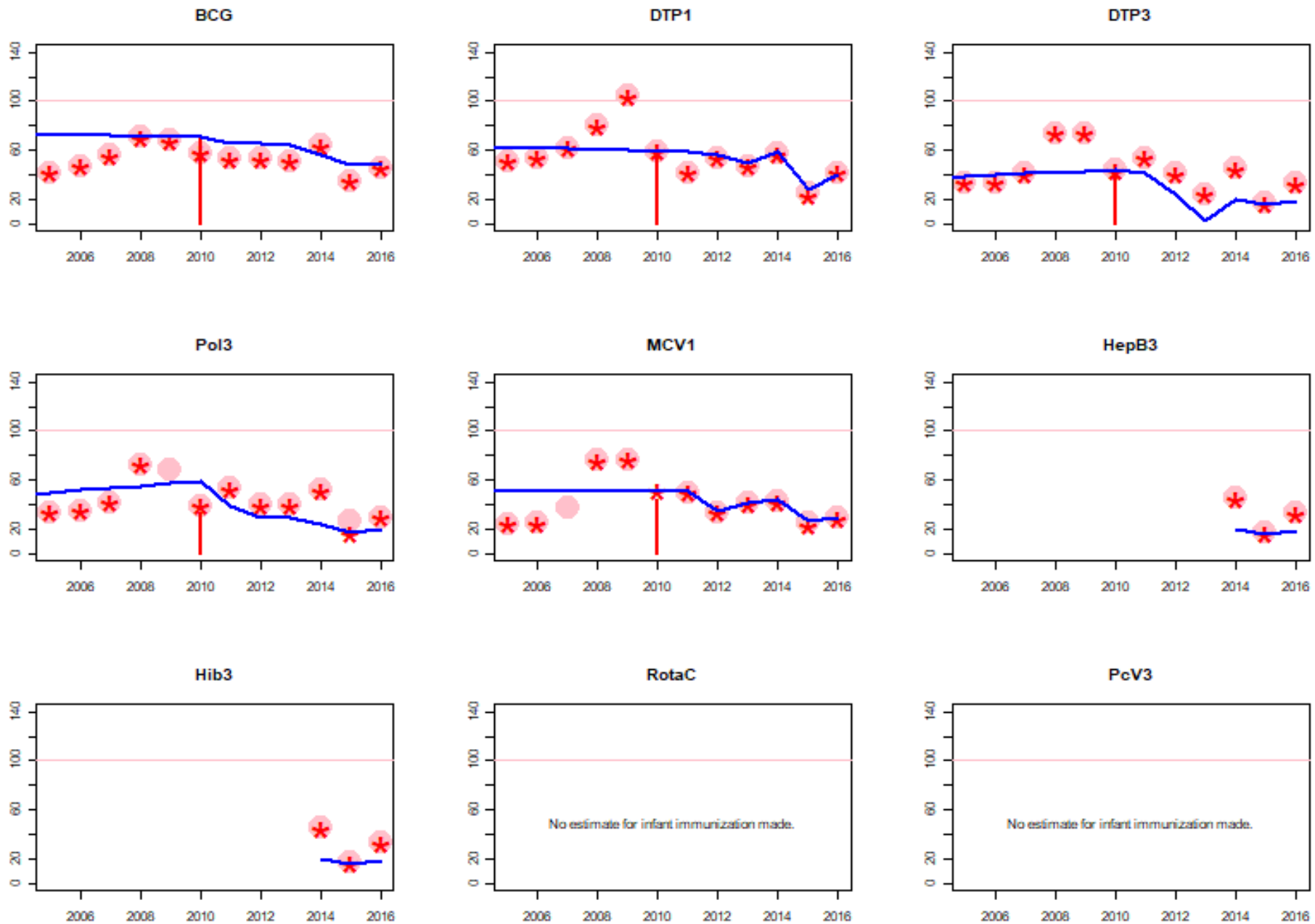


Equatorial Guinea: WHO and UNICEF estimates of immunization coverage: 2016 revision



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.

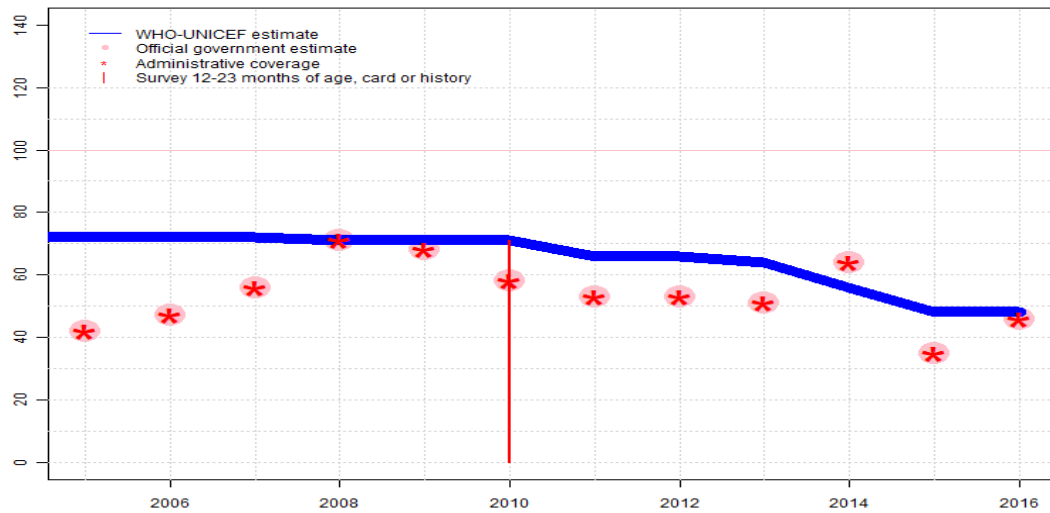
PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect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

GNQ - BCG



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	72	72	72	71	71	71	66	66	64	56	48	48
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	42	47	56	71	68	58	53	53	51	64	35	46
Administrative	42	47	56	71	68	58	53	53	51	64	35	46
Survey	NA	NA	NA	NA	NA	71	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.

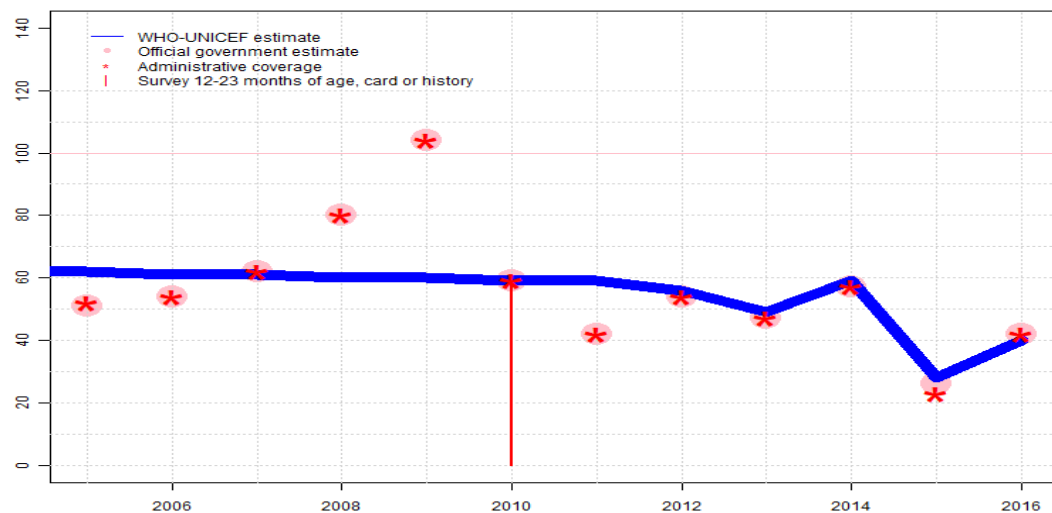
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2016: Reported data calibrated to 2010 levels. Reported data excluded due to unexplained sudden change in coverage from 35 level to 46 percent. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2015: Reported data calibrated to 2010 levels. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. Programme reports district level stock-out of unknown duration. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2014: Reported data calibrated to 2010 levels. Reported data excluded due to an unexplained increase from 51 percent to 64 percent with decrease 35 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2013: Reported data calibrated to 2010 levels. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2012: Reported data calibrated to 2010 levels. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2011: Reported data calibrated to 2010 levels. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 71 percent based on 1 survey(s). GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2009: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: R-
- 2008: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: R-
- 2007: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-
- 2006: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-
- 2005: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-

Equatorial Guinea - DTP1

GNQ - DTP1



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	62	61	61	60	60	59	59	56	49	59	28	40
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	51	54	62	80	104	59	42	54	47	57	26	42
Administrative	52	54	62	80	104	59	42	54	47	57	23	42
Survey	NA	NA	NA	NA	NA	59	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:

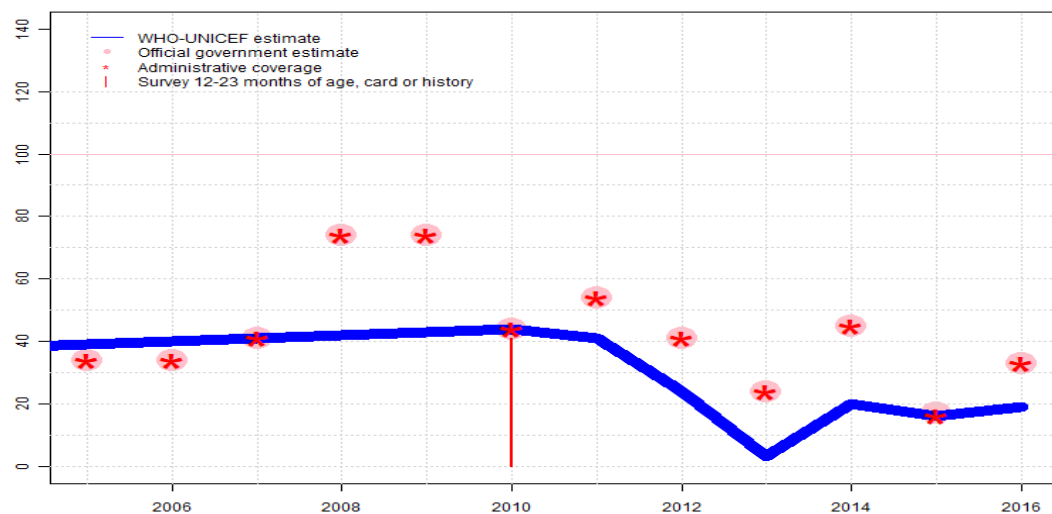
- 2016: Estimated coverage based on relative increase observed in reported number of children vaccinated applied to estimated coverage from 2015. Reported data excluded due to unexplained sudden change in coverage from 26 level to 42 percent. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2015: Reported data calibrated to 2011 levels. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. Programme reports four month stock-out of DTP-HepB-Hib vaccine. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2014: Reported data calibrated to 2011 levels. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2013: Reported data calibrated to 2011 levels. Decline in coverage reflects six month stockout at national level. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2012: Reported data calibrated to 2011 levels. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2011: Estimate of 59 percent assigned by working group. Estimate based on survey results. Reported data excluded due to decline in reported coverage from 59 percent to 42 percent with increase to 54 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 59 percent based on 1 survey(s). The use of pentavalent DTP-HepB-Hib combination vaccine or trivalent DTP vaccine is unclear based on inconsistent information received by WHO and UNICEF from the programme, the 2011 DHS report and review of existing home-based vaccination records used at the time. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2009: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Reported data excluded because 104 percent greater than 100 percent. Reported data excluded due to an unexplained increase from 80 percent to 104 percent with decrease 59 percent. Estimate challenged by: D-R-
- 2008: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-
- 2007: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: R-

Equatorial Guinea - DTP1

- 2006: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-
- 2005: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-

Equatorial Guinea - DTP3

GNQ - DTP3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	39	40	41	42	43	44	41	24	3	20	16	19
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	34	34	41	74	74	44	54	41	24	45	17	33
Administrative	34	34	41	74	74	44	54	41	24	45	16	33
Survey	NA	NA	NA	NA	NA	41	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.

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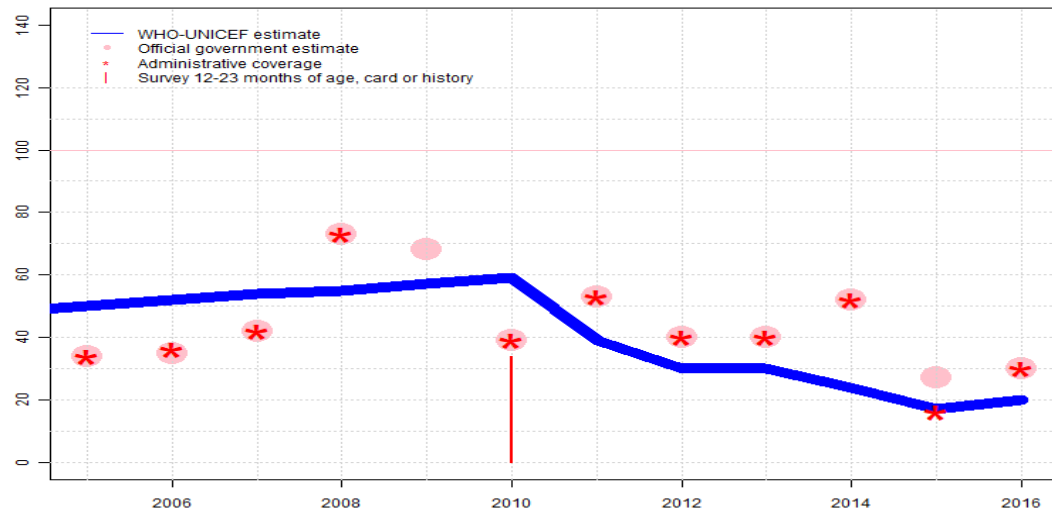
- 2016: Estimated coverage based on relative increase observed in reported number of children vaccinated applied to estimated coverage from 2015. Reported data excluded due to unexplained sudden change in coverage from 17 level to 33 percent. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2015: Estimate of 16 percent assigned by working group. Programme reports four month stock-out of DTP-HepB-Hib vaccine. Reported data excluded due to decline in reported coverage from 45 percent to 17 percent with increase to 33 percent. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2014: Reported data calibrated to 2011 and 2015 levels. Recovery from stock-out during prior year. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2013: Reported data calibrated to 2011 and 2015 levels. Decline in coverage reflects six month stockout at national level. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2012: Reported data calibrated to 2011 and 2015 levels. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2011: Estimate of 41 percent assigned by working group. Estimate based on survey results. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 54 percent based on 1 survey(s). Equatorial Guinea Demographic and Health Survey 2011 card or history results of 41 percent modified for recall bias to 54 percent based on 1st dose card or history coverage of 59 percent, 1st dose card only coverage of 33 percent and 3d dose card only coverage of 30 percent. The use of pentavalent DTP-HepB-Hib combination vaccine or trivalent DTP vaccine is unclear based on inconsistent information received by WHO and UNICEF from the programme, the 2011 DHS report and review of existing home-based vaccination records used at the time. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2009: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-S-
- 2008: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-S-

Equatorial Guinea - DTP3

- 2007: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: R-
- 2006: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: R-
- 2005: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: R-

Equatorial Guinea - Pol3

GNQ - Pol3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	50	52	54	55	57	59	39	30	30	24	17	20
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	34	35	42	73	68	39	53	40	40	52	27	30
Administrative	34	36	42	73	NA	39	53	40	40	52	16	30
Survey	NA	NA	NA	NA	NA	34	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:

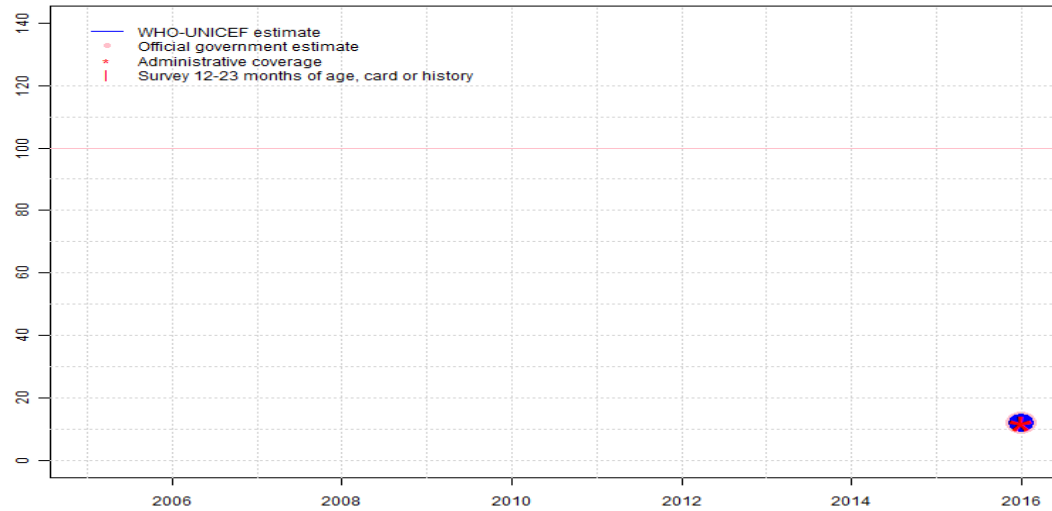
- 2016: Reported data calibrated to 2011 levels. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2015: Reported data calibrated to 2011 levels. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. . GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2014: Reported data calibrated to 2011 levels. Reported data excluded due to an unexplained increase from 40 percent to 52 percent with decrease 27 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2013: Reported data calibrated to 2011 levels. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2012: Reported data calibrated to 2011 levels. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2011: Estimate of 39 percent assigned by working group. Estimate based on survey results. Reported data excluded due to an unexplained increase from 39 percent to 53 percent with decrease 40 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2010: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 59 percent based on 1 survey(s). Equatorial Guinea Demographic and Health Survey 2011 card or history results of 34 percent modified for recall bias to 59 percent based on 1st dose card or history coverage of 64 percent, 1st dose card only coverage of 35 percent and 3d dose card only coverage of 32 percent. Reported data excluded due to decline in reported coverage from 68 percent to 39 percent with increase to 53 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2009: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: R-
- 2008: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-
- 2007: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-
- 2006: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-

Equatorial Guinea - Pol3

2005: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-

Equatorial Guinea - IPV1

GNQ - IPV1



Description:

2016: Estimate based on coverage reported by national government. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. IPV vaccine introduced in 2016. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

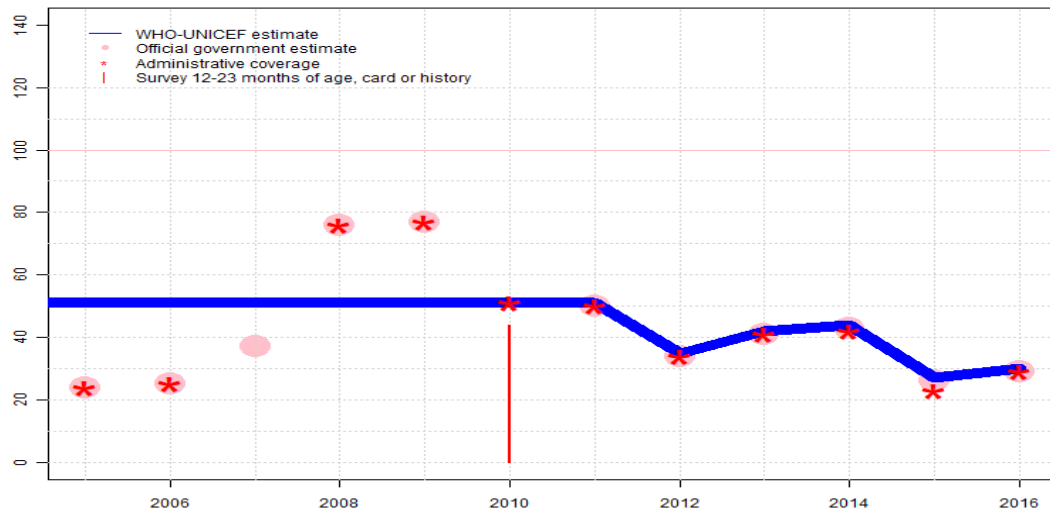
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- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While 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.

Equatorial Guinea - MCV1

GNQ - MCV1



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	51	51	51	51	51	51	51	35	42	44	27	30
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	24	25	37	76	77	NA	50	34	41	43	26	29
Administrative	24	25	NA	76	77	51	50	34	41	42	23	29
Survey	NA	NA	NA	NA	NA	44	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.

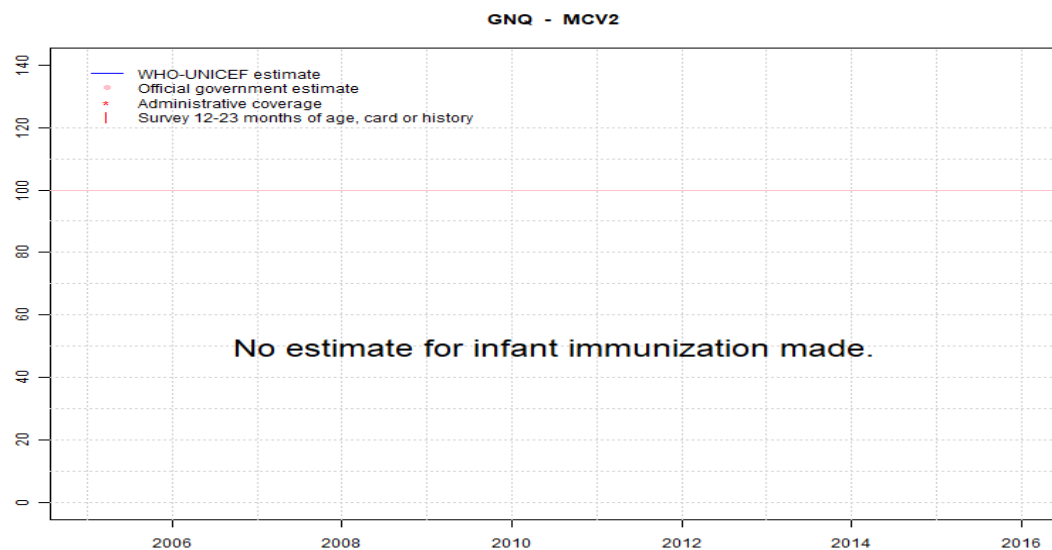
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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: Reported data calibrated to 2011 levels. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2015: Reported data calibrated to 2011 levels. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. . GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2014: Reported data calibrated to 2011 levels. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2013: Reported data calibrated to 2011 levels. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2012: Reported data calibrated to 2011 levels. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2011: Estimate of 51 percent assigned by working group. Estimate based on survey results. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2010: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 44 percent based on 1 survey(s). GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2009: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-
- 2008: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-
- 2007: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: R-
- 2006: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-
- 2005: Estimate based on interpolation between 1999 and 2010 levels. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-

Equatorial Guinea - MCV2



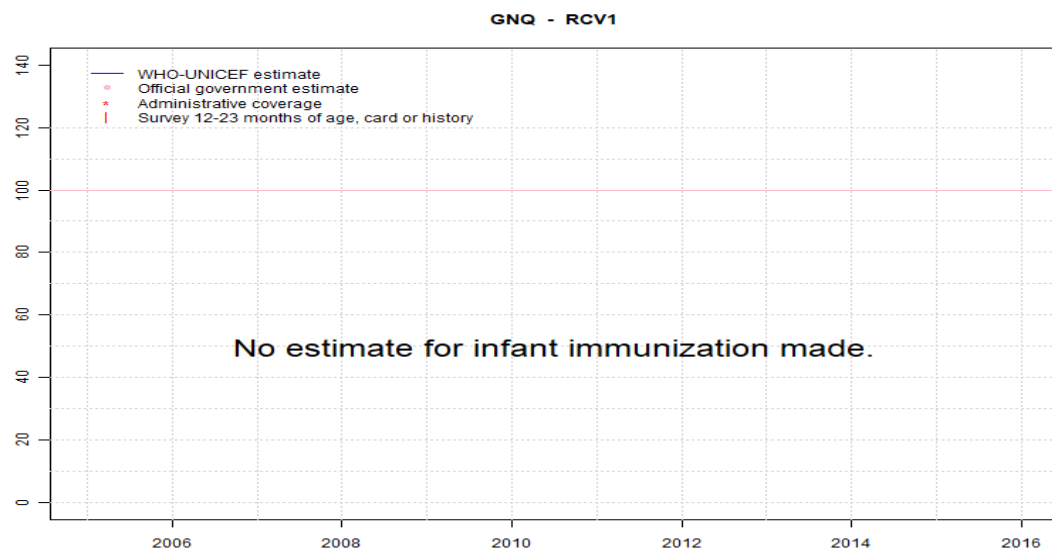
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

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Equatorial Guinea - RCV1



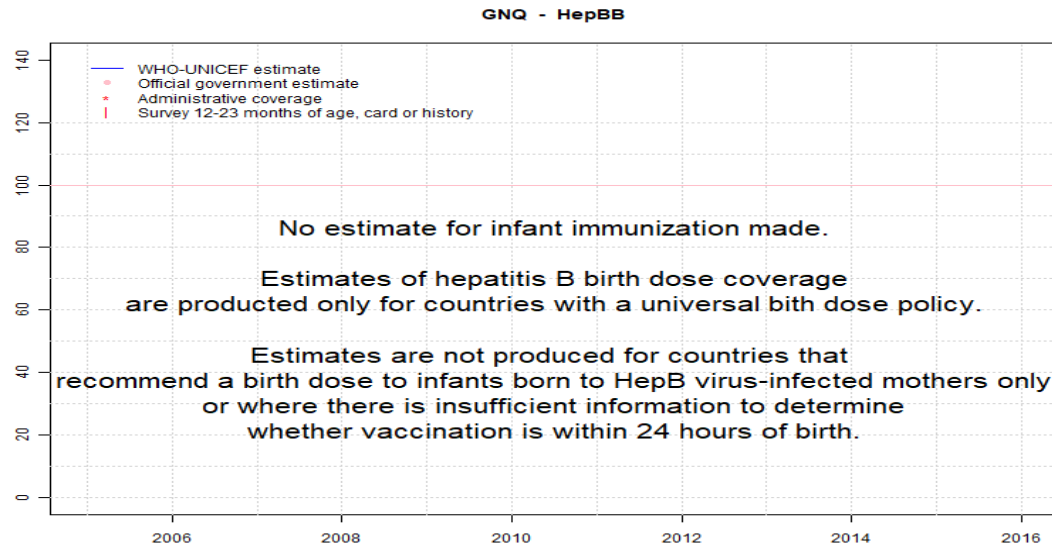
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

Equatorial Guinea - HepBB



	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

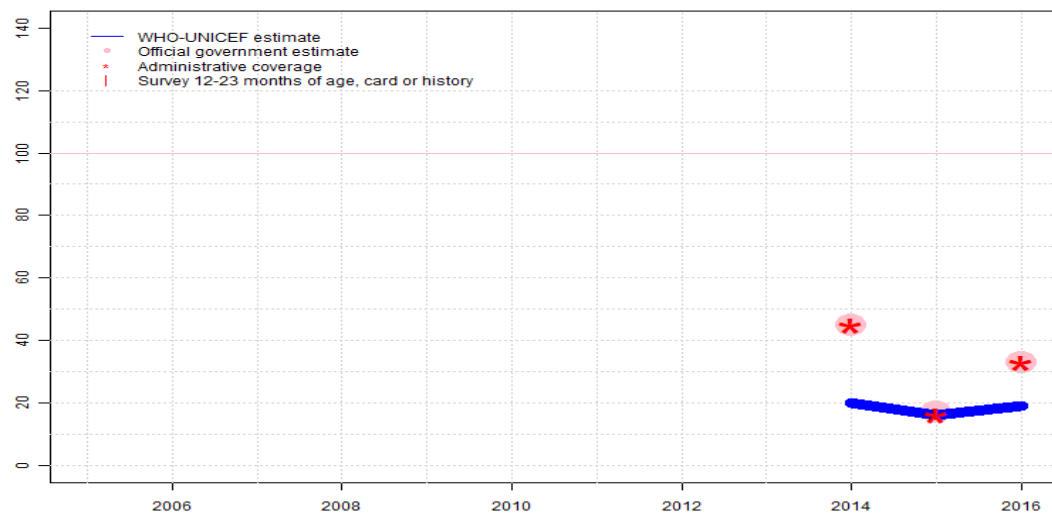
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Equatorial Guinea - HepB3

GNQ - HepB3



Description:

- 2016: Estimated coverage based on relative increase observed in reported number of children vaccinated applied to estimated coverage from 2015. Reported data excluded due to unexplained sudden change in coverage from 17 level to 33 percent. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2015: Estimate of 16 percent assigned by working group. Programme reports four month stock-out of DTP-HepB-Hib vaccine. Estimate follows DTP level. Reported data excluded due to decline in reported coverage from 45 percent to 17 percent with increase to 33 percent. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2014: Estimate of 20 percent assigned by working group. HepB containing vaccine introduced during 2013 in pentavalent DTP-HepB-Hib. Reporting began during 2014. Estimate is based on estimated DTP coverage level. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	16	19
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	45	17	33
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	45	16	33
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

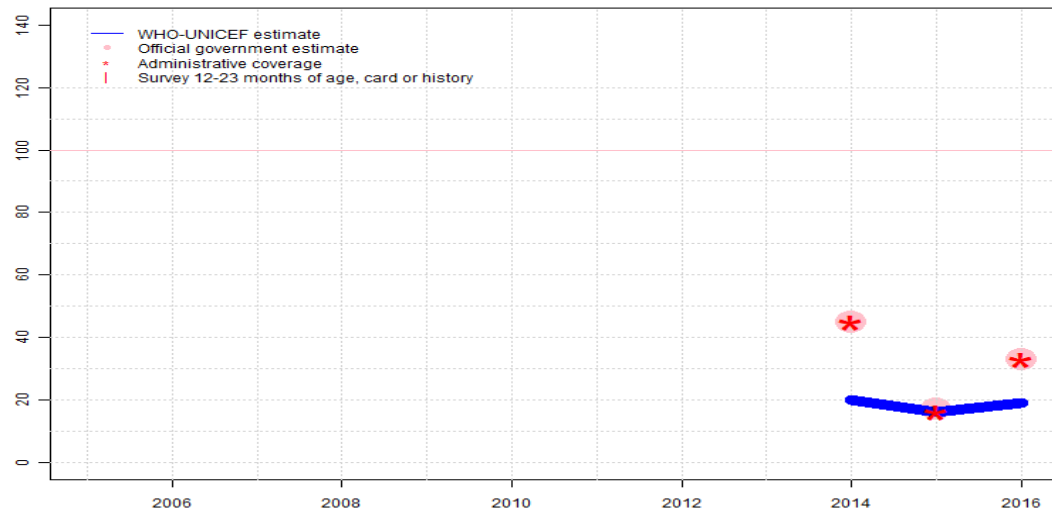
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Equatorial Guinea - Hib3

GNQ - Hib3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	16	19
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	45	17	33
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	45	16	33
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.

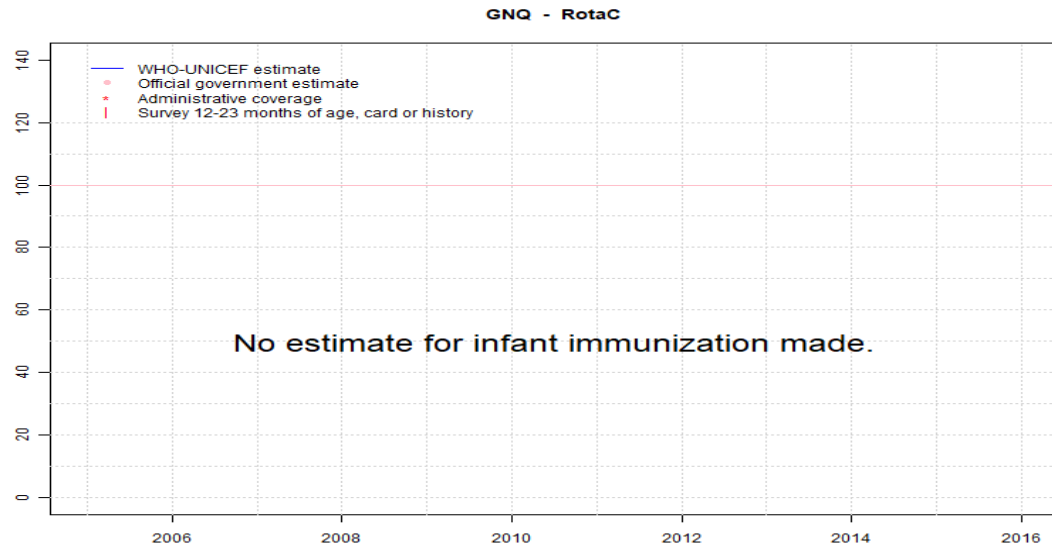
Description:

2016: Estimated coverage based on relative increase observed in reported number of children vaccinated applied to estimated coverage from 2015. Reported data excluded due to unexplained sudden change in coverage from 17 level to 33 percent. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.

2015: Estimate of 16 percent assigned by working group. Programme reports four month stock-out of DTP-HepB-Hib vaccine. Estimate follows DTP level. Reported data excluded due to decline in reported coverage from 45 percent to 17 percent with increase to 33 percent. Fluctuations in reported data over time suggest poor quality administrative recording and reporting systems. Unexplained increase of 33 percentage in target population between 2014 and 2016. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.

2014: Estimate of 20 percent assigned by working group. Hib containing vaccine introduced during 2013 in pentavalent DTP-HepB-Hib. Reporting began during 2014. Estimate is based on estimated DTP coverage level. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.

Equatorial Guinea - RotaC



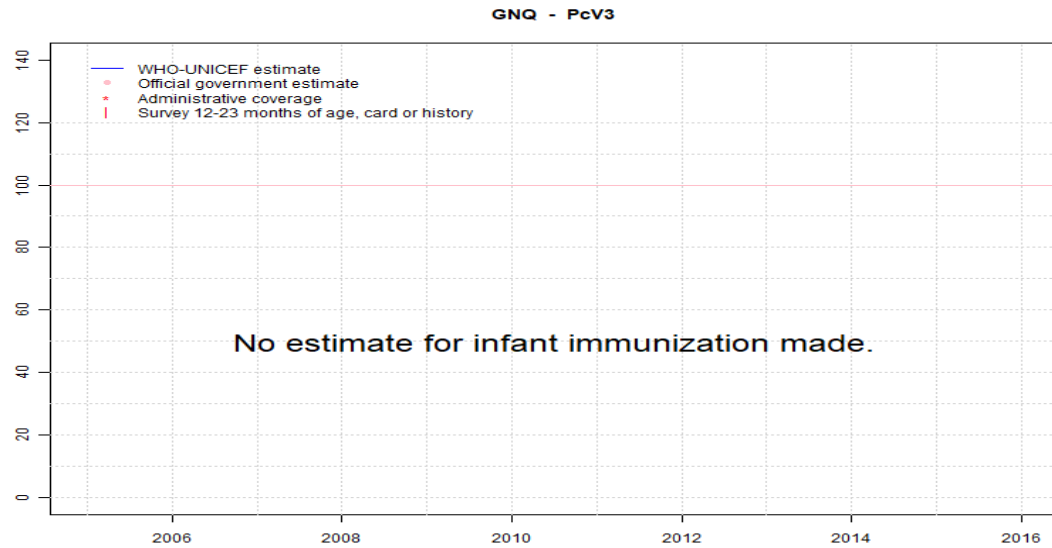
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

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Equatorial Guinea - 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.

Equatorial Guinea - survey details

2010 Guinée Équatoriale Enquête Démographique et de Santé 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	71	12-23 m	529	37
BCG	Card	37	12-23 m	197	37
BCG	Card or History	71	12-23 m	529	37
BCG	History	34	12-23 m	332	37
DTP1	C or H <12 months	59	12-23 m	529	37
DTP1	Card	33	12-23 m	197	37
DTP1	Card or History	59	12-23 m	529	37
DTP1	History	26	12-23 m	332	37
DTP3	C or H <12 months	41	12-23 m	529	37
DTP3	Card	30	12-23 m	197	37
DTP3	Card or History	41	12-23 m	529	37
DTP3	History	12	12-23 m	332	37
MCV1	C or H <12 months	40	12-23 m	529	37
MCV1	Card	27	12-23 m	197	37
MCV1	Card or History	44	12-23 m	529	37
MCV1	History	17	12-23 m	332	37
Pol1	C or H <12 months	64	12-23 m	529	37
Pol1	Card	35	12-23 m	197	37
Pol1	Card or History	64	12-23 m	529	37
Pol1	History	30	12-23 m	332	37
Pol3	C or H <12 months	33	12-23 m	529	37
Pol3	Card	32	12-23 m	197	37
Pol3	Card or History	34	12-23 m	529	37
Pol3	History	2	12-23 m	332	37

2009 Guinée Équatoriale Enquête Démographique et de Santé 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	71	24-35 m	499	37
DTP1	C or H <12 months	54	24-35 m	499	37
DTP3	C or H <12 months	31	24-35 m	499	37
HepB1	C or H <12 months	54	24-35 m	499	37
HepB3	C or H <12 months	31	24-35 m	499	37
Hib1	C or H <12 months	54	24-35 m	499	37
Hib3	C or H <12 months	31	24-35 m	499	37

MCV1	C or H <12 months	41	24-35 m	499	37
Pol1	C or H <12 months	63	24-35 m	499	37
Pol3	C or H <12 months	25	24-35 m	499	37

2008 Guinée Équatoriale Enquête Démographique et de Santé 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	66	36-47 m	460	37
DTP1	C or H <12 months	55	36-47 m	460	37
DTP3	C or H <12 months	32	36-47 m	460	37
HepB1	C or H <12 months	55	36-47 m	460	37
HepB3	C or H <12 months	32	36-47 m	460	37
Hib1	C or H <12 months	55	36-47 m	460	37
Hib3	C or H <12 months	32	36-47 m	460	37
MCV1	C or H <12 months	37	36-47 m	460	37
Pol1	C or H <12 months	59	36-47 m	460	37
Pol3	C or H <12 months	23	36-47 m	460	37

2007 Guinée Équatoriale Enquête Démographique et de Santé 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	62	48-59 m	399	37
DTP1	C or H <12 months	48	48-59 m	399	37
DTP3	C or H <12 months	27	48-59 m	399	37
HepB1	C or H <12 months	48	48-59 m	399	37
HepB3	C or H <12 months	27	48-59 m	399	37
Hib1	C or H <12 months	48	48-59 m	399	37
Hib3	C or H <12 months	27	48-59 m	399	37
MCV1	C or H <12 months	31	48-59 m	399	37
Pol1	C or H <12 months	56	48-59 m	399	37
Pol3	C or H <12 months	21	48-59 m	399	37

1999 Equatorial Guinea MICS 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	73	12-23 m	457	42

Equatorial Guinea - survey details

DTP1	Card or History	65	12-23 m	457	42	Pol1	Card or History	76	12-23 m	457	42
DTP3	Card or History	33	12-23 m	457	42	Pol3	Card or History	39	12-23 m	457	42
MCV1	Card or History	51	12-23 m	457	42						

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