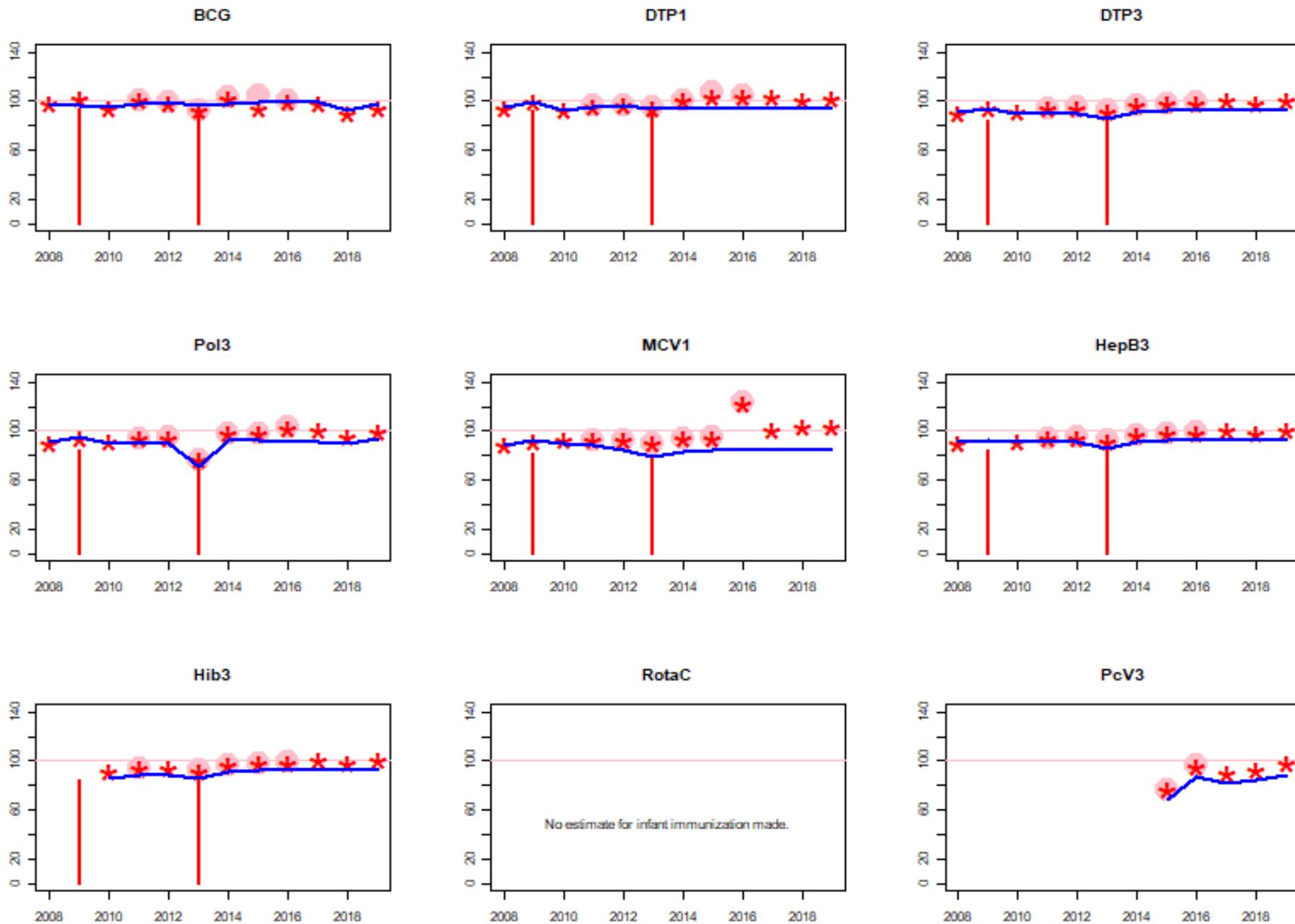


Cambodia: WHO and UNICEF estimates of immunization coverage: 2019 revision



# Cambodia: WHO and UNICEF estimates of immunization coverage: 2019 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 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.

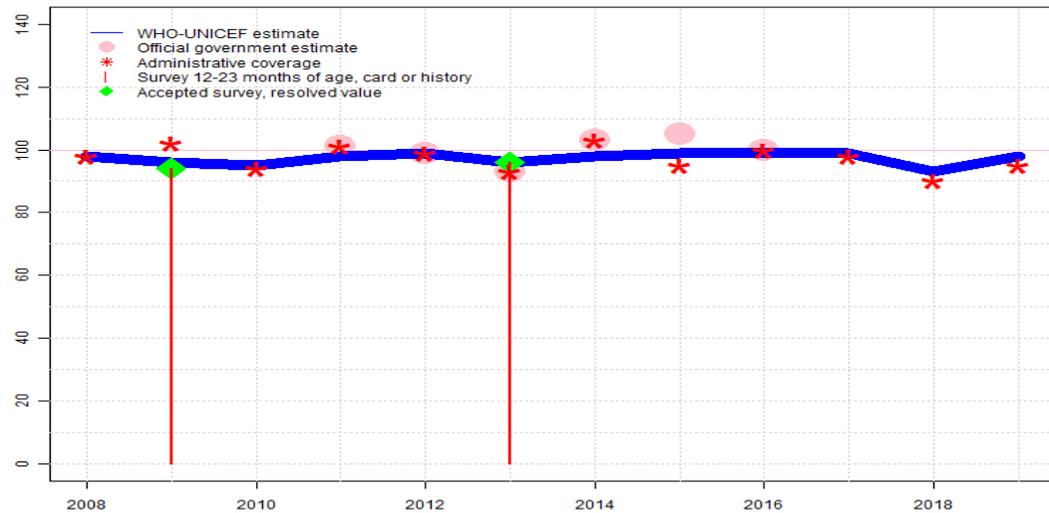
**PcV3:** percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect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

KHM - BCG



## Description:

- 2019: Reported data calibrated to 2013 levels. WHO and UNICEF are aware of an ongoing Demographic and Health Survey and await the final results. Programme reports two month national and district level vaccine stock-out. Estimate challenged by: R-
- 2018: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2017: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2016: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2015: Reported data calibrated to 2013 levels. Reported data excluded because 105 percent greater than 100 percent. Programme acknowledges challenges in data quality impacting on administrative coverage levels. Programme reports a switch in information source from the national statistics office to the national health information system. Current information suggests a decline in target population that may partially explain reported increase in coverage. WHO and UNICEF recommend a review of recording and reporting practices as well as a data review inclusive of the target population data sources. Estimate challenged by: R-
- 2014: Reported data calibrated to 2013 levels. Reported data excluded because 103 percent greater than 100 percent. Estimate challenged by: R-
- 2013: Estimate of 96 percent assigned by working group. Estimate is based on survey results from 2013 DHS. Four months national stock-out reported. Estimate challenged by: R-
- 2012: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2011: Reported data calibrated to 2009 and 2013 levels. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: R-
- 2010: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2009: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Reported data excluded because 102 percent greater than 100 percent. GoC=R+ S+ D+
- 2008: Estimate based on reported administrative data. GoC=R+ S+ D+

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimate	98	96	95	98	99	96	98	99	99	99	93	98
Estimate GoC	●●●	●●●	●	●	●	●	●	●	●	●	●	●
Official	NA	NA	NA	101	99	93	103	105	100	NA	NA	NA
Administrative	98	102	94	101	99	93	103	95	100	98	90	95
Survey	NA	94	NA	NA	NA	96	NA	NA	NA	NA	NA	NA

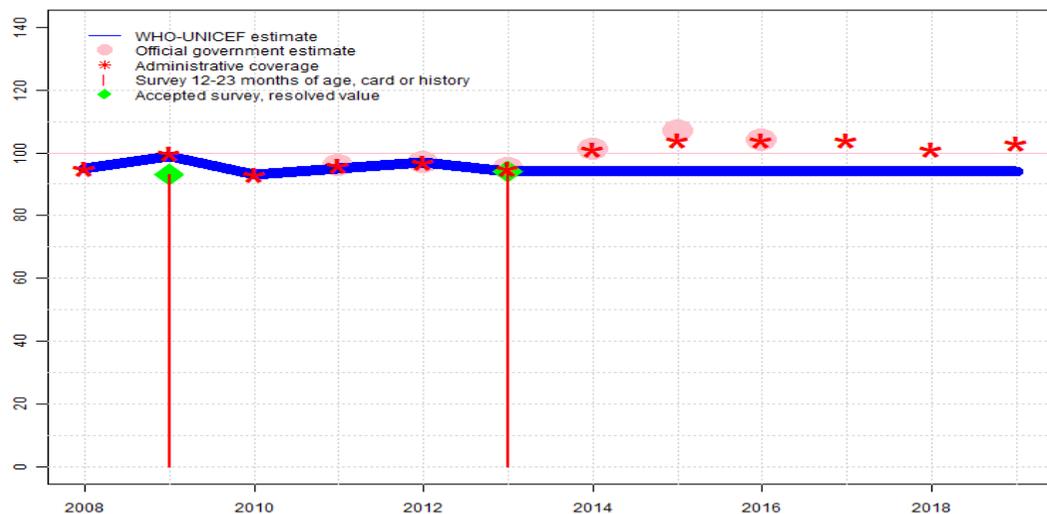
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2019 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.

# Cambodia - DTP1

KHM - DTP1



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimate	95	99	93	95	97	94	94	94	94	94	94	94
Estimate GoC	●●●	●●●	●	●	●	●	●	●	●	●	●	●
Official	NA	NA	NA	96	97	95	101	107	104	NA	NA	NA
Administrative	95	100	93	96	97	95	101	104	104	104	101	103
Survey	NA	93	NA	NA	NA	94	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: 2019 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.

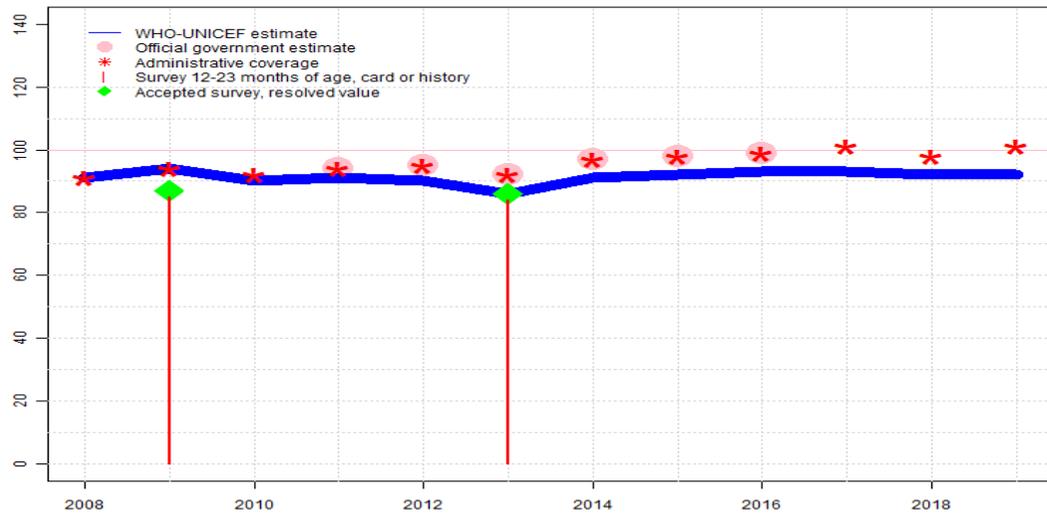
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2019: Reported data calibrated to 2013 levels. Reported data excluded because 103 percent greater than 100 percent. WHO and UNICEF are aware of an ongoing Demographic and Health Survey and await the final results. Estimate challenged by: D-R-
- 2018: Reported data calibrated to 2013 levels. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: R-
- 2017: Reported data calibrated to 2013 levels. Reported data excluded because 104 percent greater than 100 percent. Estimate challenged by: R-
- 2016: Reported data calibrated to 2013 levels. Reported data excluded because 104 percent greater than 100 percent. Estimate challenged by: R-
- 2015: Reported data calibrated to 2013 levels. Reported data excluded because 107 percent greater than 100 percent. Programme acknowledges challenges in data quality impacting on administrative coverage levels. Programme reports a switch in information source from the national statistics office to the national health information system. Current information suggests a decline in target population that may partially explain reported increase in coverage. WHO and UNICEF recommend a review of recording and reporting practices as well as a data review inclusive of the target population data sources. Estimate challenged by: R-
- 2014: Reported data calibrated to 2013 levels. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: R-
- 2013: Estimate of 94 percent assigned by working group. Estimate is based on survey results from 2013 DHS. Estimate challenged by: R-
- 2012: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2011: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2010: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 93 percent based on 1 survey(s). GoC=R+ S+ D+
- 2008: Estimate based on reported administrative data. GoC=R+ S+ D+

# Cambodia - DTP3

KHM - DTP3



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimate	91	94	90	91	90	86	91	92	93	93	92	92
Estimate GoC	●●●	●●●	●	●	●	●	●	●	●	●	●	●
Official	NA	NA	NA	94	95	92	97	98	99	NA	NA	NA
Administrative	91	94	92	94	95	92	97	98	99	101	98	101
Survey	NA	85	NA	NA	NA	84	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: 2019 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.

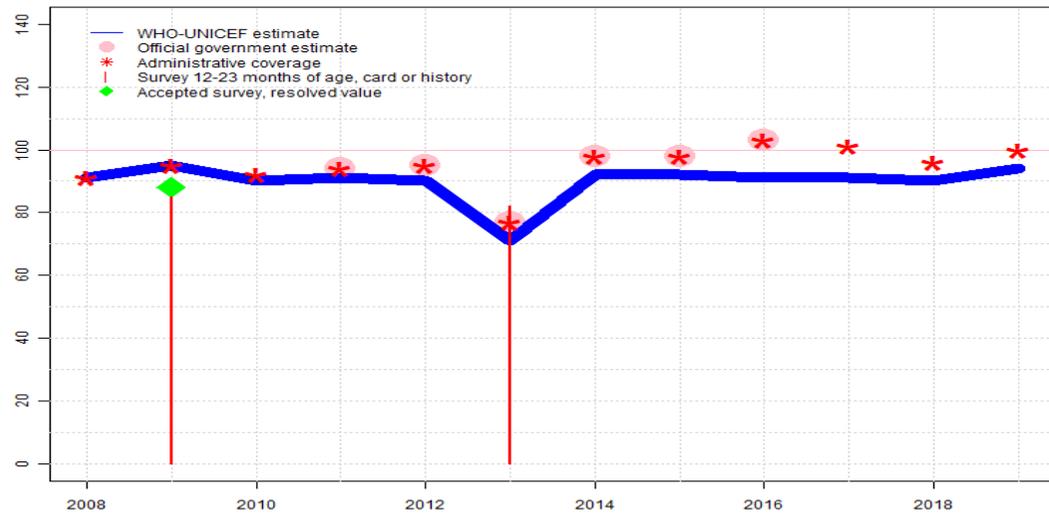
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2019: Reported data calibrated to 2013 levels. Reported data excluded because 101 percent greater than 100 percent. WHO and UNICEF are aware of an ongoing Demographic and Health Survey and await the final results. Estimate challenged by: D-R-
- 2018: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2017: Reported data calibrated to 2013 levels. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: R-
- 2016: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2015: Reported data calibrated to 2013 levels. Programme acknowledges challenges in data quality impacting on administrative coverage levels. Programme reports a switch in information source from the national statistics office to the national health information system. Current information suggests a decline in target population that may partially explain reported increase in coverage. WHO and UNICEF recommend a review of recording and reporting practices as well as a data review inclusive of the target population data sources. Estimate challenged by: R-
- 2014: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2013: Estimate of 86 percent assigned by working group. Estimate is based on survey results from 2013 DHS. Cambodia Demographic and Health Survey, 2014 card or history results of 84 percent modified for recall bias to 86 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 75 percent and 3rd dose card only coverage of 69 percent. Estimate challenged by: R-
- 2012: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2011: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2010: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 87 percent based on 1 survey(s). Cambodia Demographic and Health Survey 2010 card or history results of 85 percent modified for recall bias to 87 percent based on 1st dose card or history coverage of 93 percent, 1st dose card only coverage of 76 percent and 3rd dose card only coverage of 71 percent. GoC=R+ S+ D+
- 2008: Estimate based on reported administrative data. Increase in 2008 due to change in the denominator based on the General Population Census, 2008. GoC=R+ S+ D+

# Cambodia - Pol3

KHM - Pol3



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimate	91	95	90	91	90	71	92	92	91	91	90	94
Estimate GoC	●●●	●●●	●	●	●	●	●	●	●	●	●	●
Official	NA	NA	NA	94	95	77	98	98	103	NA	NA	NA
Administrative	91	95	92	94	95	77	98	98	103	101	96	100
Survey	NA	85	NA	NA	NA	82	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: 2019 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.

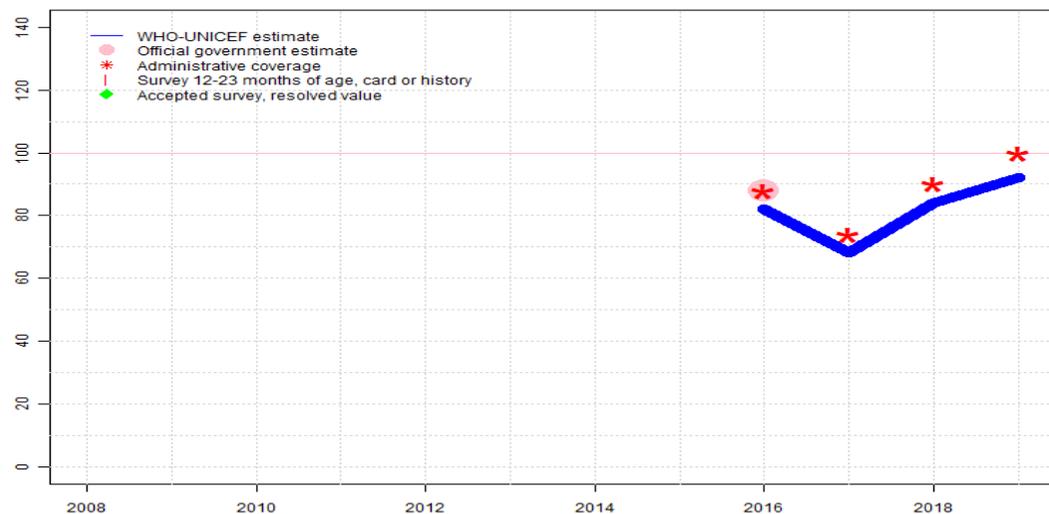
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2019: Reported data calibrated to 2013 levels. WHO and UNICEF are aware of an ongoing Demographic and Health Survey and await the final results. Programme reports two month national and district level vaccine stock-out. Estimate challenged by: R-
- 2018: Reported data calibrated to 2013 levels. Programme reports one month vaccine stock-out at national level. Estimate challenged by: R-
- 2017: Reported data calibrated to 2013 levels. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: R-
- 2016: Reported data calibrated to 2013 levels. Reported data excluded because 103 percent greater than 100 percent. Estimate challenged by: R-
- 2015: Reported data calibrated to 2013 levels. Programme acknowledges challenges in data quality impacting on administrative coverage levels. Programme reports a switch in information source from the national statistics office to the national health information system. Current information suggests a decline in target population that may partially explain reported increase in coverage. WHO and UNICEF recommend a review of recording and reporting practices as well as a data review inclusive of the target population data sources. Estimate challenged by: R-
- 2014: Reported data calibrated to 2013 levels. Recovery from stock-out during prior year. Estimate challenged by: R-
- 2013: Estimate of 71 percent assigned by working group. Estimate based on difference between survey and reported coverage for DTP3. Cambodia Demographic and Health Survey, 2014 results ignored by working group. Survey may have not detected vaccine stock-out. Cambodia Demographic and Health Survey, 2014 card or history results of 82 percent modified for recall bias to 84 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 76 percent and 3rd dose card only coverage of 67 percent. Reported decline likely due to five months vaccine stock-out. Estimate challenged by: R-
- 2012: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2011: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2010: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Cambodia Demographic and Health Survey 2010 card or history results of 85 percent modified for recall bias to 88 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 76 percent and 3rd dose card only coverage of 71 percent. GoC=R+ S+ D+
- 2008: Estimate based on reported administrative data. Increase in 2008 due to change in the denominator based on the General Population Census, 2008. GoC=R+ S+ D+

# Cambodia - IPV1

KHM - 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).

- 2019: Estimate is based on estimated DTP3 level. WHO and UNICEF are aware of an ongoing Demographic and Health Survey and await the final results. Estimate challenged by: R-
- 2018: Estimate based on reported coverage adjusted for the difference between estimated and administrative coverage for DTP3. Programme appears to have recovered from prior years stock-outs. Estimate challenged by: R-
- 2017: Estimate based on reported coverage adjusted for the difference between estimated and administrative coverage for DTP3. Programme reports vaccine stock-out of unspecified duration. Estimate challenged by: R-
- 2016: Estimate based on reported coverage adjusted for the difference between estimated and administrative coverage for DTP3. Inactivated polio vaccine introduced in December 2015. Estimate challenged by: R-

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimate	NA	82	68	84	92							
Estimate GoC	NA	●	●	●	●							
Official	NA	88	NA	NA	NA							
Administrative	NA	88	74	90	100							
Survey	NA											

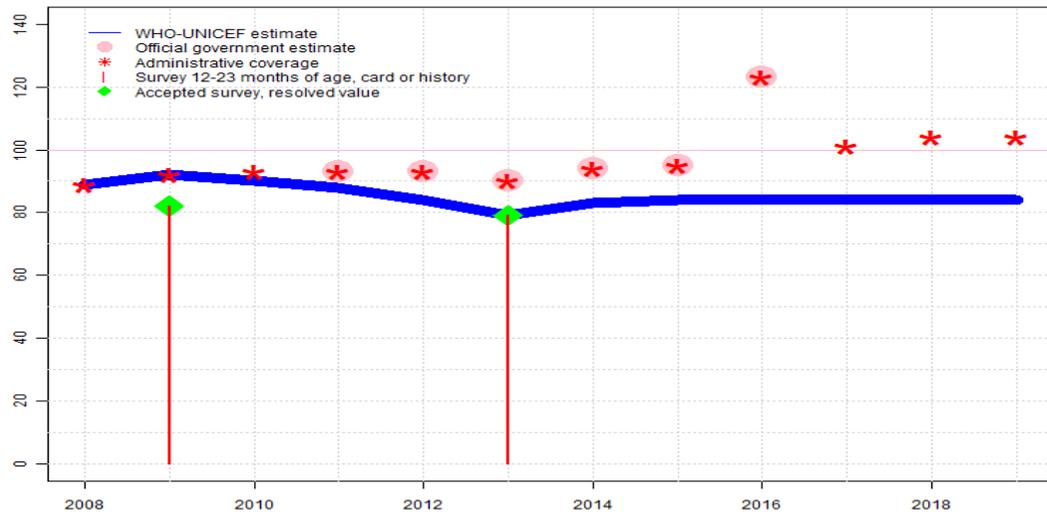
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2019 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.

# Cambodia - MCV1

KHM - MCV1



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimate	89	92	90	88	84	79	83	84	84	84	84	84
Estimate GoC	●●●	●●●	●	●	●	●	●	●	●	●	●	●
Official	NA	NA	NA	93	93	90	94	95	123	NA	NA	NA
Administrative	89	92	93	93	93	90	94	95	123	101	104	104
Survey	NA	82	NA	NA	NA	79	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: 2019 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.

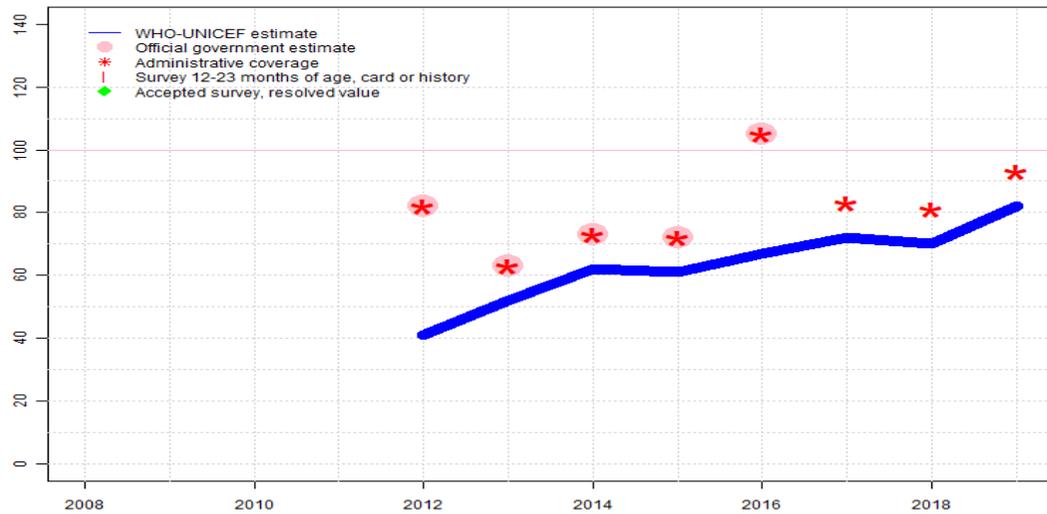
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2019: Reported data calibrated to 2013 levels. Reported data excluded because 104 percent greater than 100 percent. WHO and UNICEF are aware of an ongoing Demographic and Health Survey and await the final results. Programme reports two month national and district level vaccine stock-out. Estimate challenged by: D-R-
- 2018: Reported data calibrated to 2013 levels. Reported data excluded because 104 percent greater than 100 percent. Estimate challenged by: D-R-
- 2017: Reported data calibrated to 2013 levels. Reported data excluded because 101 percent greater than 100 percent. Programme reports vaccine stock-out of unspecified duration. Estimate challenged by: D-R-
- 2016: Reported data calibrated to 2013 levels. Reported data excluded because 123 percent greater than 100 percent. Reported data excluded due to an increase from 95 percent to 123 percent with decrease 101 percent. Increase in reported coverage due in part to doses included from MR catch up campaign as well as inclusion of children over one year of age. Estimate challenged by: D-R-
- 2015: Reported data calibrated to 2013 levels. Programme acknowledges challenges in data quality impacting on administrative coverage levels. Programme reports a switch in information source from the national statistics office to the national health information system. Current information suggests a decline in target population that may partially explain reported increase in coverage. WHO and UNICEF recommend a review of recording and reporting practices as well as a data review inclusive of the target population data sources. Estimate challenged by: R-
- 2014: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2013: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 79 percent based on 1 survey(s). Estimate challenged by: D-R-
- 2012: Reported data calibrated to 2009 and 2013 levels. Measles and rubella combination introduced in 2012; second dose recommend at 18 months. Estimate challenged by: R-
- 2011: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2010: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 82 percent based on 1 survey(s). GoC=R+ S+ D+
- 2008: Estimate based on reported administrative data. Increase in 2008 due to change in the denominator based on the General Population Census, 2008. Increase is consistent with other vaccines. GoC=R+ S+ D+

# Cambodia - MCV2

KHM - MCV2



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimate	NA	NA	NA	NA	41	52	62	61	67	72	70	82
Estimate GoC	NA	NA	NA	NA	•	•	•	•	•	•	•	•
Official	NA	NA	NA	NA	82	63	73	72	105	NA	NA	NA
Administrative	NA	NA	NA	NA	82	63	73	72	105	83	81	93
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: 2019 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.

2019: Reported data calibrated to 2013 levels. WHO and UNICEF are aware of an ongoing Demographic and Health Survey and await the final results. Programme reports two month national and district level vaccine stock-out. Programme notes that immunization, VPD surveillance and measles outbreak data were analyzed regularly as part of measles outbreak response, including identification of gaps, weaknesses and actions to be taken which were prepared and shared with sub-national levels. Estimate challenged by: D-R-

2018: Reported data calibrated to 2013 levels. Estimate challenged by: D-R-

2017: Reported data calibrated to 2013 levels. Programme reports vaccine stock-out of unspecified duration. Estimate challenged by: R-

2016: Reported data calibrated to 2013 levels. Reported data excluded because 105 percent greater than 100 percent. Reported data excluded due to an increase from 72 percent to 105 percent with decrease 83 percent. Increase in reported coverage due in part to doses included from MR catch up campaign. Estimate challenged by: D-R-

2015: Reported data calibrated to 2013 levels. Programme acknowledges challenges in data quality impacting on administrative coverage levels. Programme reports a switch in information source from the national statistics office to the national health information system. Current information suggests a decline in target population that may partially explain reported increase in coverage. WHO and UNICEF recommend a review of recording and reporting practices as well as a data review inclusive of the target population data sources. Estimate challenged by: R-

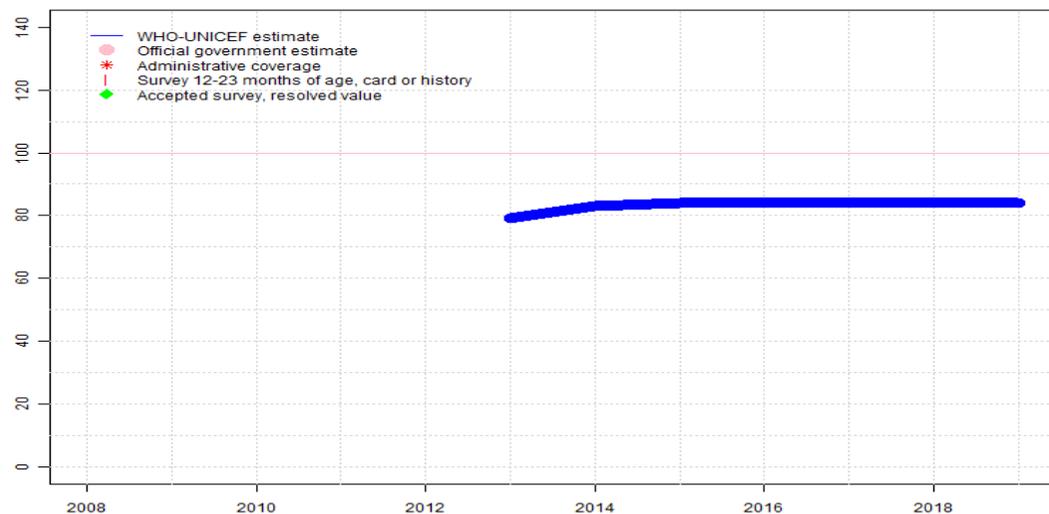
2014: Reported data calibrated to 2013 levels. Estimate challenged by: R-

2013: Estimate of 52 percent assigned by working group. Estimates is based on adjustment between estimated and reported MCV1 coverage levels. Estimate challenged by: D-R-

2012: Eighty-two percent coverage achieved in 50 percent of the national target population. Measles and rubella combination introduced in 2012; second dose recommend at 18 months. Estimate challenged by: R-

# Cambodia - RCV1

KHM - RCV1



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimate	NA	NA	NA	NA	NA	79	83	84	84	84	84	84
Estimate GoC	NA	NA	NA	NA	NA	•	•	•	•	•	•	•
Official	NA											
Administrative	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: 2019 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.

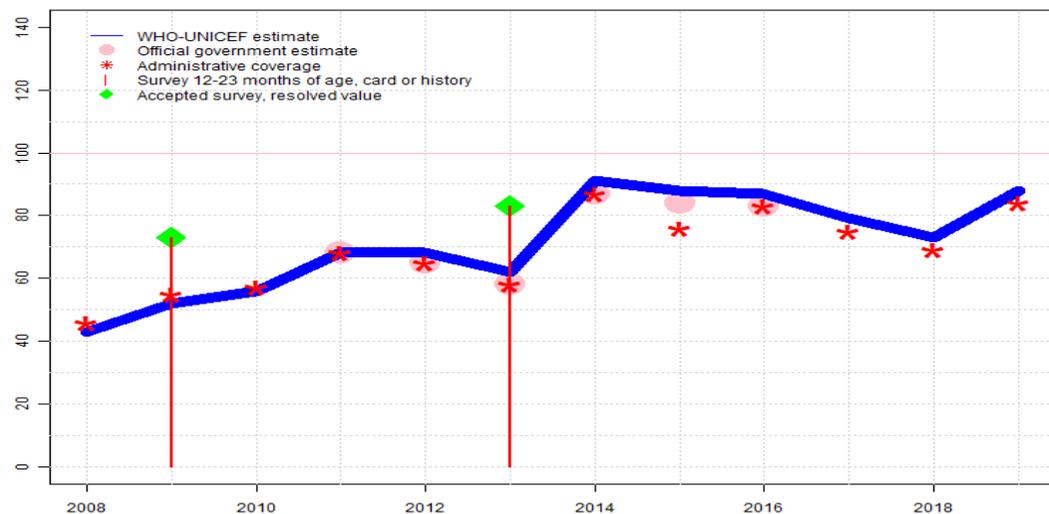
## Description:

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.

- 2019: Estimate based on estimated MCV1. WHO and UNICEF are aware of an ongoing Demographic and Health Survey and await the final results. Estimate challenged by: D-R-
- 2018: Estimate based on estimated MCV1. Estimate challenged by: D-R-
- 2017: Estimate based on estimated MCV1. Programme reports vaccine stock-out of unspecified duration. Estimate challenged by: D-R-
- 2016: Estimate based on estimated MCV1. Estimate challenged by: D-R-
- 2015: Estimate based on estimated MCV1. Programme acknowledges challenges in data quality impacting on administrative coverage levels. Programme reports a switch in information source from the national statistics office to the national health information system. Current information suggests a decline in target population that may partially explain reported increase in coverage. WHO and UNICEF recommend a review of recording and reporting practices as well as a data review inclusive of the target population data sources. Estimate challenged by: R-
- 2014: Estimate based on estimated MCV1. Estimate challenged by: R-
- 2013: Estimate based on estimated MCV1. Estimate challenged by: D-R-

# Cambodia - HepBB

KHM - HepBB



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimate	43	52	56	68	68	62	91	88	87	79	73	88
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	NA	NA	NA	68	65	58	87	84	83	NA	NA	NA
Administrative	46	55	57	68	65	58	87	76	83	75	69	84
Survey	NA	73	NA	NA	NA	83	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: 2019 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.

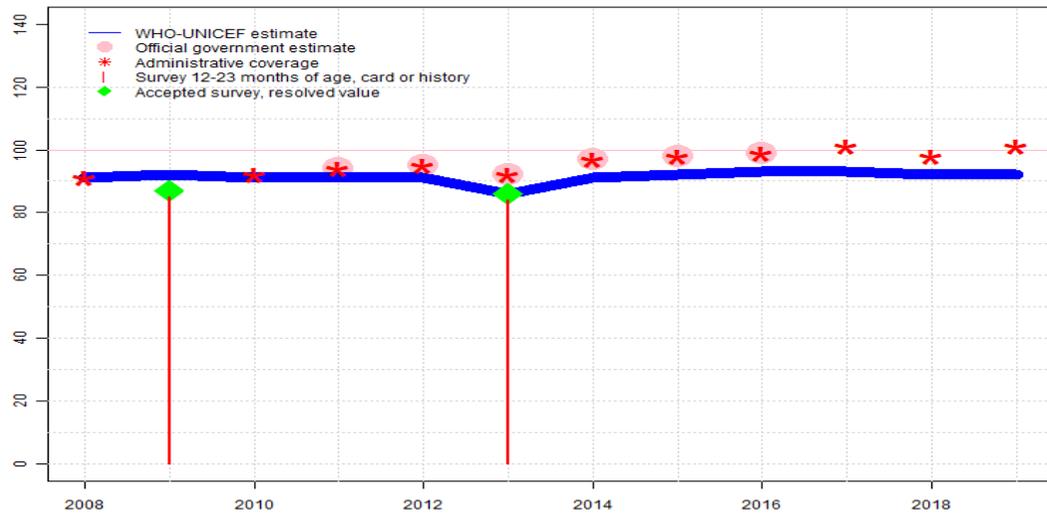
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2019: Reported data calibrated to 2013 levels. WHO and UNICEF are aware of an ongoing Demographic and Health Survey and await the final results. Programme reports two month national and district level vaccine stock-out of monovalent HepB vaccine. Reported data reflects recovery from prior year vaccine stock-out. Estimate challenged by: R-
- 2018: Reported data calibrated to 2013 levels. Programme reports three month vaccine stock-out at national level. Estimate challenged by: R-
- 2017: Reported data calibrated to 2013 levels. Programme reports vaccine stock-out of unspecified duration. Estimate challenged by: R-
- 2016: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2015: Reported data calibrated to 2013 levels. Programme acknowledges challenges in data quality impacting on administrative coverage levels. Programme reports a switch in information source from the national statistics office to the national health information system. Current information suggests a decline in target population that may partially explain reported increase in coverage. WHO and UNICEF recommend a review of recording and reporting practices as well as a data review inclusive of the target population data sources. Estimate challenged by: R-
- 2014: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2013: Estimate of 62 percent assigned by working group. Estimate is based on adjustment between estimated and reported HepB birth dose. Three months national stock-out reported. Estimate challenged by: R-S-
- 2012: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-S-
- 2011: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-S-
- 2010: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-S-
- 2009: Estimate of 52 percent assigned by working group. Estimate is based on adjustment between estimated and reported HepB birth dose. Estimate challenged by: R-S-
- 2008: Reported data calibrated to 2009 levels. Estimate challenged by: R-S-

# Cambodia - HepB3

KHM - HepB3



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimate	91	92	91	91	91	86	91	92	93	93	92	92
Estimate GoC	●●●	●●	●	●	●	●	●	●	●	●	●	●
Official	NA	NA	NA	94	95	92	97	98	99	NA	NA	NA
Administrative	91	NA	92	94	95	92	97	98	99	101	98	101
Survey	NA	85	NA	NA	NA	84	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: 2019 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.

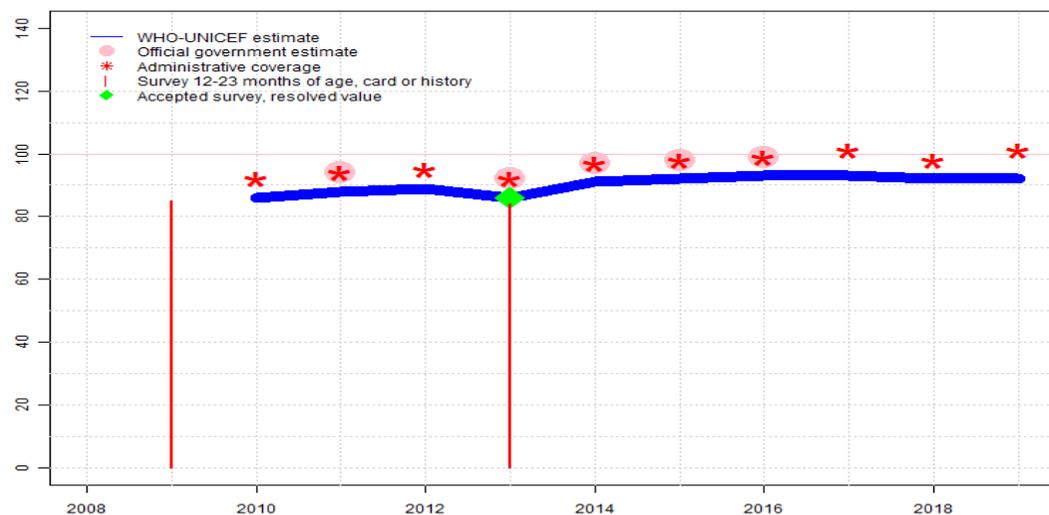
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2019: Reported data calibrated to 2013 levels. Reported data excluded because 101 percent greater than 100 percent. WHO and UNICEF are aware of an ongoing Demographic and Health Survey and await the final results. Estimate challenged by: D-R-
- 2018: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2017: Reported data calibrated to 2013 levels. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: R-
- 2016: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2015: Reported data calibrated to 2013 levels. Programme acknowledges challenges in data quality impacting on administrative coverage levels. Programme reports a switch in information source from the national statistics office to the national health information system. Current information suggests a decline in target population that may partially explain reported increase in coverage. WHO and UNICEF recommend a review of recording and reporting practices as well as a data review inclusive of the target population data sources. Estimate challenged by: R-
- 2014: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2013: Estimate of 86 percent assigned by working group. Estimate is based on survey results from 2013 DHS. Cambodia Demographic and Health Survey, 2014 card or history results of 84 percent modified for recall bias to 86 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 75 percent and 3rd dose card only coverage of 69 percent. Estimate challenged by: R-
- 2012: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2011: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2010: Reported data calibrated to 2009 and 2013 levels. Estimate challenged by: R-
- 2009: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 87 percent based on 1 survey(s). Cambodia Demographic and Health Survey 2010 card or history results of 85 percent modified for recall bias to 87 percent based on 1st dose card or history coverage of 93 percent, 1st dose card only coverage of 76 percent and 3rd dose card only coverage of 71 percent. GoC=S+
- 2008: Estimate based on reported data. Increase in 2008 due to change in the denominator based on the General Population Census, 2008. GoC=R+ S+ D+

# Cambodia - Hib3

KHM - Hib3



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimate	NA	NA	86	88	89	86	91	92	93	93	92	92
Estimate GoC	NA	NA	•	•	•	•	•	•	•	•	•	•
Official	NA	NA	NA	94	NA	92	97	98	99	NA	NA	NA
Administrative	NA	NA	92	94	95	92	97	98	99	101	98	101
Survey	NA	85	NA	NA	NA	84	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.

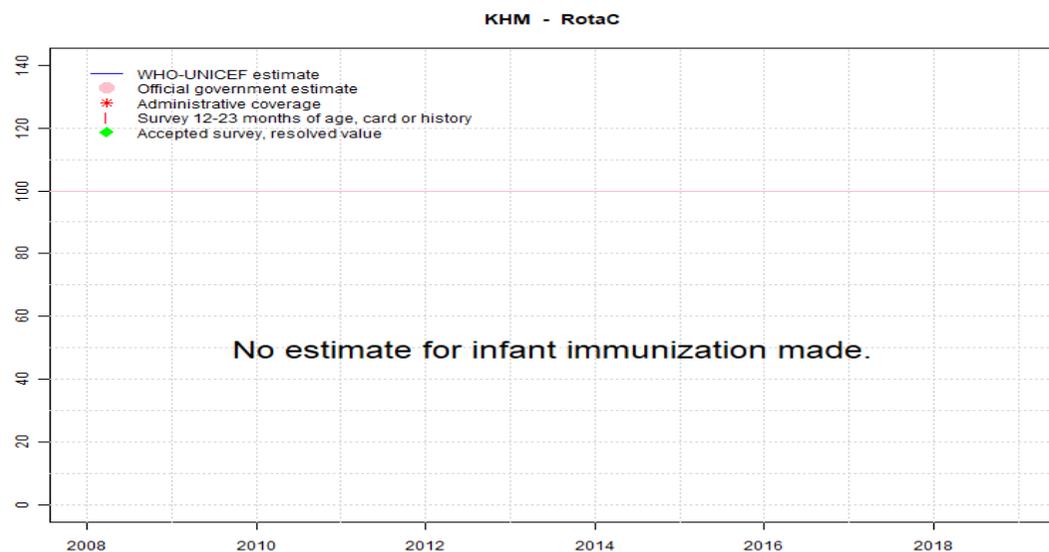
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2019 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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:

- 2019: Reported data calibrated to 2013 levels. Reported data excluded because 101 percent greater than 100 percent. WHO and UNICEF are aware of an ongoing Demographic and Health Survey and await the final results. Estimate challenged by: D-R-
- 2018: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2017: Reported data calibrated to 2013 levels. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: R-
- 2016: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2015: Reported data calibrated to 2013 levels. Programme acknowledges challenges in data quality impacting on administrative coverage levels. Programme reports a switch in information source from the national statistics office to the national health information system. Current information suggests a decline in target population that may partially explain reported increase in coverage. WHO and UNICEF recommend a review of recording and reporting practices as well as a data review inclusive of the target population data sources. Estimate challenged by: R-
- 2014: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2013: Estimate of 86 percent assigned by working group. Estimate is based on survey results from 2013 DHS. Cambodia Demographic and Health Survey, 2014 card or history results of 84 percent modified for recall bias to 86 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 75 percent and 3rd dose card only coverage of 69 percent. Estimate challenged by: R-
- 2012: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2011: Reported data calibrated to 2013 levels. Estimate challenged by: R-
- 2010: Reported data calibrated to 2013 levels. DTP-HepB-Hib pentavalent vaccine introduced in 2010. DHS survey results for Hib3 appear to refer to DTP-HepB tetravalent vaccine. Estimate challenged by: R-

# Cambodia - RotaC



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimate	NA											
Estimate GoC	NA											
Official	NA											
Administrative	NA											
Survey	NA											

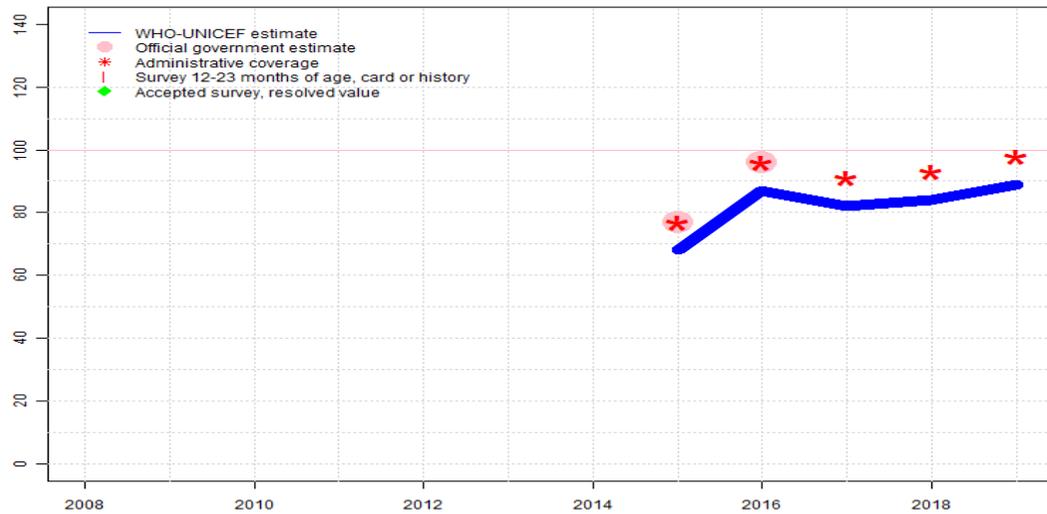
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2019 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.

# Cambodia - PcV3

KHM - PcV3



## Description:

2019: Reported data calibrated to 2015 levels. WHO and UNICEF are aware of an ongoing Demographic and Health Survey and await the final results. Estimate challenged by: R-

2018: Reported data calibrated to 2015 levels. Programme reports one month vaccine stock-out at national level. Estimate challenged by: D-R-

2017: Reported data calibrated to 2015 levels. Programme reports vaccine stock-out of unspecified duration. Estimate challenged by: R-

2016: Reported data calibrated to 2015 levels. Estimate challenged by: R-

2015: Estimate of 68 percent assigned by working group. Pneumococcal conjugate vaccine introduced in 2015. Estimate is based on estimated DTP3 coverage level. Programme acknowledges challenges in data quality impacting on administrative coverage levels. Programme reports a switch in information source from the national statistics office to the national health information system. Current information suggests a decline in target population that may partially explain reported increase in coverage. WHO and UNICEF recommend a review of recording and reporting practices as well as a data review inclusive of the target population data sources. Estimate challenged by: R-

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimate	NA	68	87	82	84	89						
Estimate GoC	NA	●	●	●	●	●						
Official	NA	77	96	NA	NA	NA						
Administrative	NA	77	96	91	93	98						
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: 2019 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.

# Cambodia - survey details

## 2013 Cambodia Demographic and Health Survey, 2014

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	95.9	12-23 m	1460	77
BCG	Card	76.4	12-23 m	1129	77
BCG	Card or History	96.1	12-23 m	1460	77
BCG	History	19.7	12-23 m	332	77
DTP1	C or H <12 months	93.6	12-23 m	1460	77
DTP1	Card	75.4	12-23 m	1129	77
DTP1	Card or History	94	12-23 m	1460	77
DTP1	History	18.6	12-23 m	332	77
DTP3	C or H <12 months	81.9	12-23 m	1460	77
DTP3	Card	68.6	12-23 m	1129	77
DTP3	Card or History	83.7	12-23 m	1460	77
DTP3	History	15.1	12-23 m	332	77
HepB1	C or H <12 months	93.6	12-23 m	1460	77
HepB1	Card	75.4	12-23 m	1129	77
HepB1	Card or History	94	12-23 m	1460	77
HepB1	History	18.6	12-23 m	332	77
HepB3	C or H <12 months	81.9	12-23 m	1460	77
HepB3	Card	68.6	12-23 m	1129	77
HepB3	Card or History	83.7	12-23 m	1460	77
HepB3	History	15.1	12-23 m	332	77
HepBB	C or H <12 months	82.6	12-23 m	1460	77
HepBB	Card	65.1	12-23 m	1129	77
HepBB	Card or History	82.8	12-23 m	1460	77
HepBB	History	17.7	12-23 m	332	77
Hib1	C or H <12 months	93.6	12-23 m	1460	77
Hib1	Card	75.4	12-23 m	1129	77
Hib1	Card or History	94	12-23 m	1460	77
Hib1	History	18.6	12-23 m	332	77
Hib3	C or H <12 months	81.9	12-23 m	1460	77
Hib3	Card	68.6	12-23 m	1129	77
Hib3	Card or History	83.7	12-23 m	1460	77
Hib3	History	15.1	12-23 m	332	77
MCV1	C or H <12 months	70.3	12-23 m	1460	77
MCV1	Card	63.4	12-23 m	1129	77
MCV1	Card or History	78.6	12-23 m	1460	77
MCV1	History	15.2	12-23 m	332	77
Pol1	C or H <12 months	94.5	12-23 m	1460	77

Pol1	Card	75.9	12-23 m	1129	77
Pol1	Card or History	94.8	12-23 m	1460	77
Pol1	History	18.9	12-23 m	332	77
Pol3	C or H <12 months	80.2	12-23 m	1460	77
Pol3	Card	67.2	12-23 m	1129	77
Pol3	Card or History	82.3	12-23 m	1460	77
Pol3	History	15.1	12-23 m	332	77

## 2009 Cambodia Demographic and Health Survey 2010

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	94.2	12-23 m	1614	77
BCG	Card	77.1	12-23 m	1614	77
BCG	Card or History	94.3	12-23 m	1614	77
BCG	History	17.3	12-23 m	1614	77
DTP1	C or H <12 months	92.6	12-23 m	1614	77
DTP1	Card	75.6	12-23 m	1614	77
DTP1	Card or History	93.1	12-23 m	1614	77
DTP1	History	17.6	12-23 m	1614	77
DTP3	C or H <12 months	83.6	12-23 m	1614	77
DTP3	Card	70.9	12-23 m	1614	77
DTP3	Card or History	84.8	12-23 m	1614	77
DTP3	History	14	12-23 m	1614	77
HepB1	C or H <12 months	92.6	12-23 m	1614	77
HepB1	Card	75.6	12-23 m	1614	77
HepB1	Card or History	93.1	12-23 m	1614	77
HepB1	History	17.6	12-23 m	1614	77
HepB3	C or H <12 months	83.6	12-23 m	1614	77
HepB3	Card	70.9	12-23 m	1614	77
HepB3	Card or History	84.8	12-23 m	1614	77
HepB3	History	14	12-23 m	1614	77
HepBB	C or H <12 months	73	12-23 m	1614	77
HepBB	Card	60.9	12-23 m	1249	77
HepBB	Card or History	73	12-23 m	1614	77
HepBB	History	12	12-23 m	364	77
Hib1	C or H <12 months	92.6	12-23 m	1614	77
Hib1	Card	75.6	12-23 m	1614	77
Hib1	Card or History	93.1	12-23 m	1614	77
Hib1	History	17.6	12-23 m	1614	77

# Cambodia - survey details

Hib3	C or H <12 months	83.6	12-23 m	1614	77	DTP3	C or H <12 months	75.5	12-23 m	1517	67
Hib3	Card	70.9	12-23 m	1614	77	DTP3	Card	61.3	12-23 m	1517	67
Hib3	Card or History	84.8	12-23 m	1614	77	DTP3	Card or History	78.3	12-23 m	1517	67
Hib3	History	14	12-23 m	1614	77	DTP3	History	17	12-23 m	1517	67
MCV1	C or H <12 months	77	12-23 m	1614	77	MCV1	C or H <12 months	70.2	12-23 m	1517	67
MCV1	Card	66.8	12-23 m	1614	77	MCV1	Card	56.3	12-23 m	1517	67
MCV1	Card or History	81.9	12-23 m	1614	77	MCV1	Card or History	76.9	12-23 m	1517	67
MCV1	History	15	12-23 m	1614	77	MCV1	History	20.6	12-23 m	1517	67
Pol1	C or H <12 months	93	12-23 m	1614	77	Pol1	C or H <12 months	89.8	12-23 m	1517	67
Pol1	Card	75.6	12-23 m	1614	77	Pol1	Card	66.2	12-23 m	1517	67
Pol1	Card or History	93.6	12-23 m	1614	77	Pol1	Card or History	90.6	12-23 m	1517	67
Pol1	History	17.9	12-23 m	1614	77	Pol1	History	24.4	12-23 m	1517	67
Pol3	C or H <12 months	83.8	12-23 m	1614	77	Pol3	C or H <12 months	74.2	12-23 m	1517	67
Pol3	Card	70.8	12-23 m	1614	77	Pol3	Card	59.8	12-23 m	1517	67
Pol3	Card or History	85	12-23 m	1614	77	Pol3	Card or History	76.9	12-23 m	1517	67
Pol3	History	14.2	12-23 m	1614	77	Pol3	History	17.1	12-23 m	1517	67

## 2008 Cambodia Socio-Economic Survey 2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	77.7	12-23 m	1068	79
DTP1	Card	76.9	12-23 m	1068	79
DTP3	Card	55.8	12-23 m	1068	79
HepBB	Card	61.1	12-23 m	1068	79
MCV1	Card	59.3	12-23 m	1068	79

## 2004 Cambodia Demographic and Health Survey 2005

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	91	12-23 m	1517	67
BCG	Card	65.9	12-23 m	1517	67
BCG	Card or History	91.4	12-23 m	1517	67
BCG	History	25.5	12-23 m	1517	67
DTP1	C or H <12 months	89.7	12-23 m	1517	67
DTP1	Card	66.3	12-23 m	1517	67
DTP1	Card or History	90.6	12-23 m	1517	67
DTP1	History	24.3	12-23 m	1517	67

## 1999 Cambodia Demographic and Health Survey 2000, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	66.1	12-23 m	1253	48
BCG	Card	45.9	12-23 m	1253	48
BCG	Card or History	71.4	12-23 m	1253	48
BCG	History	25.5	12-23 m	1253	48
DTP1	C or H <12 months	63.4	12-23 m	1253	48
DTP1	Card	45.6	12-23 m	1253	48
DTP1	Card or History	68	12-23 m	1253	48
DTP1	History	22.4	12-23 m	1253	48
DTP3	C or H <12 months	42.7	12-23 m	1253	48
DTP3	Card	35.8	12-23 m	1253	48
DTP3	Card or History	48.5	12-23 m	1253	48
DTP3	History	12.7	12-23 m	1253	48
MCV1	C or H <12 months	41.4	12-23 m	1253	48
MCV1	Card	36.4	12-23 m	1253	48
MCV1	Card or History	55.4	12-23 m	1253	48
MCV1	History	18.9	12-23 m	1253	48
Pol1	C or H <12 months	69.1	12-23 m	1253	48
Pol1	Card	45.6	12-23 m	1253	48
Pol1	Card or History	74.7	12-23 m	1253	48

# Cambodia - survey details

Pol1	History	29.1	12-23 m	1253	48
Pol3	C or H <12 months	45.3	12-23 m	1253	48
Pol3	Card	35.8	12-23 m	1253	48
Pol3	Card or History	51.5	12-23 m	1253	48
Pol3	History	15.6	12-23 m	1253	48

## 1997 National Health Survey Cambodia 1998, 1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	33.4	12-23 m	804	-
BCG	Card or History	66.7	12-23 m	804	-
BCG	History	33.4	12-23 m	804	-
DTP1	C or H <12 months	60.9	12-23 m	804	-
DTP1	Card	33	12-23 m	804	-
DTP1	Card or History	62	12-23 m	804	-
DTP1	History	29	12-23 m	804	-

DTP3	C or H <12 months	44.4	12-23 m	804	-
DTP3	Card	26.8	12-23 m	804	-
DTP3	Card or History	46.5	12-23 m	804	-
DTP3	History	19.7	12-23 m	804	-
MCV1	C or H <12 months	45.4	12-23 m	804	-
MCV1	Card	25.7	12-23 m	804	-
MCV1	Card or History	49.5	12-23 m	804	-
MCV1	History	23.8	12-23 m	804	-
Pol1	C or H <12 months	79.6	12-23 m	804	-
Pol1	Card	33	12-23 m	804	-
Pol1	Card or History	81.1	12-23 m	804	-
Pol1	History	48.2	12-23 m	804	-
Pol3	C or H <12 months	53.8	12-23 m	804	-
Pol3	Card	26.6	12-23 m	804	-
Pol3	Card or History	56.1	12-23 m	804	-
Pol3	History	29.5	12-23 m	804	-

Further information and estimates for previous years are available at:

<http://www.data.unicef.org/child-health/immunization>

[http://www.who.int/immunization/monitoring\\_surveillance/routine/coverage/en/index4.html](http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index4.html)