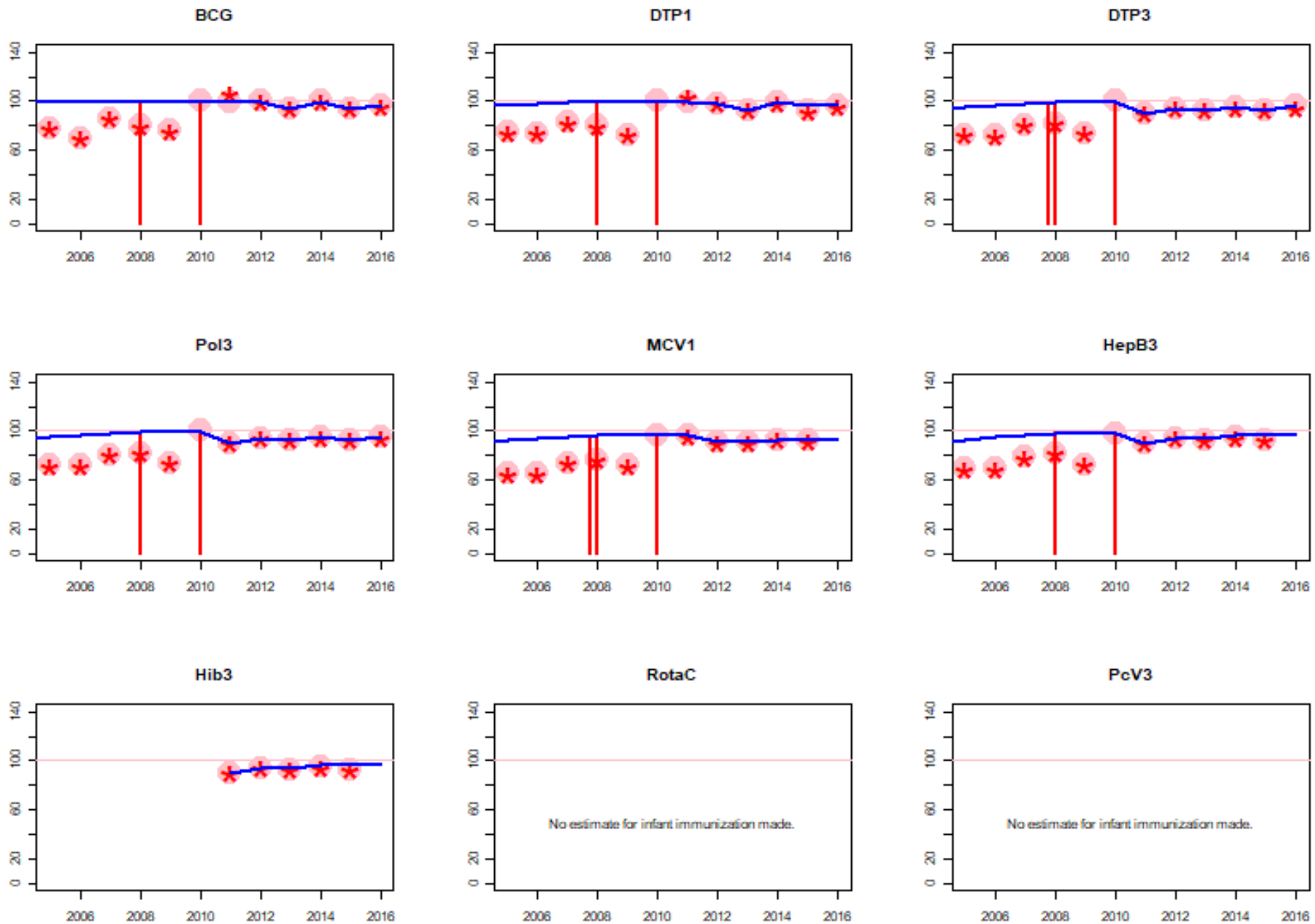


Cabo Verde: WHO and UNICEF estimates of immunization coverage: 2016 revision



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.

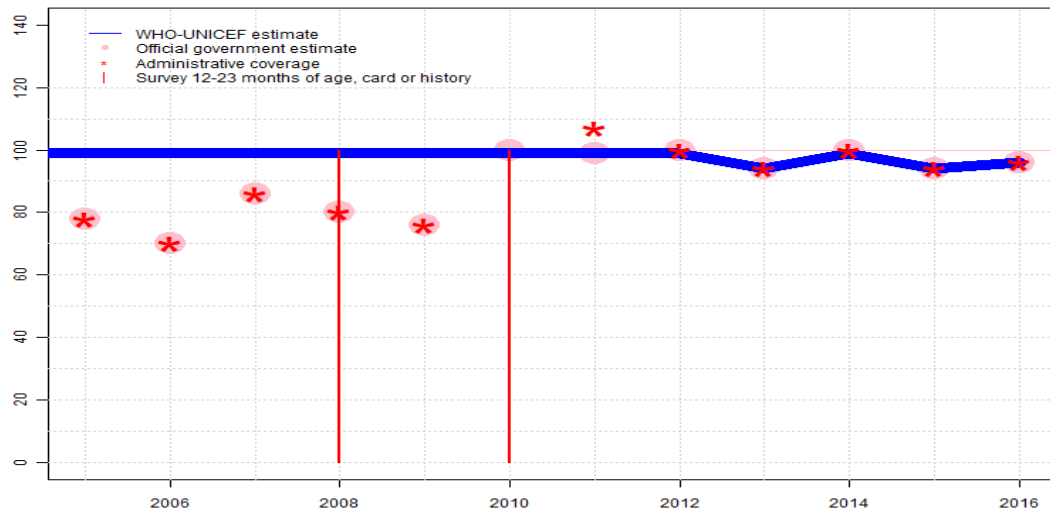
PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect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

CPV - BCG



Description:

- 2016: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. WHO and UNICEF recommend continued assessment of the routine monitoring system. Survey results (based on documented evidence by home-based records) support reported coverage levels. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 100 percent based on 1 survey(s). GoC=R+ S+ D+
- 2009: Reported data calibrated to 2008 and 2010 levels. Reported data excluded. Unexplained fluctuations in numerator and denominator levels. Estimate challenged by: R-
- 2008: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 100 percent based on 1 survey(s). Estimate challenged by: R-
- 2007: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-
- 2006: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: D-R-
- 2005: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	99	99	99	99	99	99	99	99	94	99	94	96
Estimate GoC	•	•	•	•	•	•••	•••	•••	••	•	••	••
Official	78	70	86	80	76	100	99	100	94	100	94	96
Administrative	78	70	86	80	76	NA	107	100	94	100	94	96
Survey	NA	NA	NA	100	NA	100	NA	NA	NA	NA	NA	NA

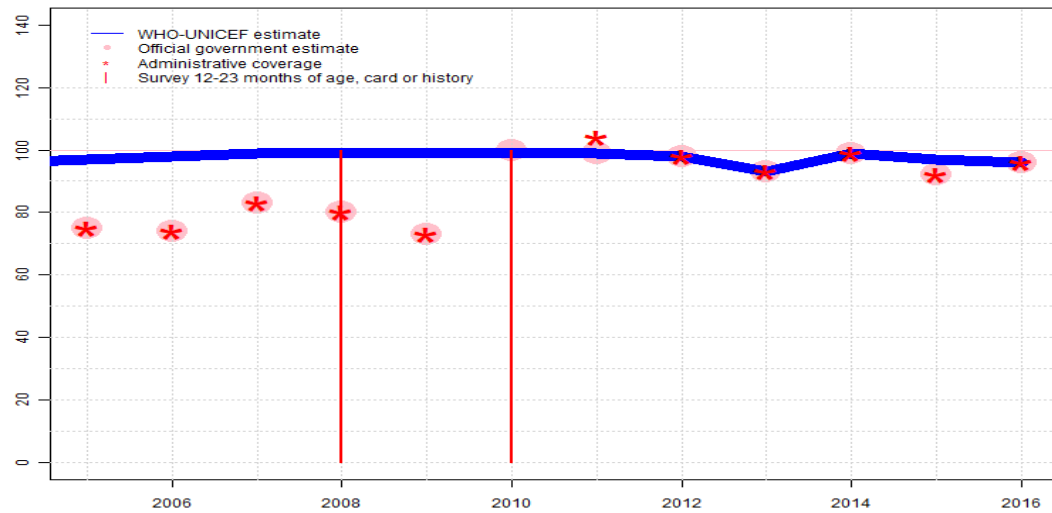
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2015 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.

Cabo Verde - DTP1

CPV - DTP1



Description:

- 2016: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: DTP1 coverage estimated based on DTP3 coverage of 93. Estimate challenged by: R-
- 2014: Estimate based on coverage reported by national government. WHO and UNICEF recommend continued assessment of the routine monitoring system. Survey results (based on documented evidence by home-based records) support reported coverage levels. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 100 percent based on 1 survey(s). GoC=R+ S+ D+
- 2009: Reported data calibrated to 2008 and 2010 levels. Reported data excluded. Unexplained fluctuations in numerator and denominator levels. Estimate challenged by: D-R-
- 2008: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 100 percent based on 1 survey(s). Estimate challenged by: R-
- 2007: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-
- 2006: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-
- 2005: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	97	98	99	99	99	99	99	98	93	99	97	96
Estimate GoC	•	•	•	•	•	•••	•••	•••	••	•	•	••
Official	75	74	83	80	73	100	99	98	93	99	92	96
Administrative	75	74	83	80	73	NA	104	98	93	99	92	96
Survey	NA	NA	NA	100	NA	100	NA	NA	NA	NA	NA	NA

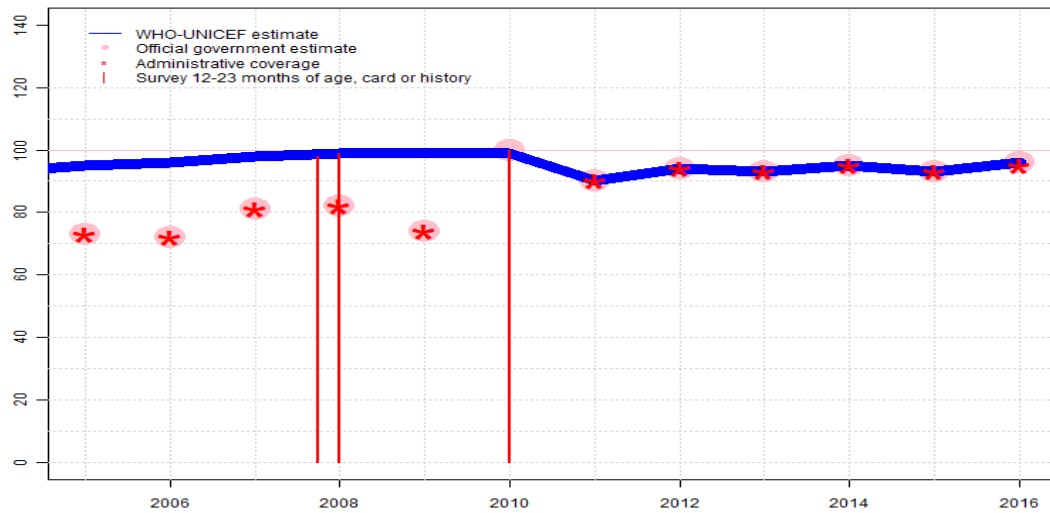
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2015 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.

Cabo Verde - DTP3

CPV - DTP3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	95	96	98	99	99	99	90	94	93	95	93	96
Estimate GoC	•	•	•	•	•	•	•••	•••	••	•	••	••
Official	73	72	81	82	74	100	90	94	93	95	93	96
Administrative	73	72	81	82	74	NA	90	94	93	95	93	95
Survey	NA	NA	NA	*	NA	100	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: 2015 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.

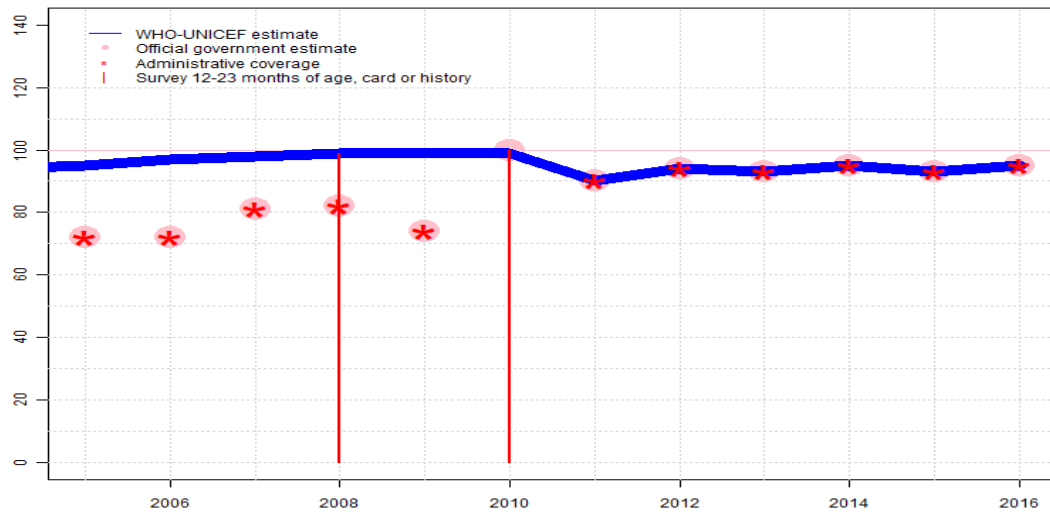
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2016: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. WHO and UNICEF recommend continued assessment of the routine monitoring system. Survey results (based on documented evidence by home-based records) support reported coverage levels. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 100 percent based on 1 survey(s). Estimate challenged by: D-
- 2009: Reported data calibrated to 2008 and 2010 levels. Reported data excluded. Unexplained fluctuations in numerator and denominator levels. Estimate challenged by: D-R-
- 2008: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 99 percent based on 2 survey(s). Estimate challenged by: R-
- 2007: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-
- 2006: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-S-
- 2005: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-S-

Cabo Verde - Pol3

CPV - Pol3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	95	97	98	99	99	99	90	94	93	95	93	95
Estimate GoC	•	•	•	•	•	•	•••	•••	••	•	••	••
Official	72	72	81	82	74	100	90	94	93	95	93	95
Administrative	72	72	81	82	74	NA	90	94	93	95	93	95
Survey	NA	NA	NA	99	NA	100	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: 2015 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.

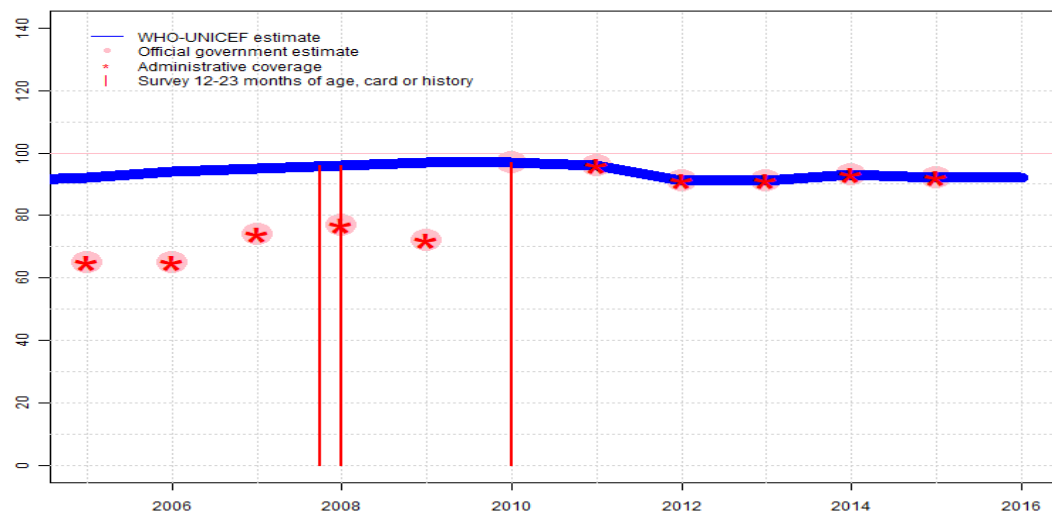
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2016: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. WHO and UNICEF recommend continued assessment of the routine monitoring system. Survey results (based on documented evidence by home-based records) support reported coverage levels. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 100 percent based on 1 survey(s). Estimate challenged by: D-
- 2009: Reported data calibrated to 2008 and 2010 levels. Reported data excluded. Unexplained fluctuations in numerator and denominator levels. Estimate challenged by: D-R-
- 2008: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 99 percent based on 1 survey(s). Estimate challenged by: R-
- 2007: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-
- 2006: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-S-
- 2005: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-S-

Cabo Verde - MCV1

CPV - MCV1



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	92	94	95	96	97	97	96	91	91	93	92	92
Estimate GoC	•	•	•	•	•	•••	•••	•••	••	•	••	•
Official	65	65	74	77	72	97	96	91	91	93	92	NA
Administrative	65	65	74	77	72	NA	96	91	91	93	92	NA
Survey	NA	NA	NA	*	NA	97	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: 2015 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.

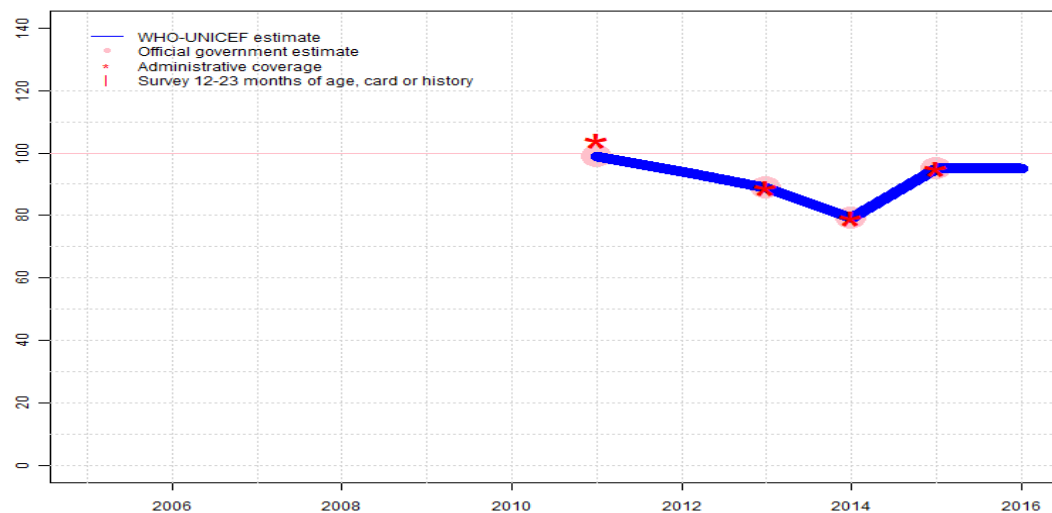
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2016: Estimate based on extrapolation from data reported by national government. GoC=No accepted empirical data
- 2015: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. WHO and UNICEF recommend continued assessment of the routine monitoring system. Survey results (based on documented evidence by home-based records) support reported coverage levels. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). GoC=R+ S+ D+
- 2009: Reported data calibrated to 2008 and 2010 levels. Reported data excluded. Unexplained fluctuations in numerator and denominator levels. Estimate challenged by: D-R-
- 2008: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 96 percent based on 2 survey(s). Estimate challenged by: R-
- 2007: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: D-R-
- 2006: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: D-R-
- 2005: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: D-R-

Cabo Verde - MCV2

CPV - MCV2



Description:

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

2016: Estimate based on extrapolation from data reported by national government. GoC=No accepted empirical data

2015: Estimate based on coverage reported by national government. Programme reports intensification activities among children aged 15-24 months which may explain the exceptional year-to-year increase between 2014 and 2015. GoC=R+ D+

2014: Estimate based on coverage reported by national government. WHO and UNICEF recommend continued assessment of the routine monitoring system. Survey results (based on documented evidence by home-based records) support reported coverage levels. GoC=R+ D+

2013: Estimate based on coverage reported by national government. GoC=R+ D+

2012: Estimate based on interpolation between reported values. GoC=No accepted empirical data

2011: Estimate based on coverage reported by national government. Second dose of measles containing vaccine introduced during 2010. Reporting started in 2011. GoC=R+ D+

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	99	94	89	79	95	95
Estimate GoC	NA	NA	NA	NA	NA	NA	●●	●	●●	●●	●●	●
Official	NA	NA	NA	NA	NA	NA	99	NA	89	79	95	NA
Administrative	NA	NA	NA	NA	NA	NA	104	NA	89	79	95	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

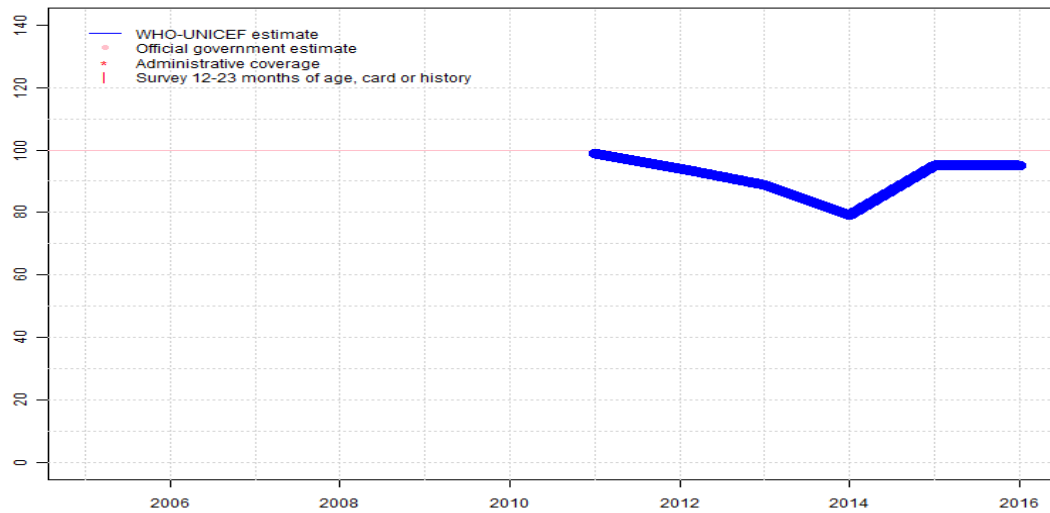
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 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.

Cabo Verde - RCV1

CPV - RCV1



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	99	94	89	79	95	95
Estimate GoC	NA	NA	NA	NA	NA	NA	••	•	••	••	••	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 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.

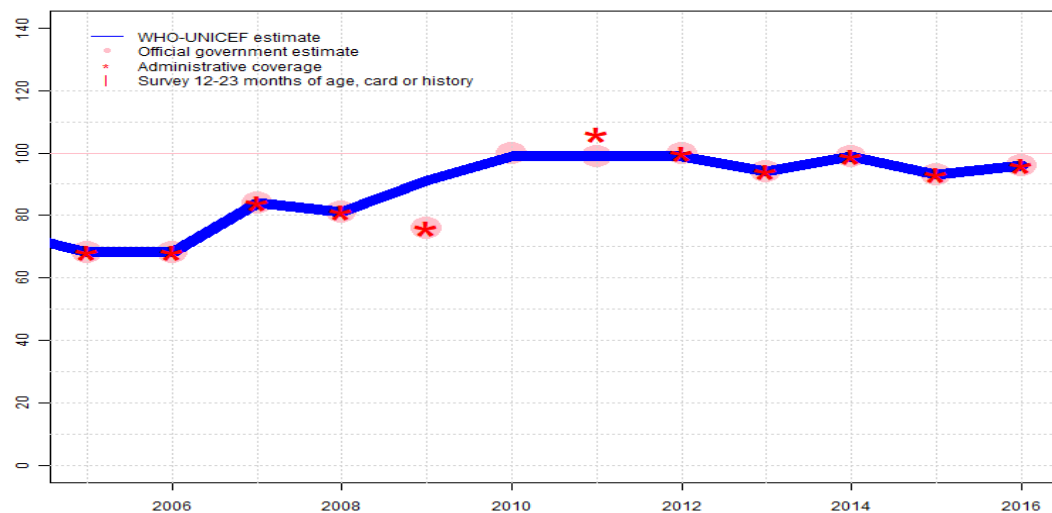
Description:

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.

- 2016: First dose of rubella vaccine given with second dose of measles containing vaccine. Estimate based on MCV2 estimate GoC=No accepted empirical data
- 2015: First dose of rubella vaccine given with second dose of measles containing vaccine. Estimate based on MCV2 estimate GoC=R+ D+
- 2014: First dose of rubella vaccine given with second dose of measles containing vaccine. Estimate based on MCV2 estimate WHO and UNICEF recommend continued assessment of the routine monitoring system. Survey results (based on documented evidence by home-based records) support reported coverage levels. GoC=R+ D+
- 2013: First dose of rubella vaccine given with second dose of measles containing vaccine. Estimate based on MCV2 estimate GoC=R+ D+
- 2012: First dose of rubella vaccine given with second dose of measles containing vaccine. Estimate based on MCV2 estimate GoC=No accepted empirical data
- 2011: First dose of rubella vaccine given with second dose of measles containing vaccine. Estimate based on MCV2 estimate Rubella containing vaccine introduced during 2010. Reporting started in 2011. GoC=R+ D+

Cabo Verde - HepBB

CPV - HepBB



Description:

- 2016: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. WHO and UNICEF recommend continued assessment of the routine monitoring system. Survey results (based on documented evidence by home-based records) support reported coverage levels. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. GoC=R+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on interpolation between reported values. Reported data excluded. Unexplained fluctuations in numerator and denominator levels. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	68	68	84	81	91	99	99	99	94	99	93	96
Estimate GoC	•	•	•	•	••	••	••	••	••	•	••	••
Official	68	68	84	81	76	100	99	100	94	99	93	96
Administrative	68	68	84	81	76	NA	106	100	94	99	93	96
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

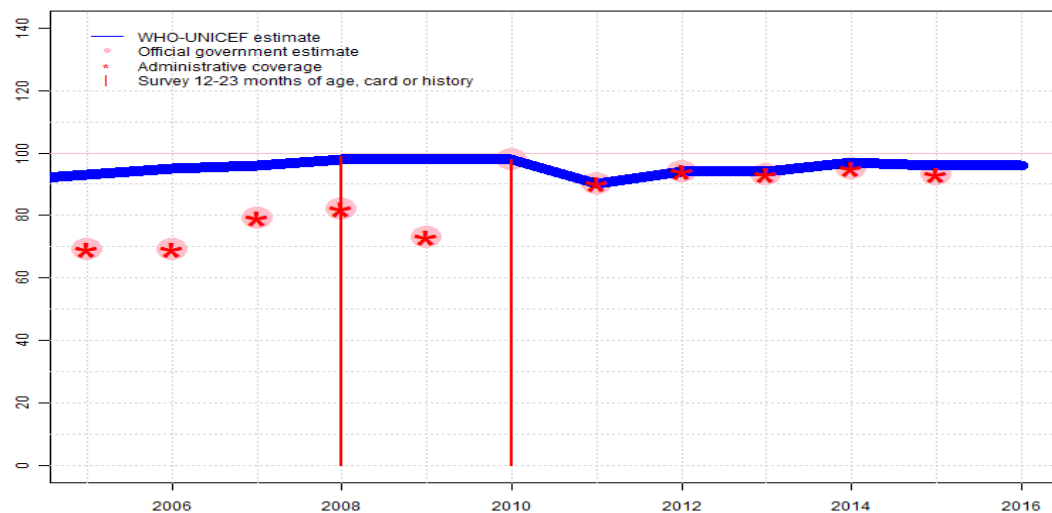
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 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.

Cabo Verde - HepB3

CPV - HepB3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	93	95	96	98	98	98	90	94	94	97	96	96
Estimate GoC	•	•	•	•	•	•	•••	•	•	•	•	•
Official	69	69	79	82	73	98	90	94	93	95	93	NA
Administrative	69	69	79	82	73	NA	90	94	93	95	93	NA
Survey	NA	NA	NA	99	NA	98	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: 2015 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.

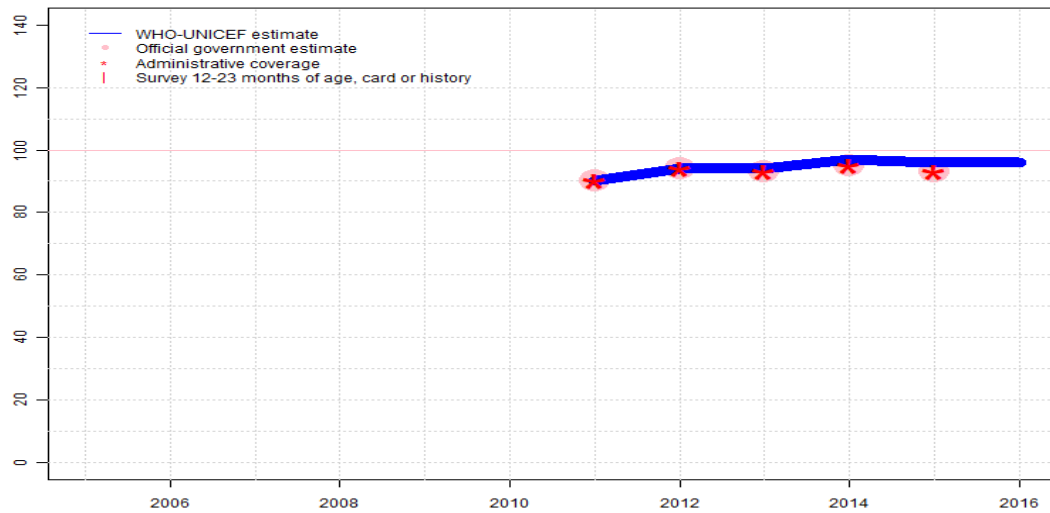
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2016: Estimate of 96 percent assigned by working group. Estimate is based on estimated DTP3 coverage. GoC=No accepted empirical data
- 2015: Reported data calibrated to 2011 and 2016 levels. Estimate of 96 percent changed from previous revision value of 93 percent. Estimate challenged by: R-
- 2014: Reported data calibrated to 2011 and 2016 levels. WHO and UNICEF recommend continued assessment of the routine monitoring system. Survey results (based on documented evidence by home-based records) support reported coverage levels. Estimate of 97 percent changed from previous revision value of 95 percent. Estimate challenged by: D-R-
- 2013: Reported data calibrated to 2011 and 2016 levels. Estimate of 94 percent changed from previous revision value of 93 percent. Estimate challenged by: R-
- 2012: Reported data calibrated to 2011 and 2016 levels. Estimate challenged by: R-
- 2011: Estimate is based on estimated DTP3 coverage. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). Estimate challenged by: D-
- 2009: Reported data calibrated to 2008 and 2010 levels. Reported data excluded. Unexplained fluctuations in numerator and denominator levels. Estimate challenged by: D-R-
- 2008: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 98 percent based on 1 survey(s). National Immunisation Coverage Survey. Cape Verde, 2009 card or history results of 99 percent modified for recall bias to 98 percent based on 1st dose card or history coverage of 99 percent, 1st dose card only coverage of 98 percent and 3d dose card only coverage of 97 percent. Estimate challenged by: R-
- 2007: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-
- 2006: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-S-
- 2005: Estimate based on interpolation between 2004 and 2008 levels. Fluctuation and nationally reported data suggests poor recording and reporting. Estimate challenged by: R-S-

Cabo Verde - Hib3

CPV - Hib3



Description:

- 2016: Estimate of 96 percent assigned by working group. Estimate is based on estimated DTP3 coverage. GoC=No accepted empirical data
- 2015: Reported data calibrated to 2011 and 2016 levels. Estimate of 96 percent changed from previous revision value of 93 percent. Estimate challenged by: R-
- 2014: Reported data calibrated to 2011 and 2016 levels. WHO and UNICEF recommend continued assessment of the routine monitoring system. Survey results (based on documented evidence by home-based records) support reported coverage levels. Estimate of 97 percent changed from previous revision value of 95 percent. Estimate challenged by: D-R-
- 2013: Reported data calibrated to 2011 and 2016 levels. Estimate of 94 percent changed from previous revision value of 93 percent. Estimate challenged by: R-
- 2012: Reported data calibrated to 2011 and 2016 levels. Estimate challenged by: R-
- 2011: Estimate is based on estimated DTP3 coverage. Hib vaccine was introduced in 2010. Reporting started in 2011. The presentation is DTP- HepB-Hib. GoC=R+ D+

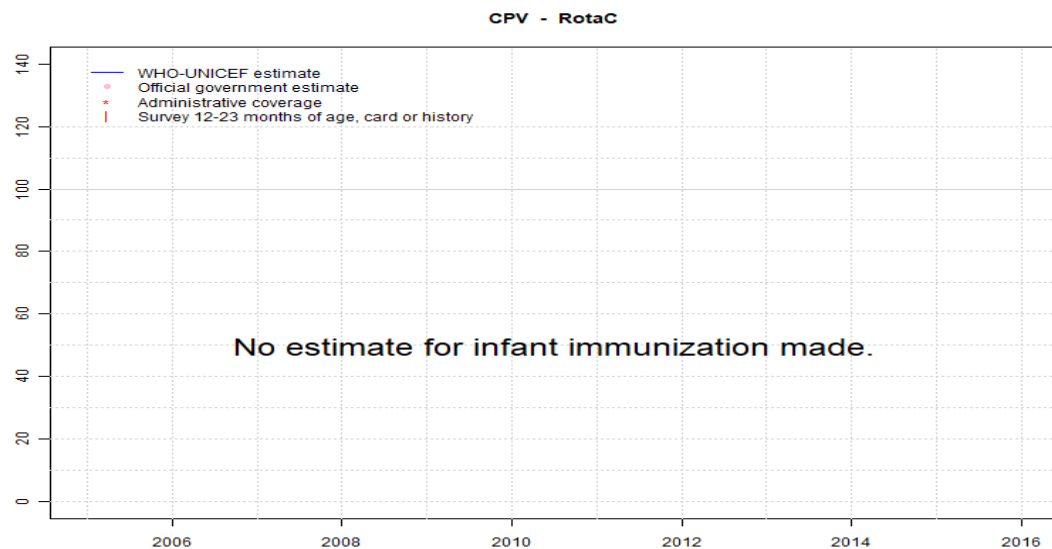
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	90	94	94	97	96	96
Estimate GoC	NA	NA	NA	NA	NA	NA	●●	●	●	●	●	●
Official	NA	NA	NA	NA	NA	NA	90	94	93	95	93	NA
Administrative	NA	NA	NA	NA	NA	NA	90	94	93	95	93	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 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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Cabo Verde - RotaC



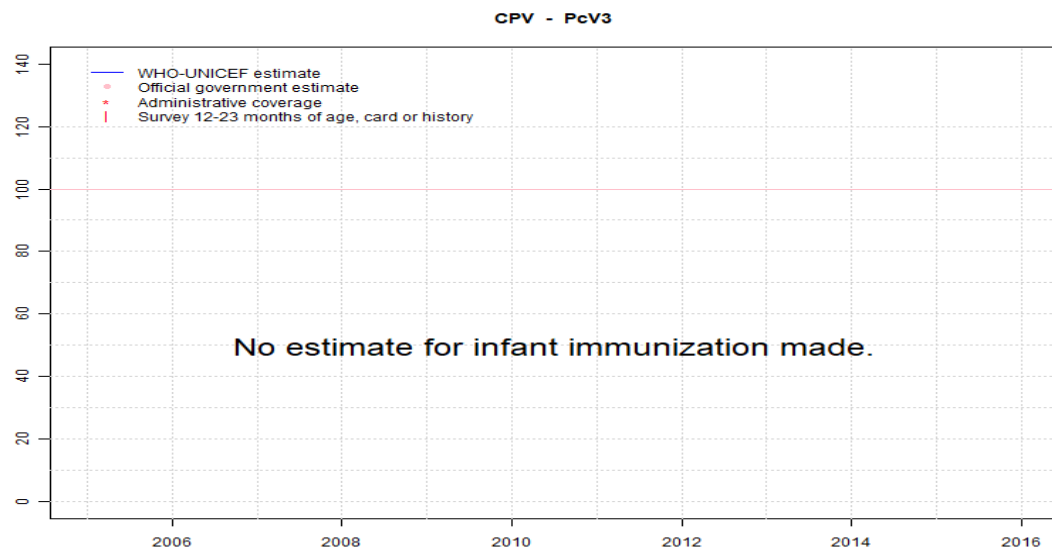
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 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.

Cabo Verde - PcV3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 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.

Cabo Verde - survey details

2014 Rapport Final de la Revue du PEV Cabo Verde

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	93	12-23 m	1696	99
DTP1	Card	93	12-23 m	1696	99
DTP3	Card	92	12-23 m	1696	99
HepB1	Card	93	12-23 m	1696	99
HepB3	Card	92	12-23 m	1696	99
HepBB	Card	68	12-23 m	1696	99
Hib1	Card	93	12-23 m	1696	99
Hib3	Card	92	12-23 m	1696	99
MCV1	Card	90	12-23 m	1696	99

2010 Enquête de couverture vaccinale, Cap-Vert 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	100	12-23 m	1598	98
DTP1	Card or History	100	12-23 m	1598	98
DTP3	Card or History	100	12-23 m	1598	98
HepB1	Card or History	100	12-23 m	1598	98
HepB3	Card or History	98	12-23 m	1598	98
MCV1	Card or History	97	12-23 m	1598	98
Pol1	Card or History	100	12-23 m	1598	98
Pol3	Card or History	100	12-23 m	1598	98

2009 Enquête de couverture vaccinale de la 3ème dose de trois vaccins (contre la diphtérie, la coqueluche et le tétanos - DTC3) et la rougeole - Cap-Vert 2010

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
DTP3	Card	98	12-23 m	4458	100
MCV1	Card	94	12-23 m	4458	100

2008 Enquête de couverture vaccinale de la 3ème dose de trois vaccins (contre la diphtérie, la coqueluche et le tétanos - DTC3) et la rougeole - Le Cap-Vert 2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
DTP3	Card or History	98	12-23 m	1696	98
MCV1	Card or History	96	12-23 m	1696	98

2008 Inquérito nacional de cobertura vacinal. Cabo Verde, 2009.

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	98	12-23 m	1684	98
BCG	Card or History	100	12-23 m	1684	98
BCG	Scar	79	12-23 m	1684	98
DTP1	Card	98	12-23 m	1684	98
DTP1	Card or History	100	12-23 m	1684	98
DTP3	Card	97	12-23 m	1684	98
DTP3	Card or History	99	12-23 m	1684	98
HepB1	Card	98	12-23 m	1684	98
HepB1	Card or History	99	12-23 m	1684	98
HepB3	Card	97	12-23 m	1684	98
HepB3	Card or History	99	12-23 m	1684	98
MCV1	Card	94	12-23 m	1684	98
MCV1	Card or History	96	12-23 m	1684	98
Pol1	Card	98	12-23 m	1684	98
Pol1	Card or History	100	12-23 m	1684	98
Pol3	Card	97	12-23 m	1684	98
Pol3	Card or History	99	12-23 m	1684	98

2004 República de Cabo Verde, Inquérito de avaliação da cobertura vacinal 2005

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	99	12-23 m	1160	97
DTP1	Card	96	12-23 m	1160	97
DTP3	Card	93	12-23 m	1160	97
HepB1	Card	94	12-23 m	1160	97
HepB3	Card	91	12-23 m	1160	97
MCV1	Card	91	12-23 m	1160	97
Pol1	Card	96	12-23 m	1160	97

Cabo Verde - survey details

Pol3 Card 94 12-23 m 1160 97

2004 Segundo Inquérito Demográfico e de Saúde Reprodutiva, Cabo Verde, IDSR-II, 2005

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	99	12-23 m	-	100
DTP3	Card or History	85	12-23 m	-	100
MCV1	Card or History	75	12-23 m	-	100
Pol3	Card or History	85	12-23 m	-	100

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	96	12-23 m	436	81
DTP1	Card or History	94	12-23 m	436	81
DTP3	Card or History	84	12-23 m	436	81
HepB1	Card or History	75	12-23 m	436	81
HepB3	Card or History	71	12-23 m	436	81
MCV1	Card or History	89	12-23 m	436	81
Pol1	Card or History	94	12-23 m	436	81
Pol3	Card or History	82	12-23 m	436	81

1999 Capo Verde, Inquérito Nacional de Cobertura Vacinal, 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	92	12-23 m	208	94
DTP1	Card or History	93	12-23 m	208	94
DTP3	Card or History	86	12-23 m	208	94
MCV1	Card or History	80	12-23 m	208	94
Pol1	Card or History	93	12-23 m	208	94
Pol3	Card or History	86	12-23 m	208	94

2001 Capo Verde, Inquérito Nacional de Cobertura Vacinal, 2002

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