

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.

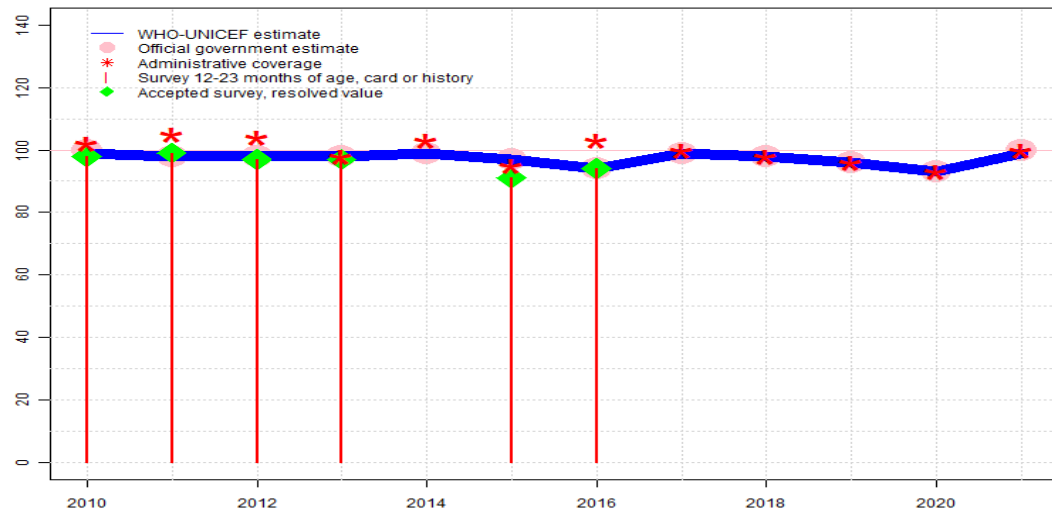
PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect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

GHA - BCG



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	99	98	98	98	99	97	94	99	98	96	93	99
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	100	98	98	98	99	97	94	99	98	96	93	100
Administrative	102	105	104	98	103	95	103	100	98	96	93	100
Survey	98	99	97	97	NA	91	94	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: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

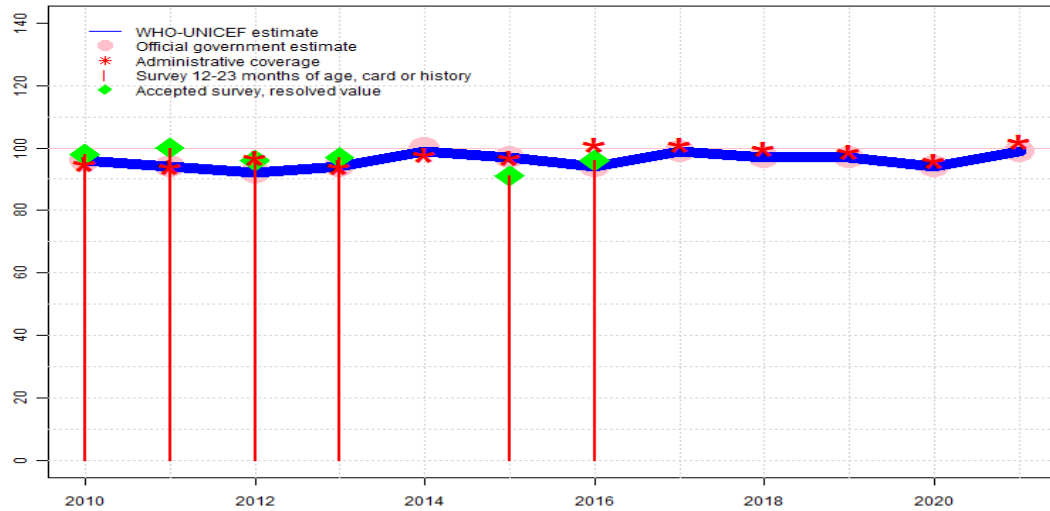
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2021: Estimate based on coverage reported by national government. Programme notes use of new target population estimates from 2021 Population and Housing Census, which suggest lower values than those indicated by projections from the prior census. Estimate challenged by: D-
- 2020: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2019: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2016: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Official estimate based on 2017 EPI coverage survey results. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 91 percent based on 1 survey(s). Reported official government coverage based on 2014 DHS results. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 99 percent based on 1 survey(s). Estimate challenged by: 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-

Ghana - DTP1

GHA - DTP1



Description:

- 2021: Estimate based on coverage reported by national government. Programme notes use of new target population estimates from 2021 Population and Housing Census, which suggest lower values than those indicated by projections from the prior census. Estimate challenged by: D-
- 2020: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2019: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2016: Estimate based on coverage reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). Official estimate based on 2017 EPI coverage survey results. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 91 percent based on 1 survey(s). Reported official government coverage based on 2014 DHS results. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). Estimate challenged by: D-
- 2011: 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-
- 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-

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	96	94	92	94	99	97	94	99	97	97	94	99
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	96	94	92	94	100	97	94	99	97	97	94	99
Administrative	95	94	97	94	98	97	101	101	100	99	96	102
Survey	98	100	96	97	NA	91	96	NA	NA	NA	NA	NA

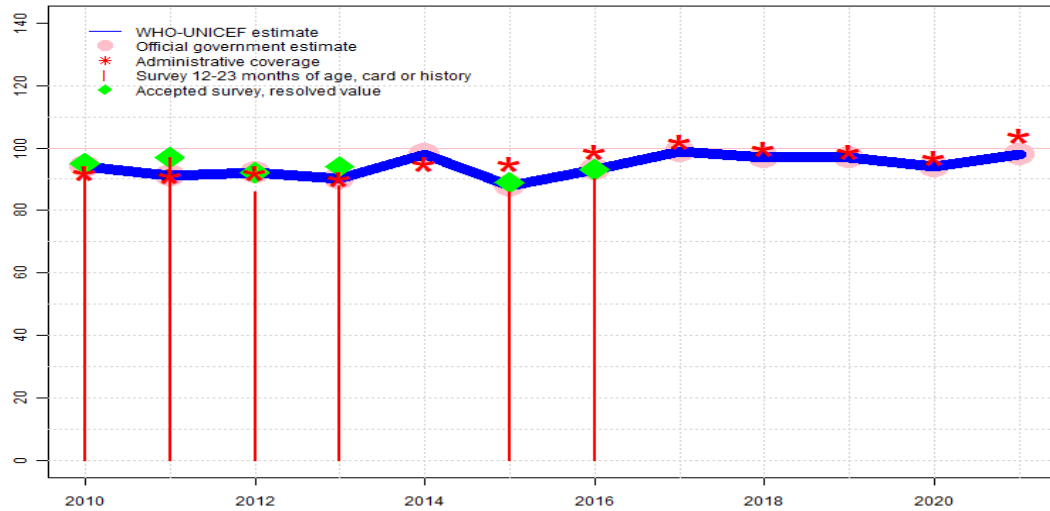
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Ghana - DTP3

GHA - DTP3



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	94	91	92	90	98	88	93	99	97	97	94	98
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	94	91	92	90	98	88	93	99	97	97	94	98
Administrative	92	91	92	90	95	95	99	102	100	99	97	104
Survey	93	97	86	88	NA	86	90	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: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

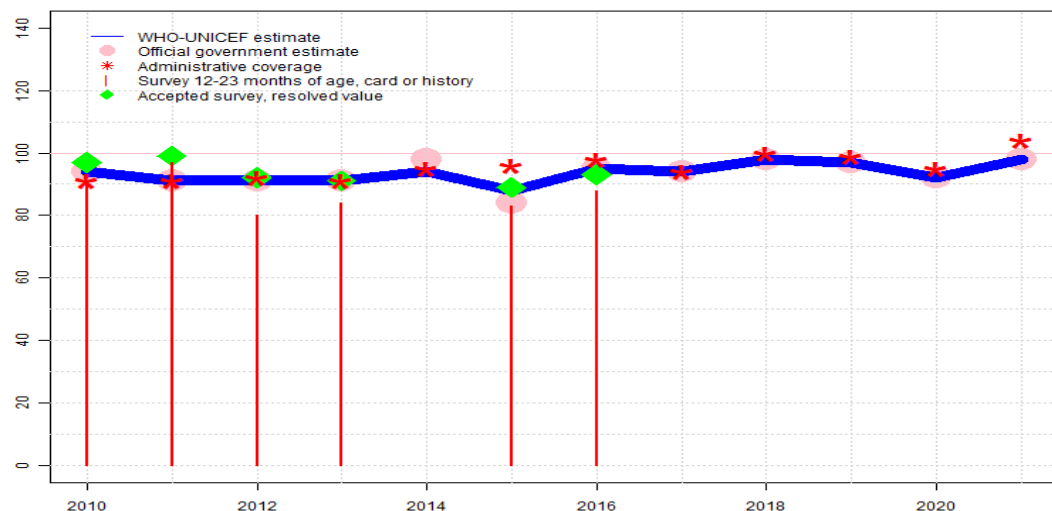
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2021: Estimate based on coverage reported by national government. Programme notes use of new target population estimates from 2021 Population and Housing Census, which suggest lower values than those indicated by projections from the prior census. Estimate challenged by: D-
- 2020: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2019: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2016: Estimate based on coverage reported by national government supported by survey. Survey evidence of 93 percent based on 1 survey(s). Ghana Multiple Indicator Cluster Survey 2017-18 card or history results of 90 percent modified for recall bias to 93 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 88 percent and 3rd dose card only coverage of 85 percent. Official estimate based on 2017 EPI coverage survey results. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Ghana Multiple Indicator Cluster Survey 2017-18 card or history results of 86 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 91 percent, 1st dose card only coverage of 80 percent and 3rd dose card only coverage of 78 percent. Reported official government coverage based on 2014 DHS results. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Ghana Demographic and Health Survey, 2014 card or history results of 88 percent modified for recall bias to 94 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 87 percent and 3rd dose card only coverage of 84 percent. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 92 percent based on 1 survey(s). Ghana Demographic and Health Survey, 2014 card or history results of 86 percent modified for recall bias to 92 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 79 percent and 3rd dose card only coverage of 76 percent. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 95 percent based on 1 survey(s). Ghana Multiple Indicator Cluster Survey with an Enhanced Malaria Module and Biomarker 2011 card or history results of 93 percent modified for recall bias to 95 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 88 percent and 3rd dose card only coverage of 85 percent. Estimate challenged by: D-

Ghana - Pol3

GHA - Pol3



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	94	91	91	91	94	88	95	94	98	97	92	98
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	94	91	91	91	98	84	95	94	98	97	92	98
Administrative	91	91	92	91	95	96	98	94	100	99	95	104
Survey	91	97	80	84	NA	83	88	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: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
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In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

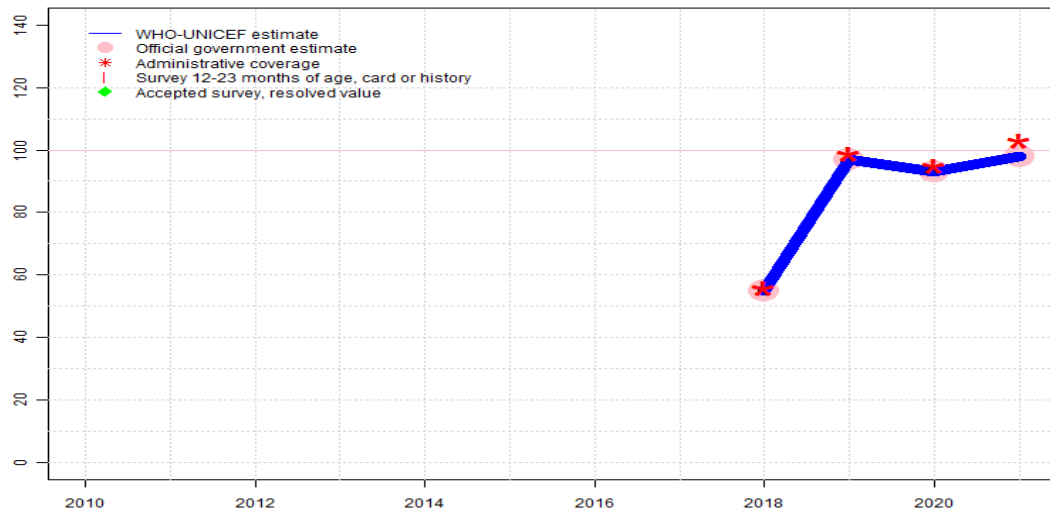
- 2021: Estimate based on coverage reported by national government. Programme notes use of new target population estimates from 2021 Population and Housing Census, which suggest lower values than those indicated by projections from the prior census. Estimate challenged by: D-
- 2020: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2019: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Programme reports stock-out of 3 months. Estimate challenged by: D-
- 2016: Estimate based on reported data. Ghana Multiple Indicator Cluster Survey 2017-18 card or history results of 88 percent modified for recall bias to 93 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 87 percent and 3rd dose card only coverage of 85 percent. Official estimate based on 2017 EPI coverage survey results. Estimate challenged by: D-
- 2015: Estimate of 88 percent assigned by working group. Estimate based on reported DTP3 coverage level. Ghana Multiple Indicator Cluster Survey 2017-18 card or history results of 83 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 90 percent, 1st dose card only coverage of 79 percent and 3rd dose card only coverage of 78 percent. Reported data excluded due to decline in reported coverage from 98 percent to 84 percent with increase to 95 percent. Reported official government coverage based on 2014 DHS results. Estimate challenged by: D-R-
- 2014: Reported data calibrated to 2013 and 2015 levels. Estimate challenged by: D-R-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 91 percent based on 1 survey(s). Ghana Demographic and Health Survey, 2014 card or history results of 84 percent modified for recall bias to 91 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 88 percent and 3rd dose card only coverage of 83 percent. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 92 percent based on 1 survey(s). Ghana Demographic and Health Survey, 2014 card or history results of 80 percent modified for recall bias to 92 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 79 percent and 3rd dose card only coverage of 76 percent. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 99 percent based on 1 survey(s). Ghana EPI Cluster Survey 2012 card or history results of 97 percent modified for recall bias to 99 percent based on 1st dose card or history coverage of 100 percent, 1st dose card only coverage of 98 percent and 3rd dose card only coverage of 97 percent. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). Ghana Multiple Indicator Cluster Survey with an Enhanced Malaria Module and Biomarker 2011 card or history results of 91 percent modified for recall bias to 97 percent based on 1st dose card or history coverage

Ghana - Pol3

of 99 percent, 1st dose card only coverage of 87 percent and 3rd dose card only coverage of 85 percent. Estimate challenged by: D-

Ghana - IPV1

GHA - IPV1



Description:

Estimates for a dose of inactivated polio vaccine (IPV) begin in 2015 following the Global Polio Eradication Initiative's Polio Eradication and Endgame Strategic Plan: 2013-2018 which recommended at least one full dose or two fractional doses of IPV into routine immunization schedules as a strategy to mitigate the potential consequences should any re-emergence of type 2 poliovirus occur following the planned withdrawal of Sabin type 2 strains from oral polio vaccine (OPV).

2021: Estimate based on coverage reported by national government. Programme notes use of new target population estimates from 2021 Population and Housing Census, which suggest lower values than those indicated by projections from the prior census. Estimate challenged by: D-

2020: Estimate based on coverage reported by national government. Estimate challenged by: D-
2019: Estimate based on coverage reported by national government. . Estimate challenged by: D-

2018: Estimate based on coverage reported by national government. Inactivated polio vaccine introduced during 2018. Estimate challenged by: D-

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	55	97	93	98
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	55	97	93	98
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	56	99	95	103
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

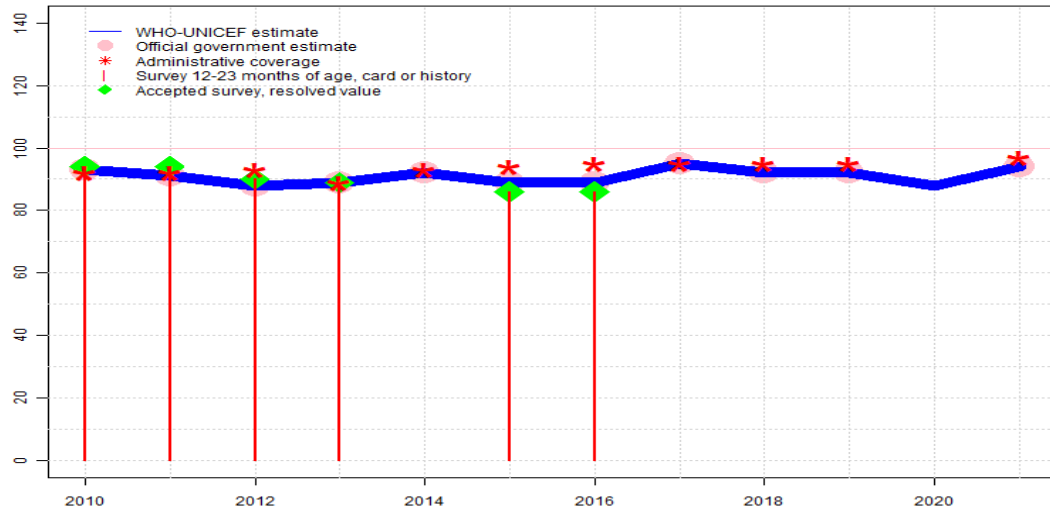
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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Ghana - MCV1

GHA - MCV1



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	93	91	88	89	92	89	89	95	92	92	88	94
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	93	91	88	89	92	89	89	95	92	92	NA	94
Administrative	92	92	93	89	93	94	95	95	95	95	NA	97
Survey	94	94	90	89	NA	86	86	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: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

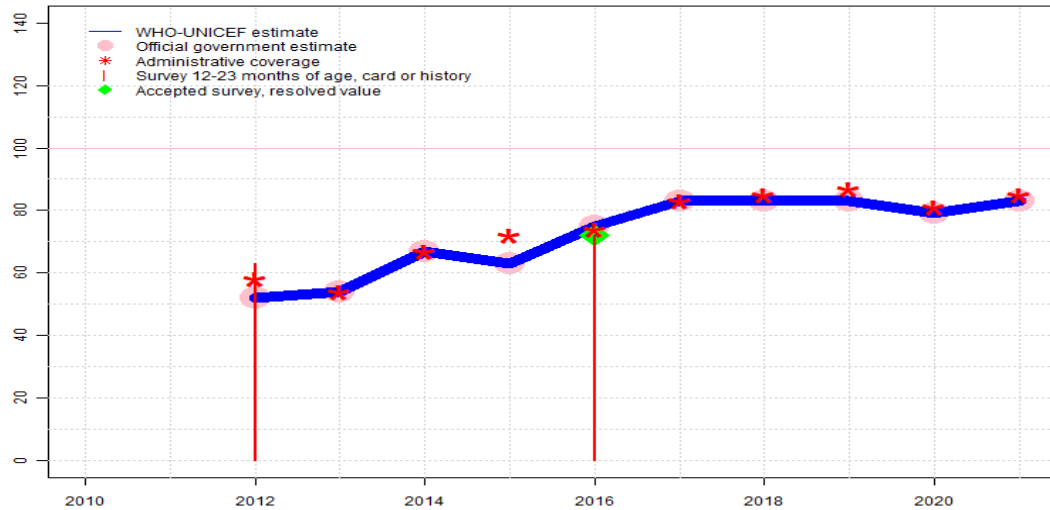
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2021: Estimate based on coverage reported by national government. Programme notes use of new target population estimates from 2021 Population and Housing Census, which suggest lower values than those indicated by projections from the prior census. Estimate challenged by: D-
- 2020: Estimate is based on estimated coverage for YFV. While MCV1 data are not reported, MCV1 and YFV reported coverage has previously tracked closely. GoC=No accepted empirical data
- 2019: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2016: Estimate based on coverage reported by national government supported by survey. Survey evidence of 86 percent based on 1 survey(s). Official estimate based on 2017 EPI coverage survey results. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 86 percent based on 1 survey(s). Reported official government coverage based on 2014 DHS results. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Measles rubella vaccine introduced in September 2013. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 90 percent based on 1 survey(s). Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Estimate challenged by: D-

Ghana - MCV2

GHA - MCV2



Description:

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

2021: Estimate based on coverage reported by national government. Programme notes use of new target population estimates from 2021 Population and Housing Census, which suggest lower values than those indicated by projections from the prior census. Estimate challenged by: D-

2020: Estimate based on coverage reported by national government. Estimate challenged by: D-

2019: Estimate based on coverage reported by national government. Estimate challenged by: D-

2018: Estimate based on coverage reported by national government. Estimate challenged by: D-S-

2017: Estimate based on coverage reported by national government. Estimate challenged by: D-S-

2016: Estimate based on coverage reported by national government supported by survey. Survey evidence of 72 percent based on 1 survey(s). Official estimate based on 2017 EPI coverage survey results. Estimate is based on reported data during introduction period. Estimate challenged by: D-

2015: Estimate based on reported data. Reported official government coverage based on 2014 DHS results. Estimate challenged by: D-

2014: Estimate based on reported data. . Estimate challenged by: D-

2013: Estimate based on reported data. Measles rubella vaccine introduced in September 2013. GoC=R+ D+

2012: Estimate based on reported data. Ghana Demographic and Health Survey, 2014 results ignored by working group. Measles second dose introduced in 2012. Recommended at 18 months. Survey may not reflect data for vaccine introduction period. GoC=R+ D+

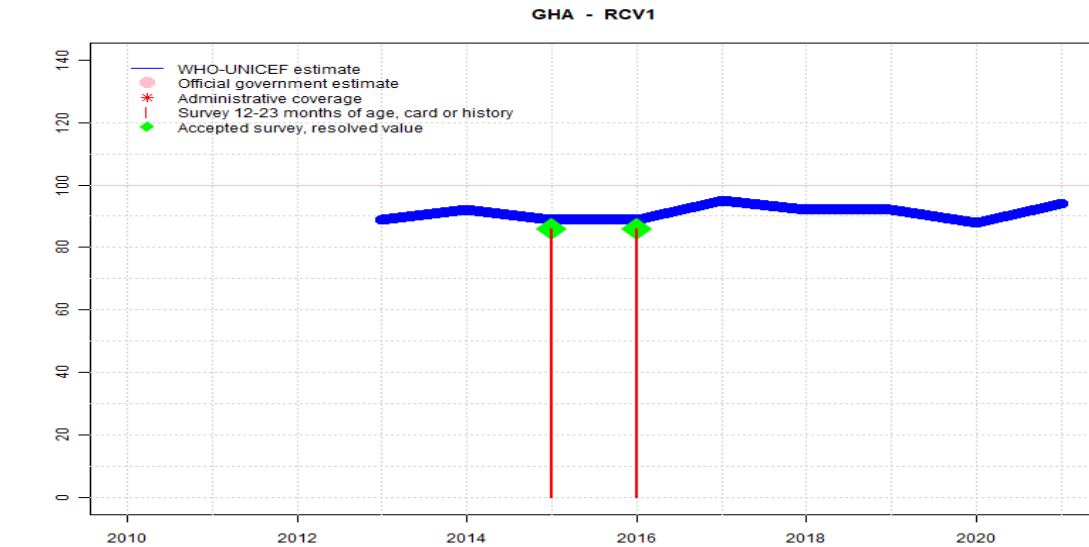
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	NA	NA	52	54	67	63	75	83	83	83	79	83
Estimate GoC	NA	NA	••	••	•	•	•	•	•	•	•	•
Official	NA	NA	52	54	67	63	75	83	83	83	79	83
Administrative	NA	NA	58	54	67	72	74	83	85	87	81	85
Survey	NA	NA	63	NA	NA	NA	72	NA	NA	NA	NA	NA

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: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Ghana - RCV1



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	NA	NA	NA	89	92	89	89	95	92	92	88	94
Estimate GoC	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	86	86	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.

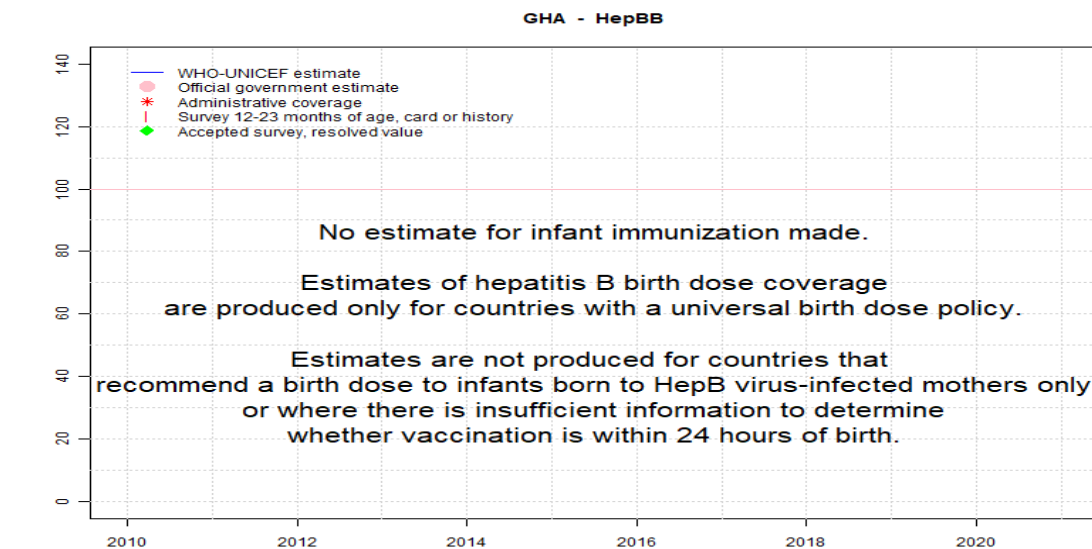
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

For this revision, coverage estimates for the first dose of rubella containing vaccine are based on WHO and UNICEF estimates of coverage of measles containing vaccine. Nationally reported coverage of rubella containing vaccine is not taken into consideration nor are they represented in the the accompanying graph and data table.

- 2021: Estimate based on estimated MCV1. Programme notes use of new target population estimates from 2021 Population and Housing Census, which suggest lower values than those indicated by projections from the prior census. Estimate challenged by: D-
- 2020: Estimate is based on estimated coverage for MCV1. GoC=No accepted empirical data
- 2019: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2018: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2017: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2016: Estimate based on estimated MCV1. Official estimate based on 2017 EPI coverage survey results. Estimate challenged by: D-
- 2015: Estimate based on estimated MCV1. Reported official government coverage based on 2014 DHS results. Estimate challenged by: D-
- 2014: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2013: Estimate based on estimated MCV1. Estimate challenged by: D-



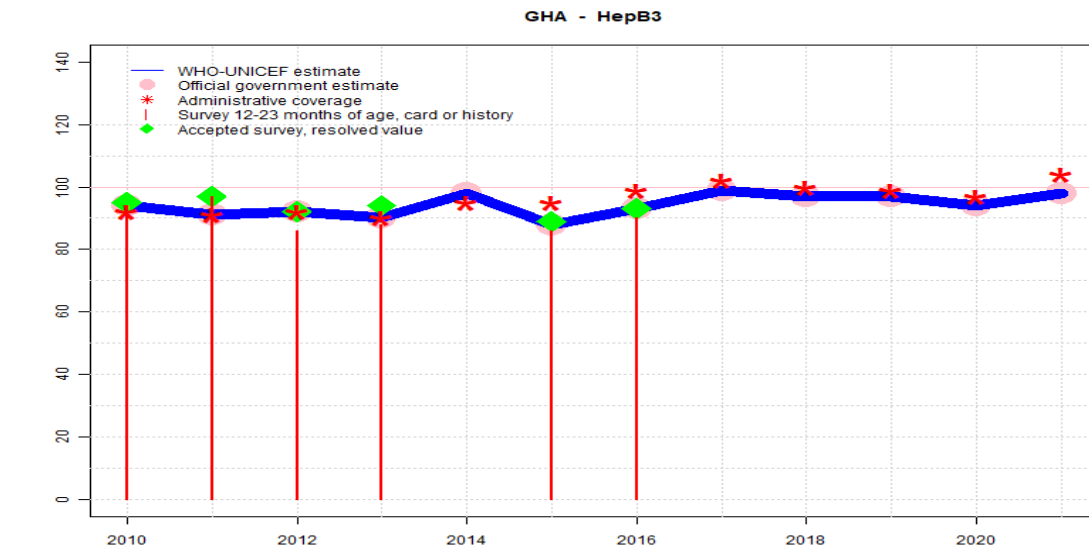
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Ghana - HepB3



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	94	91	92	90	98	88	93	99	97	97	94	98
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	94	91	92	90	98	88	93	99	97	97	94	98
Administrative	92	91	92	90	95	95	99	102	100	99	97	104
Survey	93	97	86	88	NA	86	90	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: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

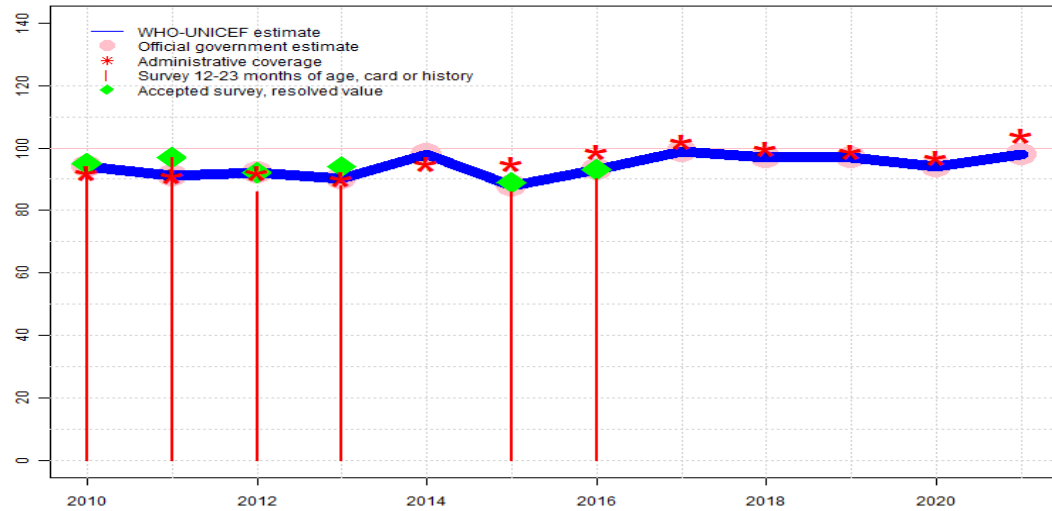
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2021: Estimate based on coverage reported by national government. Programme notes use of new target population estimates from 2021 Population and Housing Census, which suggest lower values than those indicated by projections from the prior census. Estimate challenged by: D-
- 2020: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2019: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2016: Estimate based on coverage reported by national government supported by survey. Survey evidence of 93 percent based on 1 survey(s). Ghana Multiple Indicator Cluster Survey 2017-18 card or history results of 90 percent modified for recall bias to 93 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 88 percent and 3rd dose card only coverage of 85 percent. Official estimate based on 2017 EPI coverage survey results. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Ghana Multiple Indicator Cluster Survey 2017-18 card or history results of 86 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 91 percent, 1st dose card only coverage of 80 percent and 3rd dose card only coverage of 78 percent. Reported official government coverage based on 2014 DHS results. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Ghana Demographic and Health Survey, 2014 card or history results of 88 percent modified for recall bias to 94 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 87 percent and 3rd dose card only coverage of 84 percent. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 92 percent based on 1 survey(s). Ghana Demographic and Health Survey, 2014 card or history results of 86 percent modified for recall bias to 92 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 79 percent and 3rd dose card only coverage of 76 percent. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 95 percent based on 1 survey(s). Ghana Multiple Indicator Cluster Survey with an Enhanced Malaria Module and Biomarker 2011 card or history results of 93 percent modified for recall bias to 95 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 88 percent and 3rd dose card only coverage of 85 percent. Estimate challenged by: D-

Ghana - Hib3

GHA - Hib3



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	94	91	92	90	98	88	93	99	97	97	94	98
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	94	91	92	90	98	88	93	99	97	97	94	98
Administrative	92	91	92	90	95	95	99	102	100	99	97	104
Survey	93	97	86	88	NA	86	90	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: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

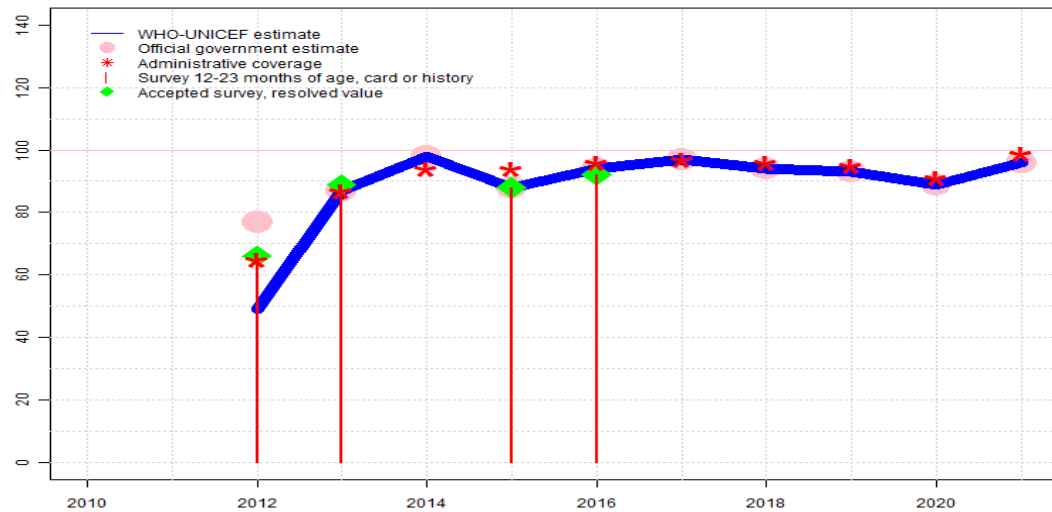
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2021: Estimate based on coverage reported by national government. Programme notes use of new target population estimates from 2021 Population and Housing Census, which suggest lower values than those indicated by projections from the prior census. Estimate challenged by: D-
- 2020: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2019: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2016: Estimate based on coverage reported by national government supported by survey. Survey evidence of 93 percent based on 1 survey(s). Ghana Multiple Indicator Cluster Survey 2017-18 card or history results of 90 percent modified for recall bias to 93 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 88 percent and 3rd dose card only coverage of 85 percent. Official estimate based on 2017 EPI coverage survey results. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Ghana Multiple Indicator Cluster Survey 2017-18 card or history results of 86 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 91 percent, 1st dose card only coverage of 80 percent and 3rd dose card only coverage of 78 percent. Reported official government coverage based on 2014 DHS results. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Ghana Demographic and Health Survey, 2014 card or history results of 88 percent modified for recall bias to 94 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 87 percent and 3rd dose card only coverage of 84 percent. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 92 percent based on 1 survey(s). Ghana Demographic and Health Survey, 2014 card or history results of 86 percent modified for recall bias to 92 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 79 percent and 3rd dose card only coverage of 76 percent. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 95 percent based on 1 survey(s). Ghana Multiple Indicator Cluster Survey with an Enhanced Malaria Module and Biomarker 2011 card or history results of 93 percent modified for recall bias to 95 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 88 percent and 3rd dose card only coverage of 85 percent. Estimate challenged by: D-

Ghana - RotaC

GHA - RotaC



Description:

- 2021: Estimate based on coverage reported by national government. Programme notes use of new target population estimates from 2021 Population and Housing Census, which suggest lower values than those indicated by projections from the prior census. Estimate challenged by: D-
- 2020: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2019: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2016: Estimate based on coverage reported by national government supported by survey. Survey evidence of 92 percent based on 1 survey(s). Official estimate based on 2017 EPI coverage survey results. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Reported official government coverage based on 2014 DHS results. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Estimate challenged by: D-S-
- 2012: Rotavirus vaccine was introduced in 2012. 65 percent coverage in 75 percent of national target population. Estimate challenged by: R-S-

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	NA	NA	49	87	98	88	94	97	94	93	89	96
Estimate GoC	NA	NA	•	•	•	•	•	•	•	•	•	•
Official	NA	NA	77	87	98	88	94	97	94	93	89	96
Administrative	NA	NA	65	87	94	94	96	97	96	95	91	99
Survey	NA	NA	66	89	NA	88	92	NA	NA	NA	NA	NA

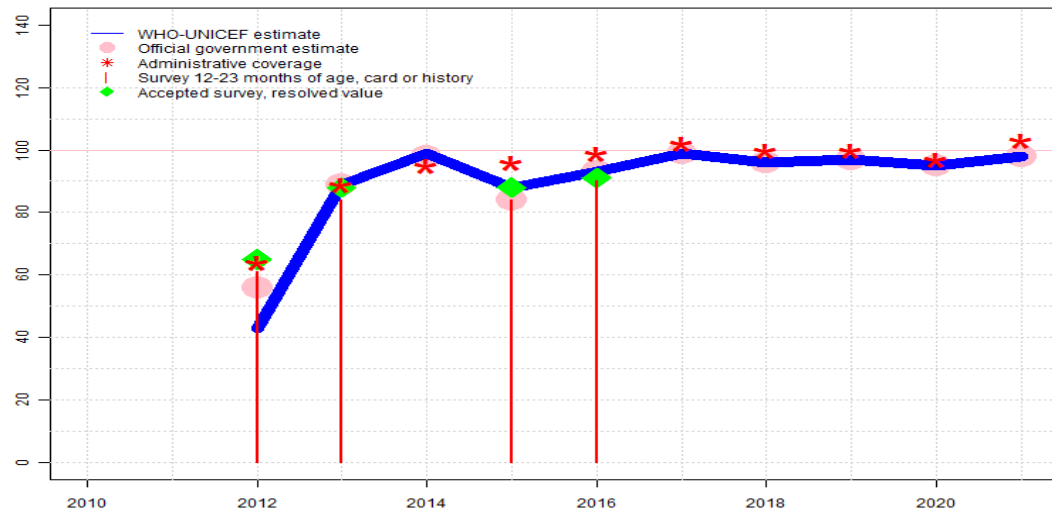
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Ghana - PcV3

GHA - PcV3



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	NA	NA	43	89	99	88	93	99	96	97	95	98
Estimate GoC	NA	NA	•	•	•	•	•	•	•	•	•	•
Official	NA	NA	56	89	98	84	93	99	96	97	95	98
Administrative	NA	NA	64	89	95	96	99	102	100	100	97	103
Survey	NA	NA	61	84	NA	84	90	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: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

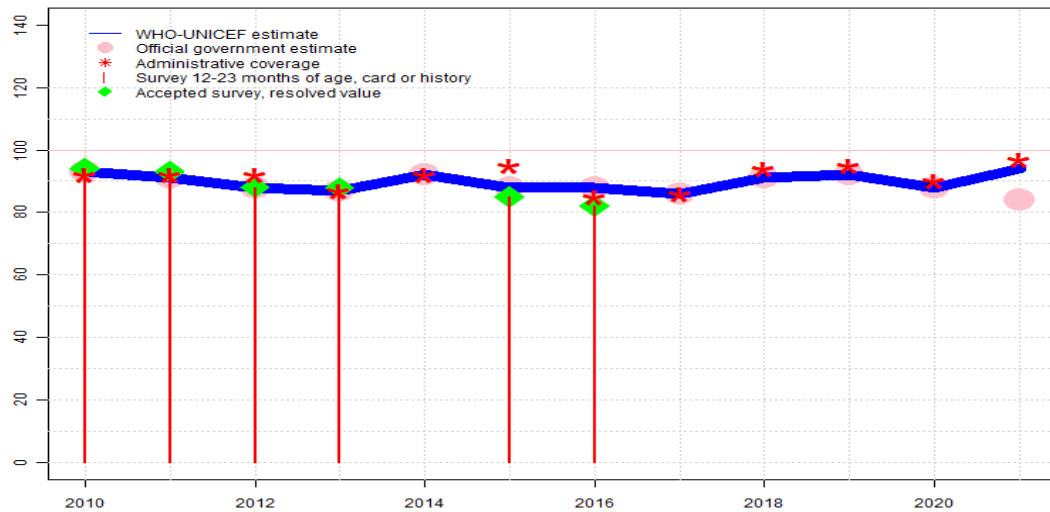
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2021: Estimate based on coverage reported by national government. Programme notes use of new target population estimates from 2021 Population and Housing Census, which suggest lower values than those indicated by projections from the prior census. Estimate challenged by: D-
- 2020: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2019: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2016: Estimate is based on reported official coverage. Ghana Multiple Indicator Cluster Survey 2017-18 card or history results of 90 percent modified for recall bias to 91 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 87 percent and 3rd dose card only coverage of 84 percent. Official estimate based on 2017 EPI coverage survey results. Estimate challenged by: D-
- 2015: Estimate of 88 percent assigned by working group. Estimate is based on reported DTP3 coverage level. Ghana Multiple Indicator Cluster Survey 2017-18 card or history results of 84 percent modified for recall bias to 88 percent based on 1st dose card or history coverage of 90 percent, 1st dose card only coverage of 80 percent and 3rd dose card only coverage of 78 percent. Reported official government coverage based on 2014 DHS results. Estimate challenged by: D-R-
- 2014: Reported data calibrated to 2013 and 2015 levels. Estimate challenged by: D-R-S-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Ghana Demographic and Health Survey, 2014 card or history results of 84 percent modified for recall bias to 88 percent based on 1st dose card or history coverage of 93 percent, 1st dose card only coverage of 85 percent and 3rd dose card only coverage of 80 percent. Estimate challenged by: D-S-
- 2012: Pneumococcal conjugate vaccine introduced in 2012. 64 percent coverage in 66 percent of national target population. Ghana Demographic and Health Survey, 2014 card or history results of 61 percent modified for recall bias to 65 percent based on 1st dose card or history coverage of 75 percent, 1st dose card only coverage of 61 percent and 3rd dose card only coverage of 53 percent. Estimate challenged by: R-S-

Ghana - YFV

GHA - YFV



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Estimate	93	91	88	87	92	88	88	86	91	92	88	94
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	93	91	88	87	92	88	88	86	91	92	88	84
Administrative	92	92	92	87	92	95	85	86	94	95	90	97
Survey	94	93	88	88	NA	85	82	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: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

2021: Estimate is based on estimated coverage for MCV1. Adjustment used to derive reported official coverage differs from that used for MCV1. Programme notes use of new target population estimates from 2021 Population and Housing Census, which suggest lower values than those indicated by projections from the prior census. Estimate challenged by: D-R-

2020: Estimate based on coverage reported by national government. Estimate challenged by: D-

2019: Estimate based on coverage reported by national government. Estimate challenged by: D-

2018: Estimate based on coverage reported by national government. Estimate challenged by: D-

2017: Estimate based on coverage reported by national government. Programme reports stock-out of 4 months. Estimate challenged by: D-

2016: Estimate based on coverage reported by national government supported by survey. Survey evidence of 82 percent based on 1 survey(s). Official estimate based on 2017 EPI coverage survey results. Programme reports a 2 month vaccine stock-out at national level. Decrease in admin data may be at least in part due to the stock-out. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 85 percent based on 1 survey(s). Reported official government coverage based on 2014 DHS results. Estimate challenged by: D-

2014: Estimate based on coverage reported by national government. Estimate challenged by: D-

2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Estimate challenged by: D-

2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Estimate challenged by: D-

2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 93 percent based on 1 survey(s). Estimate challenged by: D-

2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Estimate challenged by: D-

Ghana - survey details

2016 Ghana Multiple Indicator Cluster Survey 2017-18

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	93.5	12-23 m	1694	88
BCG	Card	84.3	12-23 m	1694	88
BCG	Card or History	93.6	12-23 m	1694	88
BCG	History	9.3	12-23 m	1694	88
DTP1	C or H <12 months	95.6	12-23 m	1694	88
DTP1	Card	87.6	12-23 m	1694	88
DTP1	Card or History	95.8	12-23 m	1694	88
DTP1	History	8.2	12-23 m	1694	88
DTP3	C or H <12 months	89.3	12-23 m	1694	88
DTP3	Card	85	12-23 m	1694	88
DTP3	Card or History	90.5	12-23 m	1694	88
DTP3	History	5.6	12-23 m	1694	88
HepB1	C or H <12 months	95.6	12-23 m	1694	88
HepB1	Card	87.6	12-23 m	1694	88
HepB1	Card or History	95.8	12-23 m	1694	88
HepB1	History	8.2	12-23 m	1694	88
HepB3	C or H <12 months	89.3	12-23 m	1694	88
HepB3	Card	85	12-23 m	1694	88
HepB3	Card or History	90.5	12-23 m	1694	88
HepB3	History	5.6	12-23 m	1694	88
Hib1	C or H <12 months	95.6	12-23 m	1694	88
Hib1	Card	87.6	12-23 m	1694	88
Hib1	Card or History	95.8	12-23 m	1694	88
Hib1	History	8.2	12-23 m	1694	88
Hib3	C or H <12 months	89.3	12-23 m	1694	88
Hib3	Card	85	12-23 m	1694	88
Hib3	Card or History	90.5	12-23 m	1694	88
Hib3	History	5.6	12-23 m	1694	88
MCV1	C or H <12 months	81.6	12-23 m	1694	88
MCV1	Card	79.4	12-23 m	1694	88
MCV1	Card or History	86.5	12-23 m	1694	88
MCV1	History	7.1	12-23 m	1694	88
MCV2	C or H <12 months	71.9	24-35 m	1754	88
MCV2	Card	63.3	24-35 m	1754	88
MCV2	Card or History	72	24-35 m	1754	88
MCV2	History	8.6	24-35 m	1754	88
PCV1	C or H <12 months	94.3	12-23 m	1694	88

PCV1	Card	87	12-23 m	1694	88
PCV1	Card or History	94.5	12-23 m	1694	88
PCV1	History	7.5	12-23 m	1694	88
PCV3	C or H <12 months	88.9	12-23 m	1694	88
PCV3	Card	84.5	12-23 m	1694	88
PCV3	Card or History	90.2	12-23 m	1694	88
PCV3	History	5.7	12-23 m	1694	88
Pol1	C or H <12 months	94.3	12-23 m	1694	88
Pol1	Card	86.7	12-23 m	1694	88
Pol1	Card or History	94.6	12-23 m	1694	88
Pol1	History	8	12-23 m	1694	88
Pol3	C or H <12 months	87.3	12-23 m	1694	88
Pol3	Card	84.6	12-23 m	1694	88
Pol3	Card or History	88.3	12-23 m	1694	88
Pol3	History	3.7	12-23 m	1694	88
RotaC	C or H <12 months	91.7	12-23 m	1694	88
RotaC	Card	85	12-23 m	1694	88
RotaC	Card or History	91.9	12-23 m	1694	88
RotaC	History	6.8	12-23 m	1694	88
YFV	C or H <12 months	82.3	12-23 m	1694	88
YFV	Card	76	12-23 m	1694	88
YFV	Card or History	82.3	12-23 m	1694	88
YFV	History	6.4	12-23 m	1694	88

2015 Ghana Multiple Indicator Cluster Survey 2017-18

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	90.6	24-35 m	1754	88
BCG	Card	78.4	24-35 m	1754	88
BCG	Card or History	91	24-35 m	1754	88
BCG	History	12.6	24-35 m	1754	88
DTP1	C or H <12 months	90.9	24-35 m	1754	88
DTP1	Card	79.6	24-35 m	1754	88
DTP1	Card or History	91.3	24-35 m	1754	88
DTP1	History	11.7	24-35 m	1754	88
DTP3	C or H <12 months	84.8	24-35 m	1754	88
DTP3	Card	78.4	24-35 m	1754	88
DTP3	Card or History	85.9	24-35 m	1754	88
DTP3	History	7.5	24-35 m	1754	88

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HepB1	C or H <12 months	90.9	24-35 m	1754	88
HepB1	Card	79.6	24-35 m	1754	88
HepB1	Card or History	91.3	24-35 m	1754	88
HepB1	History	11.7	24-35 m	1754	88
HepB3	C or H <12 months	84.8	24-35 m	1754	88
HepB3	Card	78.4	24-35 m	1754	88
HepB3	Card or History	85.9	24-35 m	1754	88
HepB3	History	7.5	24-35 m	1754	88
Hib1	C or H <12 months	90.9	24-35 m	1754	88
Hib1	Card	79.6	24-35 m	1754	88
Hib1	Card or History	91.3	24-35 m	1754	88
Hib1	History	11.7	24-35 m	1754	88
Hib3	C or H <12 months	84.8	24-35 m	1754	88
Hib3	Card	78.4	24-35 m	1754	88
Hib3	Card or History	85.9	24-35 m	1754	88
Hib3	History	7.5	24-35 m	1754	88
MCV1	C or H <12 months	80.3	24-35 m	1754	88
MCV1	Card	74.6	24-35 m	1754	88
MCV1	Card or History	85.8	24-35 m	1754	88
MCV1	History	11.2	24-35 m	1754	88
PCV1	C or H <12 months	89.8	24-35 m	1754	88
PCV1	Card	79.7	24-35 m	1754	88
PCV1	Card or History	90.1	24-35 m	1754	88
PCV1	History	10.4	24-35 m	1754	88
PCV3	C or H <12 months	83	24-35 m	1754	88
PCV3	Card	77.8	24-35 m	1754	88
PCV3	Card or History	84.2	24-35 m	1754	88
PCV3	History	6.4	24-35 m	1754	88
Pol1	C or H <12 months	90.2	24-35 m	1754	88
Pol1	Card	79.1	24-35 m	1754	88
Pol1	Card or History	90.5	24-35 m	1754	88
Pol1	History	11.3	24-35 m	1754	88
Pol3	C or H <12 months	82.1	24-35 m	1754	88
Pol3	Card	77.9	24-35 m	1754	88
Pol3	Card or History	83.3	24-35 m	1754	88
Pol3	History	5.3	24-35 m	1754	88
RotaC	C or H <12 months	87.5	24-35 m	1754	88
RotaC	Card	78.8	24-35 m	1754	88
RotaC	Card or History	88.1	24-35 m	1754	88
RotaC	History	9.3	24-35 m	1754	88

YFV	C or H <12 months	78.6	24-35 m	1754	88
YFV	Card	74.1	24-35 m	1754	88
YFV	Card or History	84.6	24-35 m	1754	88
YFV	History	10.5	24-35 m	1754	88

2013 Ghana Demographic and Health Survey, 2014

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	96.6	12-23 m	1113	88
BCG	Card	86.8	12-23 m	982	88
BCG	Card or History	96.8	12-23 m	1113	88
BCG	History	10	12-23 m	132	88
DTP1	C or H <12 months	96.5	12-23 m	1113	88
DTP1	Card	87.2	12-23 m	982	88
DTP1	Card or History	96.6	12-23 m	1113	88
DTP1	History	9.4	12-23 m	132	88
DTP3	C or H <12 months	87.7	12-23 m	1113	88
DTP3	Card	84.4	12-23 m	982	88
DTP3	Card or History	88.5	12-23 m	1113	88
DTP3	History	4.1	12-23 m	132	88
HepB1	C or H <12 months	96.5	12-23 m	1113	88
HepB1	Card	87.2	12-23 m	982	88
HepB1	Card or History	96.6	12-23 m	1113	88
HepB1	History	9.4	12-23 m	132	88
HepB3	C or H <12 months	87.7	12-23 m	1113	88
HepB3	Card	84.4	12-23 m	982	88
HepB3	Card or History	88.5	12-23 m	1113	88
HepB3	History	4.1	12-23 m	132	88
Hib1	C or H <12 months	96.5	12-23 m	1113	88
Hib1	Card	87.2	12-23 m	982	88
Hib1	Card or History	96.6	12-23 m	1113	88
Hib1	History	9.4	12-23 m	132	88
Hib3	C or H <12 months	87.7	12-23 m	1113	88
Hib3	Card	84.4	12-23 m	982	88
Hib3	Card or History	88.5	12-23 m	1113	88
Hib3	History	4.1	12-23 m	132	88
MCV1	C or H <12 months	82.5	12-23 m	1113	88
MCV1	Card	80.5	12-23 m	982	88
MCV1	Card or History	89.3	12-23 m	1113	88

Ghana - survey details

MCV1	History	8.8	12-23 m	132	88	DTP3	Card	76.1	24-35 m	872	88
MCV2	C or H <24 months	59.5	24-35 m	1090	88	DTP3	Card or History	85.8	24-35 m	1090	88
PcV1	C or H <12 months	93.2	12-23 m	1113	88	DTP3	History	9.7	24-35 m	218	88
PcV1	Card	85.1	12-23 m	982	88	HepB1	C or H <12 months	96.2	24-35 m	1090	88
PcV1	Card or History	93.3	12-23 m	1113	88	HepB1	Card	78.6	24-35 m	872	88
PcV1	History	8.2	12-23 m	132	88	HepB1	Card or History	96.4	24-35 m	1090	88
PcV3	C or H <12 months	83	12-23 m	1113	88	HepB1	History	17.8	24-35 m	218	88
PcV3	Card	80.3	12-23 m	982	88	HepB3	C or H <12 months	85.6	24-35 m	1090	88
PcV3	Card or History	84.2	12-23 m	1113	88	HepB3	Card	76.1	24-35 m	872	88
PcV3	History	3.9	12-23 m	132	88	HepB3	Card or History	85.8	24-35 m	1090	88
Pol1	C or H <12 months	97	12-23 m	1113	88	HepB3	History	9.7	24-35 m	218	88
Pol1	Card	87.9	12-23 m	982	88	Hib1	C or H <12 months	96.2	24-35 m	1090	88
Pol1	Card or History	97.1	12-23 m	1113	88	Hib1	Card	78.6	24-35 m	872	88
Pol1	History	9.2	12-23 m	132	88	Hib1	Card or History	96.4	24-35 m	1090	88
Pol3	C or H <12 months	83.3	12-23 m	1113	88	Hib1	History	17.8	24-35 m	218	88
Pol3	Card	82.7	12-23 m	982	88	Hib3	C or H <12 months	85.6	24-35 m	1090	88
Pol3	Card or History	84	12-23 m	1113	88	Hib3	Card	76.1	24-35 m	872	88
Pol3	History	1.4	12-23 m	132	88	Hib3	Card or History	85.8	24-35 m	1090	88
RotaC	C or H <12 months	88.5	12-23 m	1113	88	Hib3	History	9.7	24-35 m	218	88
RotaC	Card	82.5	12-23 m	982	88	MCV1	C or H <12 months	89.5	24-35 m	1090	88
RotaC	Card or History	88.7	12-23 m	1113	88	MCV1	Card	72.8	24-35 m	872	88
RotaC	History	6.2	12-23 m	132	88	MCV1	Card or History	90	24-35 m	1090	88
YFV	C or H <12 months	79.1	12-23 m	1113	88	MCV1	History	17.2	24-35 m	218	88
YFV	Card	79.4	12-23 m	982	88	MCV2	Card	51.5	24-35 m	872	88
YFV	Card or History	88	12-23 m	1113	88	MCV2	Card or History	63.2	24-35 m	1090	88
YFV	History	8.6	12-23 m	132	88	MCV2	History	11.6	24-35 m	218	88
						PcV1	C or H <12 months	74.7	24-35 m	1090	88
						PcV1	Card	60.8	24-35 m	872	88
						PcV1	Card or History	75	24-35 m	1090	88
						PcV1	History	14.3	24-35 m	218	88
						PcV3	C or H <12 months	60.8	24-35 m	1090	88
						PcV3	Card	52.9	24-35 m	872	88
						PcV3	Card or History	61.3	24-35 m	1090	88
						PcV3	History	8.3	24-35 m	218	88
						Pol1	C or H <12 months	96.2	24-35 m	1090	88
						Pol1	Card	79.3	24-35 m	872	88
						Pol1	Card or History	96.3	24-35 m	1090	88
						Pol1	History	17	24-35 m	218	88
						Pol3	C or H <12 months	79.9	24-35 m	1090	88
						Pol3	Card	75.8	24-35 m	872	88

2012 Ghana Demographic and Health Survey, 2014

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	96.6	24-35 m	1090	88
BCG	Card	78.7	24-35 m	872	88
BCG	Card or History	96.6	24-35 m	1090	88
BCG	History	17.9	24-35 m	218	88
DTP1	C or H <12 months	96.2	24-35 m	1090	88
DTP1	Card	78.6	24-35 m	872	88
DTP1	Card or History	96.4	24-35 m	1090	88
DTP1	History	17.8	24-35 m	218	88
DTP3	C or H <12 months	85.6	24-35 m	1090	88

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Pol3	Card or History	79.8	24-35 m	1090	88
Pol3	History	3.9	24-35 m	218	88
RotaC	C or H <12 months	65.6	24-35 m	1090	88
RotaC	Card	54.9	24-35 m	872	88
RotaC	Card or History	66.2	24-35 m	1090	88
RotaC	History	11.3	24-35 m	218	88
YFV	C or H <12 months	87	24-35 m	1090	88
YFV	Card	71.8	24-35 m	872	88
YFV	Card or History	87.7	24-35 m	1090	88
YFV	History	15.9	24-35 m	218	88

2011 Ghana EPI Cluster Survey 2012

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	96.3	12-23 m	300	98
BCG	Card or History	99.3	12-23 m	300	98
DTP1	Card	97.8	12-23 m	300	98
DTP1	Card or History	99.7	12-23 m	300	98
DTP3	Card	95.3	12-23 m	300	98
DTP3	Card or History	97	12-23 m	300	98
HepB1	Card	97.8	12-23 m	300	98
HepB1	Card or History	99.7	12-23 m	300	98
HepB3	Card	95.3	12-23 m	300	98
HepB3	Card or History	97	12-23 m	300	98
Hib1	Card	97.8	12-23 m	300	98
Hib1	Card or History	99.7	12-23 m	300	98
Hib3	Card	95.3	12-23 m	300	98
Hib3	Card or History	97	12-23 m	300	98
MCV1	Card	92	12-23 m	300	98
MCV1	Card or History	94	12-23 m	300	98
Pol1	Card	97.8	12-23 m	300	98
Pol1	Card or History	99.7	12-23 m	300	98
Pol3	Card	97	12-23 m	300	98
Pol3	Card or History	97	12-23 m	300	98
YFV	Card	91.3	12-23 m	300	98
YFV	Card or History	93.3	12-23 m	300	98

2010 Ghana Multiple Indicator Cluster Survey with an Enhanced Malaria

Module and Biomarker 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	97.8	12-23 m	1453	89
BCG	Card	86.4	12-23 m	-	89
BCG	Card or History	98.1	12-23 m	1453	89
BCG	History	11.7	12-23 m	-	89
DTP1	C or H <12 months	97.7	12-23 m	1453	89
DTP1	Card	87.6	12-23 m	-	89
DTP1	Card or History	98.4	12-23 m	1453	89
DTP1	History	10.8	12-23 m	-	89
DTP3	C or H <12 months	92.1	12-23 m	1453	89
DTP3	Card	85.3	12-23 m	-	89
DTP3	Card or History	92.9	12-23 m	1453	89
DTP3	History	7.6	12-23 m	-	89
HepB1	C or H <12 months	97.7	12-23 m	1453	89
HepB1	Card	87.6	12-23 m	-	89
HepB1	Card or History	98.4	12-23 m	1453	89
HepB1	History	10.8	12-23 m	-	89
HepB3	C or H <12 months	92.1	12-23 m	1453	89
HepB3	Card	85.3	12-23 m	-	89
HepB3	Card or History	92.9	12-23 m	1453	89
HepB3	History	7.6	12-23 m	-	89
Hib1	C or H <12 months	97.7	12-23 m	1453	89
Hib1	Card	87.6	12-23 m	-	89
Hib1	Card or History	98.4	12-23 m	1453	89
Hib1	History	10.8	12-23 m	-	89
Hib3	C or H <12 months	92.1	12-23 m	1453	89
Hib3	Card	85.3	12-23 m	-	89
Hib3	Card or History	92.9	12-23 m	1453	89
Hib3	History	7.6	12-23 m	-	89
MCV1	C or H <12 months	88.5	12-23 m	1453	89
MCV1	Card	80.7	12-23 m	-	89
MCV1	Card or History	93.7	12-23 m	1453	89
MCV1	History	13.1	12-23 m	-	89
Pol1	C or H <12 months	98	12-23 m	1453	89
Pol1	Card	87.1	12-23 m	-	89
Pol1	Card or History	98.6	12-23 m	1453	89
Pol1	History	11.5	12-23 m	-	89
Pol3	C or H <12 months	90.7	12-23 m	1453	89

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Pol3	Card	84.9	12-23 m	-	89
Pol3	Card or History	91.2	12-23 m	1453	89
Pol3	History	6.4	12-23 m	-	89
YFV	C or H <12 months	88.3	12-23 m	1453	89
YFV	Card	81.2	12-23 m	-	89
YFV	Card or History	93.8	12-23 m	1453	89
YFV	History	12.5	12-23 m	-	89

2007 Ghana Demographic and Health Survey 2008

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	95.6	12-23 m	552	86
BCG	Card	83	12-23 m	552	86
BCG	Card or History	95.8	12-23 m	552	86
BCG	History	12.8	12-23 m	552	86
DTP1	C or H <12 months	97.6	12-23 m	552	86
DTP1	Card	85.1	12-23 m	552	86
DTP1	Card or History	98	12-23 m	552	86
DTP1	History	13	12-23 m	552	86
DTP3	C or H <12 months	87.7	12-23 m	552	86
DTP3	Card	82	12-23 m	552	86
DTP3	Card or History	88.8	12-23 m	552	86
DTP3	History	6.8	12-23 m	552	86
MCV1	C or H <12 months	79.9	12-23 m	552	86
MCV1	Card	79.3	12-23 m	552	86
MCV1	Card or History	90.2	12-23 m	552	86
MCV1	History	10.9	12-23 m	552	86
Pol1	C or H <12 months	96.8	12-23 m	552	86
Pol1	Card	85.1	12-23 m	552	86
Pol1	Card or History	97.2	12-23 m	552	86
Pol1	History	12.2	12-23 m	552	86
Pol3	C or H <12 months	84.7	12-23 m	552	86
Pol3	Card	81.4	12-23 m	552	86
Pol3	Card or History	86.4	12-23 m	552	86
Pol3	History	5.1	12-23 m	552	86
YFV	C or H <12 months	77.8	12-23 m	552	86
YFV	Card	78.9	12-23 m	552	86
YFV	Card or History	89.1	12-23 m	552	86
YFV	History	10.2	12-23 m	552	86

2005 Ghana Multiple Indicator Cluster Survey 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	94.2	12-23 m	706	85
BCG	Card	83.4	12-23 m	706	85
BCG	Card or History	94.3	12-23 m	706	85
BCG	History	10.8	12-23 m	706	85
DTP1	C or H <12 months	93.8	12-23 m	706	85
DTP1	Card	84	12-23 m	706	85
DTP1	Card or History	94.2	12-23 m	706	85
DTP1	History	10.2	12-23 m	706	85
DTP3	C or H <12 months	81.4	12-23 m	706	85
DTP3	Card	77.8	12-23 m	706	85
DTP3	Card or History	83.5	12-23 m	706	85
DTP3	History	5.7	12-23 m	706	85
HepB1	C or H <12 months	93.8	12-23 m	706	85
HepB1	Card	84	12-23 m	706	85
HepB1	Card or History	94.2	12-23 m	706	85
HepB1	History	10.2	12-23 m	706	85
HepB3	C or H <12 months	81.4	12-23 m	706	85
HepB3	Card	77.8	12-23 m	706	85
HepB3	Card or History	83.5	12-23 m	706	85
HepB3	History	5.7	12-23 m	706	85
Hib1	C or H <12 months	93.8	12-23 m	706	85
Hib1	Card	84	12-23 m	706	85
Hib1	Card or History	94.2	12-23 m	706	85
Hib1	History	10.2	12-23 m	706	85
Hib3	C or H <12 months	81.4	12-23 m	706	85
Hib3	Card	77.8	12-23 m	706	85
Hib3	Card or History	83.5	12-23 m	706	85
Hib3	History	5.7	12-23 m	706	85
MCV1	C or H <12 months	77.7	12-23 m	706	85
MCV1	Card	74.5	12-23 m	706	85
MCV1	Card or History	85.4	12-23 m	706	85
MCV1	History	10.9	12-23 m	706	85
Pol1	C or H <12 months	95.8	12-23 m	706	85
Pol1	Card	83.9	12-23 m	706	85
Pol1	Card or History	96.2	12-23 m	706	85

Ghana - survey details

Pol1	History	12.3	12-23 m	706	85
Pol3	C or H <12 months	80.1	12-23 m	706	85
Pol3	Card	76.4	12-23 m	706	85
Pol3	Card or History	82.4	12-23 m	706	85
Pol3	History	6.1	12-23 m	706	85
YFV	C or H <12 months	76.7	12-23 m	706	85
YFV	Card	73.9	12-23 m	706	85
YFV	Card or History	84.4	12-23 m	706	85
YFV	History	10.5	12-23 m	706	85

2002 Ghana National Demographic and Health Survey 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	90	12-23 m	695	83
BCG	Card	79.2	12-23 m	695	83
BCG	Card or history	91.1	12-23 m	695	83
BCG	History	12	12-23 m	695	83
DTP1	C or H <12 months	90	12-23 m	695	83
DTP1	Card	80.5	12-23 m	695	83
DTP1	Card or history	90.8	12-23 m	695	83
DTP1	History	10.4	12-23 m	695	83
DTP3	C or H <12 months	76.9	12-23 m	695	83
DTP3	Card	74.5	12-23 m	695	83
DTP3	Card or history	79.5	12-23 m	695	83
DTP3	History	5	12-23 m	695	83
MCV1	C or H <12 months	68.8	12-23 m	695	83
MCV1	Card	74	12-23 m	695	83
MCV1	Card or history	83.2	12-23 m	695	83
MCV1	History	9.2	12-23 m	695	83
Pol1	C or H <12 months	92.2	12-23 m	695	83

Pol1	Card	81.5	12-23 m	695	83
Pol1	Card or history	93	12-23 m	695	83
Pol1	History	11.5	12-23 m	695	83
Pol3	C or H <12 months	75.9	12-23 m	695	83
Pol3	Card	74.3	12-23 m	695	83
Pol3	Card or history	79.2	12-23 m	695	83
Pol3	History	4.9	12-23 m	695	83
YFV	C or H <12 months	58.5	12-23 m	695	83
YFV	Card	68.6	12-23 m	695	83
YFV	Card or history	76.6	12-23 m	695	83
YFV	History	8	12-23 m	695	83

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Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	85.9	12-23 m	1193	76
BCG	Card or History	84.4	12-23 m	1193	76
DTP1	C or H <12 months	87.7	12-23 m	1193	76
DTP1	Card or History	82.4	12-23 m	1193	76
DTP3	C or H <12 months	67.6	12-23 m	1193	76
DTP3	Card or History	59.3	12-23 m	1193	76
MCV1	C or H <12 months	60.9	12-23 m	1193	76
MCV1	Card or History	57.5	12-23 m	1193	76
Pol1	C or H <12 months	89.8	12-23 m	1193	76
Pol1	Card or History	85.2	12-23 m	1193	76
Pol3	C or H <12 months	67.1	12-23 m	1193	76
Pol3	Card or History	58.3	12-23 m	1193	76
YFV	C or H <12 months	38.9	12-23 m	1193	76
YFV	Card or History	39.5	12-23 m	1193	76

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