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by reported data. GoC=R+ D+
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2020 and 2021. Results from the 2023 National Health Survey (NHS) suggests coverage levels of over 98 percent for all childhood vaccines. Estimate challenged by: D-
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2017 and 2018. Estimate challenged by: D-
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2015: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2014: Estimate informed by reported data. Programme reports that official government estimate is based in part on the 2012 National Health Survey. GoC=R+ D+
- 2013: Estimate informed by reported data. Estimate challenged by: D-

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	97	99	99	98	98	97	97	95	98	98	99	98
Estimate GoC	●	●●	●●	●●	●●	●	●	●●	●	●●	●●	●●
Official	97	99	99	98	98	97	97	95	98	98	99	98
Administrative	96	96	98	96	97	97	97	95	98	98	99	98
Survey	-	-	-	-	-	-	-	-	-	-	-	-

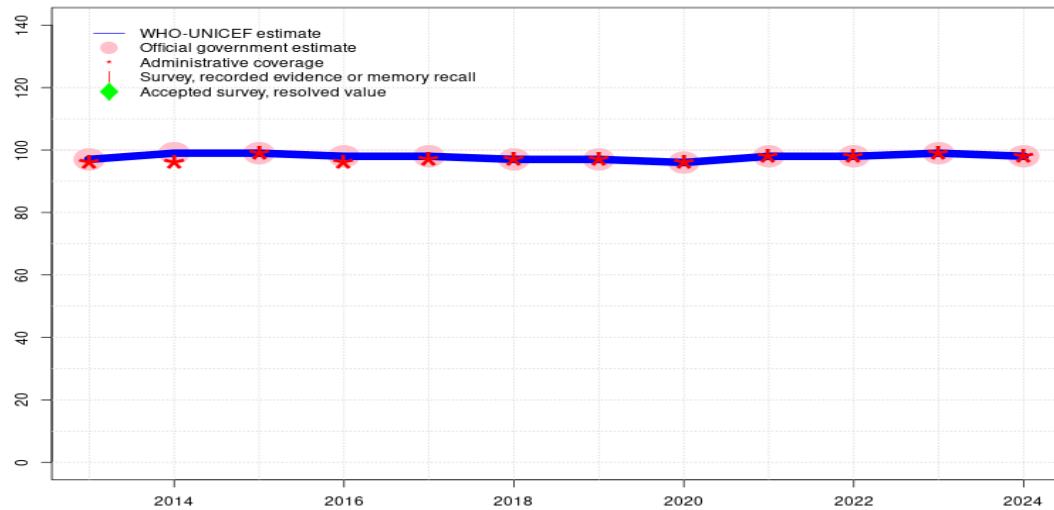
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Bhutan - HEPB3

BTN - HEPB3



Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by reported data. GoC=R+ D+
- 2022: Estimate informed by reported data. GoC=R+ D+
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- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2017 and 2018. Estimate challenged by: D-
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2015: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2014: Estimate informed by reported data. Programme reports that official government estimate is based in part on the 2012 National Health Survey. GoC=R+ D+
- 2013: Estimate informed by reported data. Estimate challenged by: D-

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	97	99	99	98	98	97	97	96	98	98	99	98
Estimate GoC	●	●●	●●	●●	●●	●	●	●●	●	●●	●●	●●
Official	97	99	99	98	98	97	97	96	98	98	99	98
Administrative	96	96	99	96	97	97	97	96	98	98	99	98
Survey	-	-	-	-	-	-	-	-	-	-	-	-

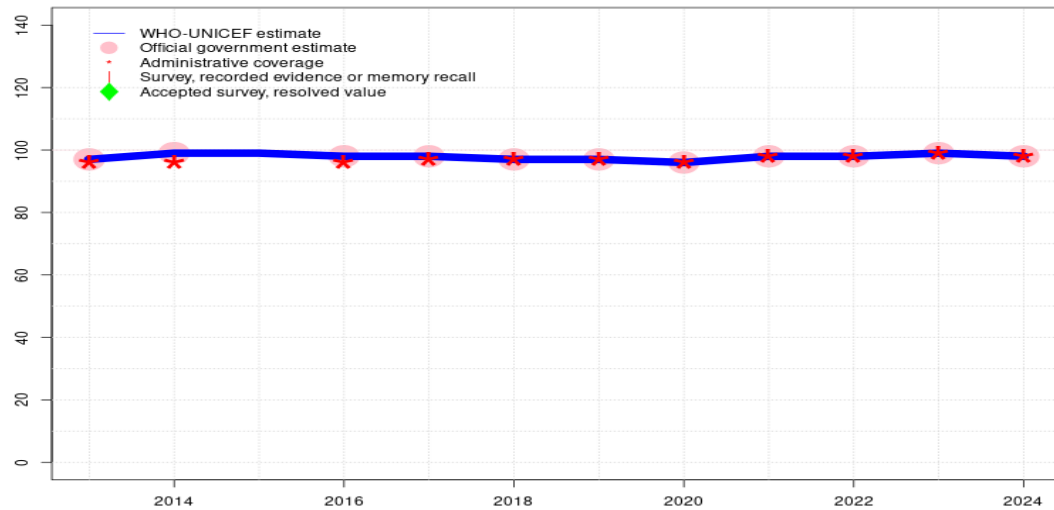
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- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2024 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
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Bhutan - HIB3

BTN - HIB3



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	97	99	99	98	98	97	97	96	98	98	99	98
Estimate GoC	●	●●	●	●●	●●	●	●	●●	●	●●	●●	●●
Official	97	99	-	98	98	97	97	96	98	98	99	98
Administrative	96	96	-	96	97	97	97	96	98	98	99	98
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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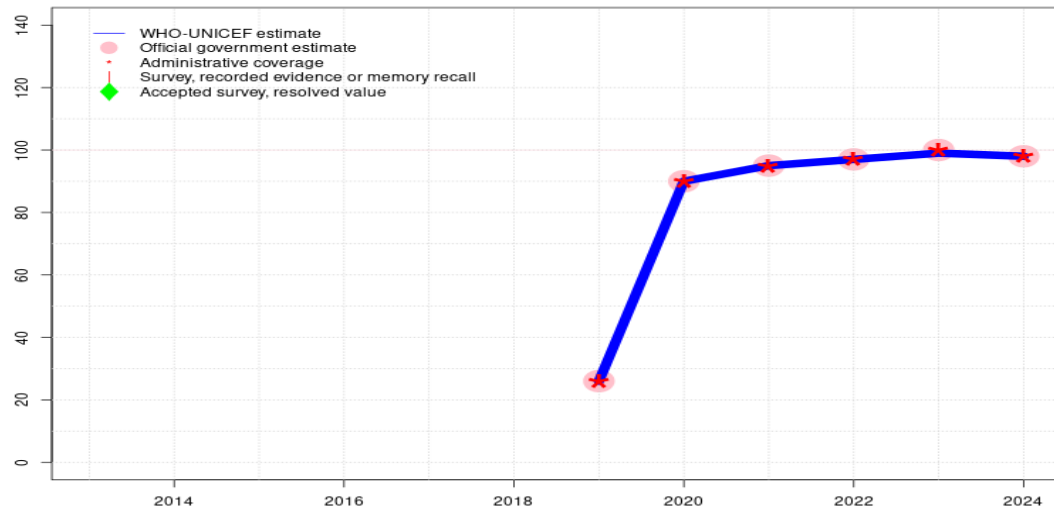
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- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2017 and 2018. Estimate challenged by: D-
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2015: Estimate informed by interpolation between reported data. Reported official coverage is based on National Health Survey, 2012. GoC=No accepted empirical data
- 2014: Estimate informed by reported data. Programme reports that official government estimate is based in part on the 2012 National Health Survey. GoC=R+ D+
- 2013: Estimate informed by reported data. Estimate challenged by: D-

Bhutan - PCV3

BTN - PCV3



Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
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- 2021: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2020 and 2021. Results from the 2023 National Health Survey (NHS) suggests coverage levels of over 98 percent for all childhood vaccines. Estimate challenged by: D-
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. Pneumococcal conjugate vaccine introduced in 2019. Programme reports one week vaccine stockout. GoC=R+ D+

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	-	-	-	-	-	-	26	90	95	97	99	98
Estimate GoC	-	-	-	-	-	-	●●	●●	●	●●	●●	●●
Official	-	-	-	-	-	-	26	90	95	97	100	98
Administrative	-	-	-	-	-	-	26	90	95	97	100	98
Survey	-	-	-	-	-	-	-	-	-	-	-	-

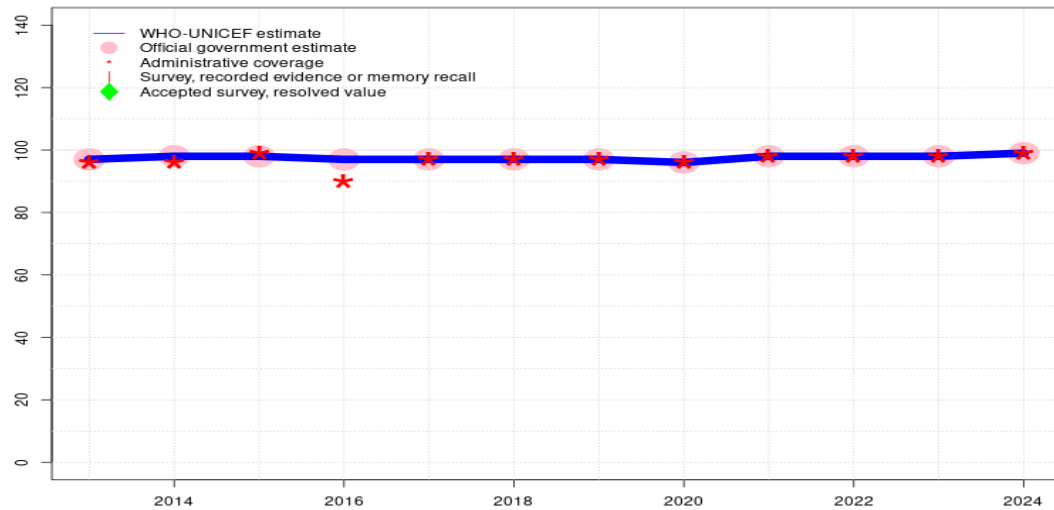
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Bhutan - POL3

BTN - POL3



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- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2017 and 2018. Estimate challenged by: D-
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2015: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Programme reports that official government estimate is based in part on the 2012 National Health Survey. GoC=R+ D+
- 2013: Estimate informed by reported data. Estimate challenged by: D-

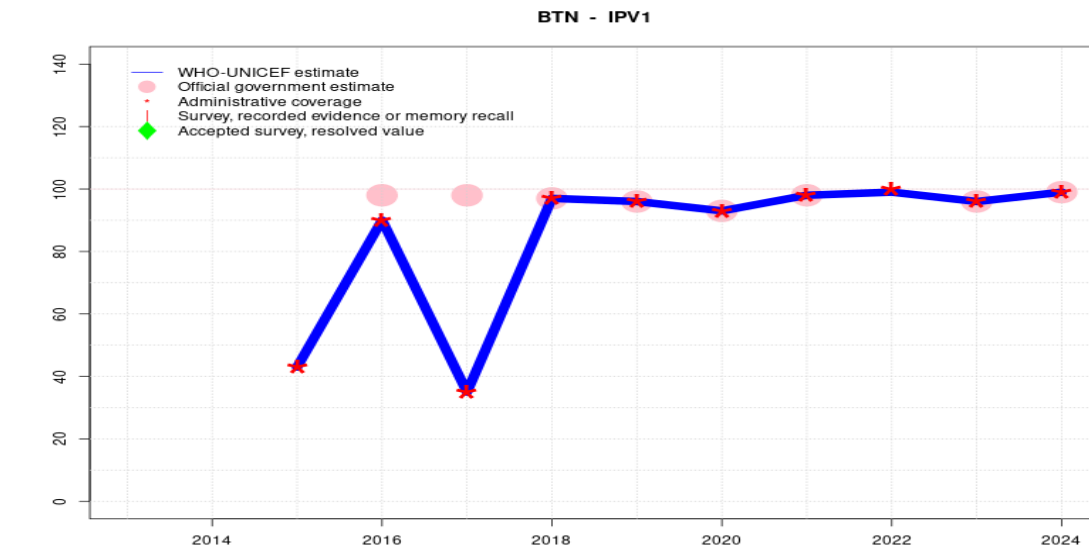
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	97	98	98	97	97	97	97	96	98	98	98	99
Estimate GoC	•	••	•	••	••	•	•	••	•	••	••	••
Official	97	98	98	97	97	97	97	96	98	98	98	99
Administrative	96	96	99	90	97	97	97	96	98	98	98	99
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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: 2024 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.

Bhutan - IPV1



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	-	-	43	90	35	97	96	93	98	99	96	99
Estimate GoC	-	-	••	••	••	•	•	••	•	••	••	••
Official	-	-	-	98	98	97	96	93	98	-	96	99
Administrative	-	-	43	90	35	97	96	93	98	100	96	99
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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.

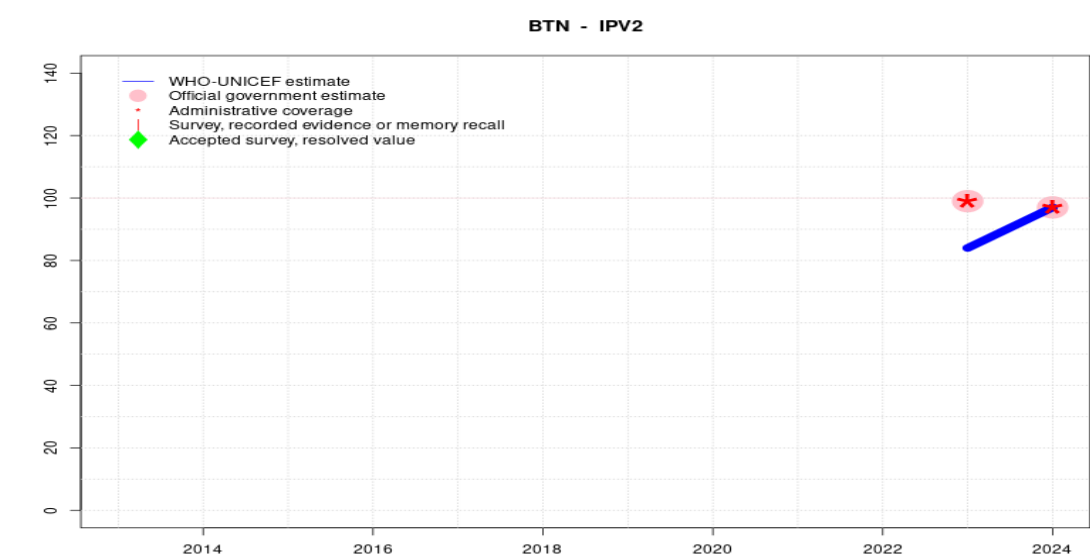
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2024 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by reported data. GoC=R+ D+
- 2022: Estimate informed by reported administrative data. GoC=R+ D+
- 2021: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2020 and 2021. Results from the 2023 National Health Survey (NHS) suggests coverage levels of over 98 percent for all childhood vaccines. Estimate challenged by: D-
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2017 and 2018. Programme appears to have recovered from vaccine stockout in prior year. Estimate challenged by: D-
- 2017: Estimate informed by reported administrative data. Programme reports 12 month vaccine stockout at national level. Official estimates based on 2012 survey results but survey results do not include IPV. GoC=R+ D+
- 2016: Estimate informed by reported administrative data. Reported official coverage is based on National Health Survey, 2012. Estimate informed by reported data following introduction. Programme reports vaccine stockout of 5 months at national level. Survey results from 2012 do not include IPV. GoC=R+ D+
- 2015: Estimate informed by reported administrative data. Inactivated polio vaccine introduced in July 2015. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+

Bhutan - IPV2



Description:

2024: Estimate informed by reported data. GoC=R+ D+
2023: Reported coverage reflects that achieved in 85 percent of national target population. Estimated coverage reflects that achieved in the annual national cohort. Vaccine introduced in 2023 and recommended at 32 weeks. Estimate challenged by: R-

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	-	-	-	-	-	-	-	-	-	-	84	97
Estimate GoC	-	-	-	-	-	-	-	-	-	-	●	●●
Official	-	-	-	-	-	-	-	-	-	-	99	97
Administrative	-	-	-	-	-	-	-	-	-	-	99	97
Survey	-	-	-	-	-	-	-	-	-	-	-	-

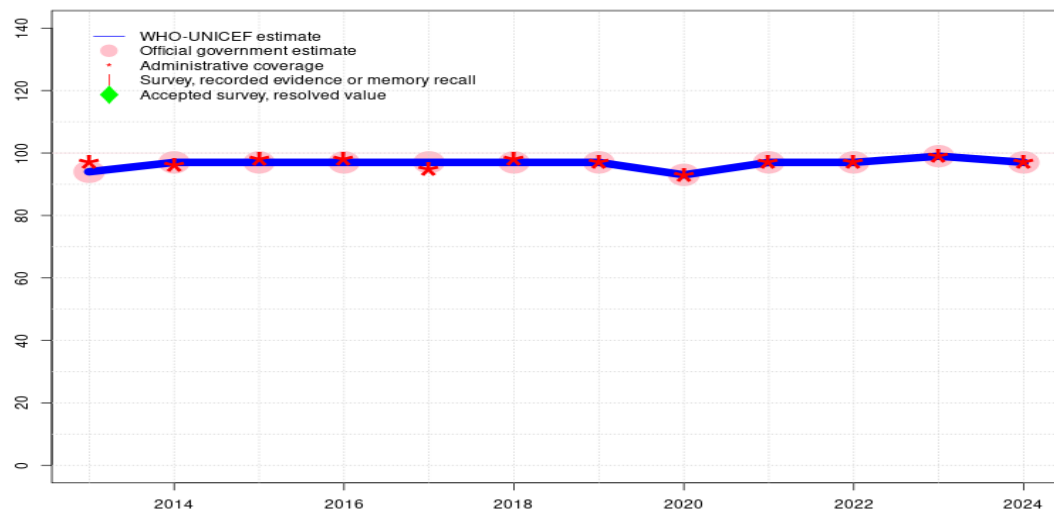
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2024 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.

Bhutan - MCV1

BTN - MCV1



Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by reported data. GoC=R+ D+
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2020 and 2021. Results from the 2023 National Health Survey (NHS) suggests coverage levels of over 98 percent for all childhood vaccines. Estimate challenged by: D-
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2017 and 2018. Estimate challenged by: D-
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2015: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Programme reports that official government estimate is based in part on the 2012 National Health Survey. GoC=R+ D+
- 2013: Estimate informed by reported data. Estimate challenged by: D-

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	94	97	97	97	97	97	97	93	97	97	99	97
Estimate GoC	•	••	•	••	••	•	•	••	•	••	••	••
Official	94	97	97	97	97	97	97	93	97	97	99	97
Administrative	97	96	98	98	95	98	97	93	97	97	99	97
Survey	-	-	-	-	-	-	-	-	-	-	-	-

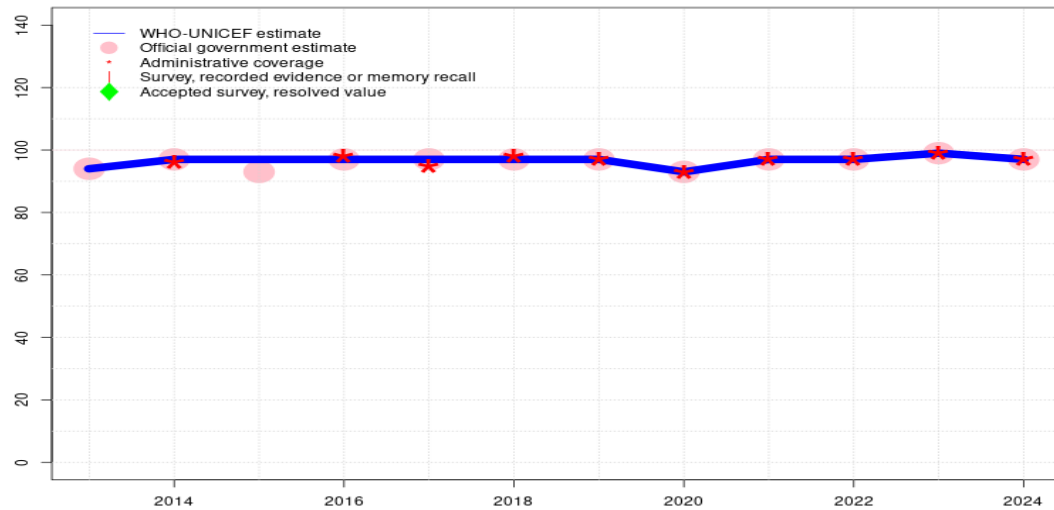
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2024 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.

Bhutan - RCV1

BTN - RCV1



Description:

- 2024: Estimate based on estimated MCV1. GoC=R+ D+
- 2023: Estimate based on estimated MCV1. GoC=R+ D+
- 2022: Estimate based on estimated MCV1. GoC=R+ D+
- 2021: Estimate based on estimated MCV1. Fluctuations in target population of surviving infants with unexplained decline between 2020 and 2021. Results from the 2023 National Health Survey (NHS) suggests coverage levels of over 98 percent for all childhood vaccines. Estimate challenged by: D-
- 2020: Estimate based on estimated MCV1. GoC=R+ D+
- 2019: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2018: Estimate based on estimated MCV1. Fluctuations in target population of surviving infants with unexplained decline between 2017 and 2018. Estimate challenged by: D-
- 2017: Estimate based on estimated MCV1. GoC=R+ D+
- 2016: Estimate based on estimated MCV1. Reported official coverage is based on National Health Survey, 2012. GoC=R+ D+
- 2015: Estimate based on estimated MCV1. Reported official coverage is based on National Health Survey, 2012. Estimate challenged by: D-
- 2014: Estimate based on estimated MCV1. Programme reports that official government estimate is based in part on the 2012 National Health Survey. GoC=R+ D+
- 2013: Estimate based on estimated MCV1. Estimate challenged by: D-

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	94	97	97	97	97	97	97	93	97	97	99	97
Estimate GoC	•	••	•	••	••	•	•	••	•	••	••	••
Official	94	97	93	97	97	97	97	93	97	97	99	97
Administrative	-	96	-	98	95	98	97	93	97	97	99	97
Survey	-	-	-	-	-	-	-	-	-	-	-	-

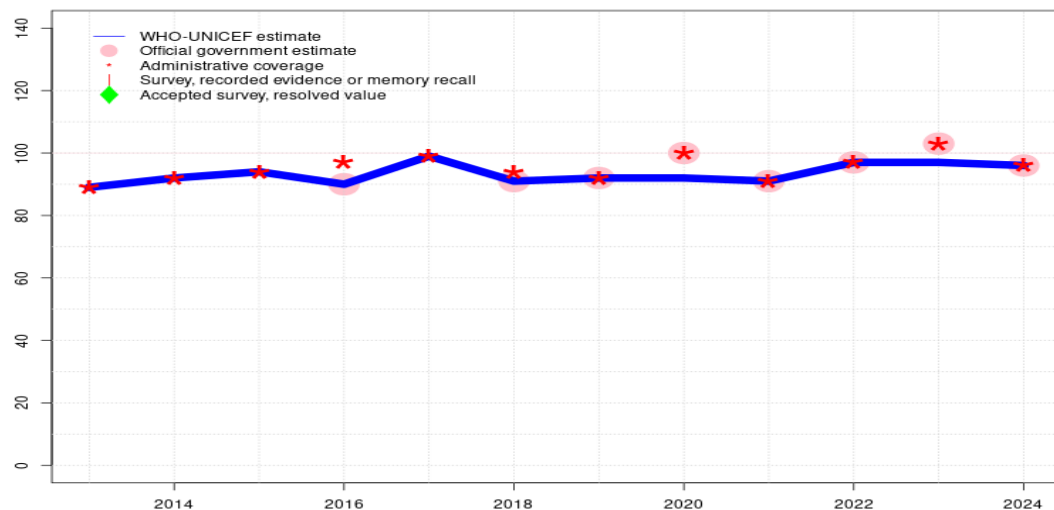
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2024 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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Bhutan - MCV2

BTN - MCV2



Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by interpolation between reported data. Reported data excluded because 103 percent greater than 100 percent. GoC=R+ D+
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2020 and 2021. Results from the 2023 National Health Survey (NHS) suggests coverage levels of over 98 percent for all childhood vaccines. Estimate challenged by: D-
- 2020: Decline in reported denominator compared to previous years may explain the observed increase in reported coverage. Estimate challenged by: D-R-
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Fluctuations in target population of surviving infants with unexplained decline between 2017 and 2018. Estimate challenged by: D-
- 2017: Estimate informed by reported administrative data. Estimate challenged by: D-
- 2016: Estimate informed by reported data. Reported official coverage is based on National Health Survey, 2012. Estimate challenged by: D-
- 2015: Estimate informed by reported administrative data. Reported official coverage is based on National Health Survey, 2012. Estimate challenged by: D-
- 2014: Estimate informed by reported administrative data. Programme reports that official government estimate is based in part on the 2012 National Health Survey. Estimate challenged by: D-
- 2013: Estimate informed by reported administrative data. Estimate challenged by: D-

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	89	92	94	90	99	91	92	92	91	97	97	96
Estimate GoC	●	●	●	●	●	●	●	●	●	●●	●●	●●
Official	-	-	-	90	-	91	92	100	91	97	103	96
Administrative	89	92	94	97	99	94	92	100	91	97	103	96
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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: 2024 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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Bhutan - Survey Details

NOTE A survey to measure vaccination coverage for infants (i.e., children aged 0-11 months) will sample children aged 12-23 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 12-23 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 one or two years prior to the survey field work.

The survey results below present vaccination coverage estimates by antigen, confirmation method, and child's age at the time of the survey. Coverage based on **Recall** reflects information based upon a mother's or caregiver's memory. Coverage based on **Record** reflects information drawn from documented vaccination history in home- and/or facility-based records. **Evidence seen** reflects the percentage of children in the sample with documented evidence of vaccination history seen by the survey team.

2021 Bhutan National Health Survey 2023

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Record	100	12-23 m	590	-
DTP1	Record	100	12-23 m	590	-
DTP3	Record	100	12-23 m	590	-
HEPB1	Record	100	12-23 m	590	-
HEPB3	Record	100	12-23 m	590	-
HEPB3	Record	98.1	12-23 m	590	-
HIB1	Record	100	12-23 m	590	-
HIB3	Record	100	12-23 m	590	-
IPV1	Record	99.4	12-23 m	590	-
IPV2	Record	93.3	12-23 m	590	-
MCV1	Record	99.4	12-23 m	590	-
MCV2	Record	95.2	24-35 m	552	-
PCV1	Record	95.4	12-23 m	590	-
PCV3	Record	97.7	12-23 m	590	-
POL1	Record	100	12-23 m	590	-
POL3	Record	100	12-23 m	590	-
RCV1	Record	99.4	12-23 m	590	-

2020 Bhutan National Health Survey 2023

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Record	100	24-35 m	552	-
DTP1	Record	100	24-35 m	552	-
DTP3	Record	100	24-35 m	552	-
HEPB1	Record	100	24-35 m	552	-
HEPB3	Record	100	24-35 m	552	-
HEPB3	Record	98.1	24-35 m	552	-
HIB1	Record	100	24-35 m	552	-
HIB3	Record	100	24-35 m	552	-
IPV1	Record	98.3	24-35 m	552	-
IPV2	Record	68.3	24-35 m	552	-
MCV1	Record	100	24-35 m	552	-
PCV1	Record	93.5	24-35 m	552	-
PCV3	Record	97.6	24-35 m	552	-
POL1	Record	100	24-35 m	552	-
POL3	Record	100	24-35 m	552	-
RCV1	Record	100	24-35 m	552	-

2011 Bhutan National Health Survey 2012

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Recall	4.1	12-23 m	38	91
BCG	Record	95.9	12-23 m	878	91
BCG	Record or Recall	100	12-23 m	916	91
DTP1	Recall	4.1	12-23 m	38	91
DTP1	Record	95.4	12-23 m	878	91
DTP1	Record or Recall	99.7	12-23 m	916	91
DTP3	Recall	4.1	12-23 m	38	91
DTP3	Record	94.5	12-23 m	878	91
DTP3	Record or Recall	98.7	12-23 m	916	91
HEPB1	Recall	4.1	12-23 m	38	91
HEPB1	Record	95.4	12-23 m	878	91
HEPB1	Record or Recall	99.7	12-23 m	916	91
HEPB3	Recall	4.1	12-23 m	38	91
HEPB3	Record	94.5	12-23 m	878	91
HEPB3	Record or Recall	98.7	12-23 m	916	91
POL1	Recall	4.1	12-23 m	38	91
POL1	Record	95	12-23 m	878	91

POL1	Record or Recall	99.2	12-23 m	916	91
POL3	Recall	4	12-23 m	38	91
POL3	Record	93.4	12-23 m	878	91
POL3	Record or Recall	97.4	12-23 m	916	91

POL3	Record or Recall	99.9	12-23 m	1193	98
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2001 Bhutan National EPI Coverage Evaluation Survey 2002

2007 The National EPI Coverage Survey, 2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Recall	3.1	12-23 m	1193	98
BCG	Record	96.9	12-23 m	1193	98
BCG	Record or Recall	100	12-23 m	1193	98
DTP1	Recall	3.3	12-23 m	1193	98
DTP1	Record	96.7	12-23 m	1193	98
DTP1	Record or Recall	100	12-23 m	1193	98
DTP3	Recall	3.1	12-23 m	1193	98
DTP3	Record	96.8	12-23 m	1193	98
DTP3	Record or Recall	99.9	12-23 m	1193	98
HEPB1	Recall	3.3	12-23 m	1193	98
HEPB1	Record	96.7	12-23 m	1193	98
HEPB1	Record or Recall	100	12-23 m	1193	98
HEPB3	Recall	3.1	12-23 m	1193	98
HEPB3	Record	96.8	12-23 m	1193	98
HEPB3	Record or Recall	99.9	12-23 m	1193	98
MCV1	Recall	4.3	12-23 m	1193	98
MCV1	Record	94.7	12-23 m	1193	98
MCV1	Record or Recall	99	12-23 m	1193	98
POL1	Recall	3.2	12-23 m	1193	98
POL1	Record	96.8	12-23 m	1193	98
POL1	Record or Recall	100	12-23 m	1193	98
POL3	Recall	3.2	12-23 m	1193	98
POL3	Record	96.7	12-23 m	1193	98

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Recall	4.2	12-23 m	214	95
BCG	Record	95.3	12-23 m	214	95
BCG	Record or Recall	99.5	12-23 m	214	95
DTP1	Recall	4.7	12-23 m	214	95
DTP1	Record	94.9	12-23 m	214	95
DTP1	Record or Recall	99.5	12-23 m	214	95
DTP3	Recall	4.7	12-23 m	214	95
DTP3	Record	93.9	12-23 m	214	95
DTP3	Record or Recall	98.6	12-23 m	214	95
HEPB1	Recall	4.7	12-23 m	214	95
HEPB1	Record	93.5	12-23 m	214	95
HEPB1	Record or Recall	98.1	12-23 m	214	95
HEPB3	Recall	4.7	12-23 m	214	95
HEPB3	Record	91.6	12-23 m	214	95
HEPB3	Record or Recall	96.3	12-23 m	214	95
MCV1	Recall	4.7	12-23 m	214	95
MCV1	Record	91.6	12-23 m	214	95
MCV1	Record or Recall	96.3	12-23 m	214	95
POL1	Recall	4.7	12-23 m	214	95
POL1	Record	94.9	12-23 m	214	95
POL1	Record or Recall	99.5	12-23 m	214	95
POL3	Recall	4.7	12-23 m	214	95
POL3	Record	93.9	12-23 m	214	95
POL3	Record or Recall	98.6	12-23 m	214	95

Further information and estimates for previous years are available at:
<https://data.unicef.org/topic/child-health/immunization/>
<https://immunizationdata.who.int/listing.html>