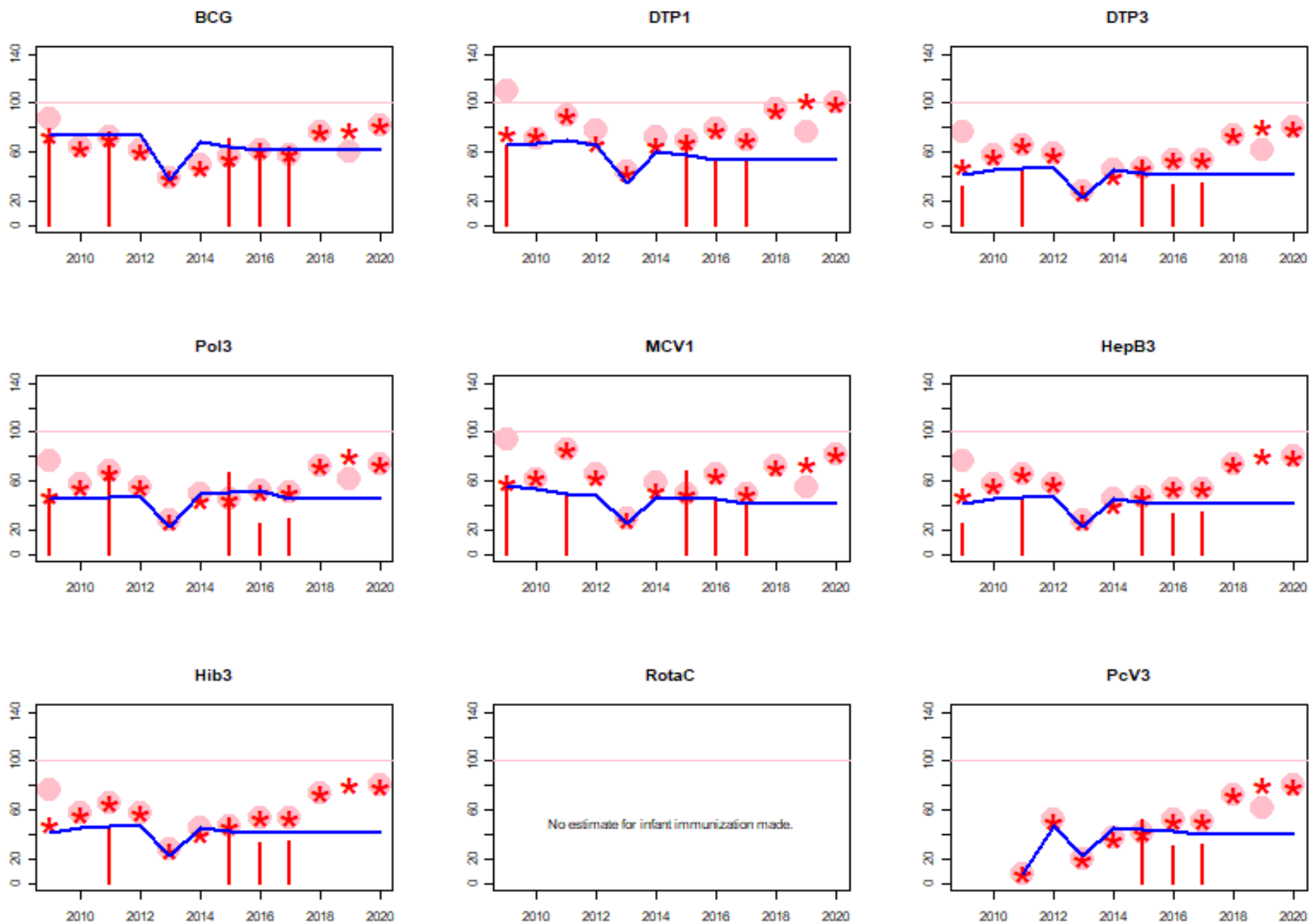


Central African Republic: WHO and UNICEF estimates of immunization coverage: 2020 revision



**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.

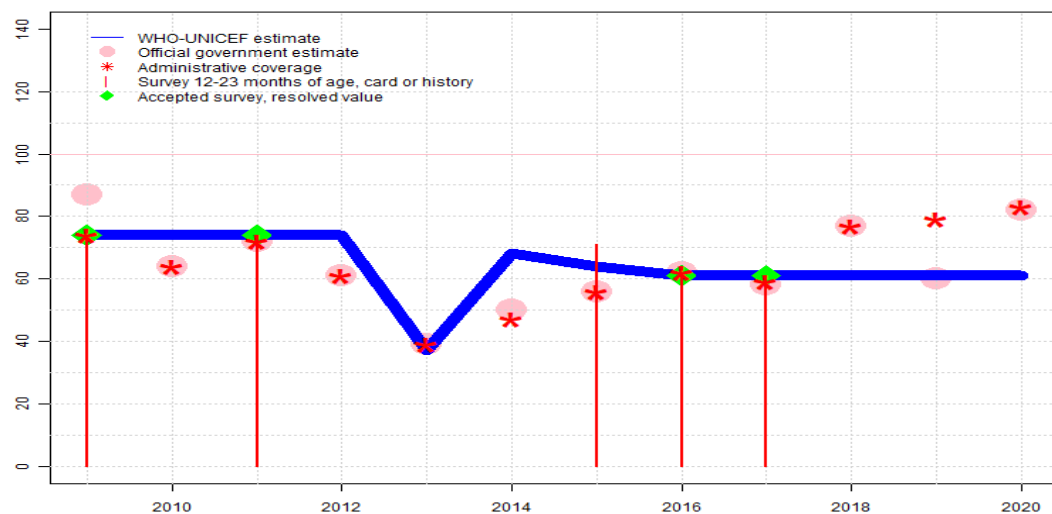
**PcV3:** percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect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

CAF - BCG



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	74	74	74	74	37	68	64	61	61	61	61	61
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	87	64	72	61	39	50	56	62	58	77	60	82
Administrative	74	64	72	61	39	47	56	62	59	77	79	83
Survey	74	NA	74	NA	NA	NA	71	61	61	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: 2020 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:

- 2020: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to sudden change in coverage from 60 level to 82 percent. Programme notes issues with data quality and use including that the denominators come from projections from a 2003 census. Programme reports a two month vaccine stock-out at the national and subnational levels. Estimate challenged by: D-R-
- 2019: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 77 percent to 60 percent with increase to 82 percent. Programme reports less than one month vaccine stock-out at the national level. Estimate of 61 percent changed from previous revision value of 74 percent. Estimate challenged by: D-R-
- 2018: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to an increase from 58 percent to 77 percent with decrease 60 percent. Estimate of 61 percent changed from previous revision value of 74 percent. Estimate challenged by: D-R-
- 2017: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 61 percent based on 1 survey(s). Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports 15 days of vaccine stock-out at the national level and vaccine supply disruptions at district level. Estimate of 61 percent changed from previous revision value of 74 percent. Estimate challenged by: R-
- 2016: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 61 percent based on 1 survey(s). Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level that impacted service delivery. Estimate of 61 percent changed from previous revision value of 74 percent. Estimate challenged by: R-
- 2015: Reported data calibrated to 2012 and 2016 levels. Survey results ignored. Sample size 0 less than 300. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Survey reported values for vaccination coverage by documented evidence in home-based records are illogical for the first and third doses for several vaccines. Programme reports two month national level vaccine stock-out. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. The reported number of children vaccinated has not returned to level Estimate of 64 percent changed from previous revision value of 74 percent. Estimate challenged by: R-
- 2014: Reported data calibrated to 2012 and 2016 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Government reports the conduct of multiple routine intensification activities during 2014. Reported

# Central African Republic - BCG

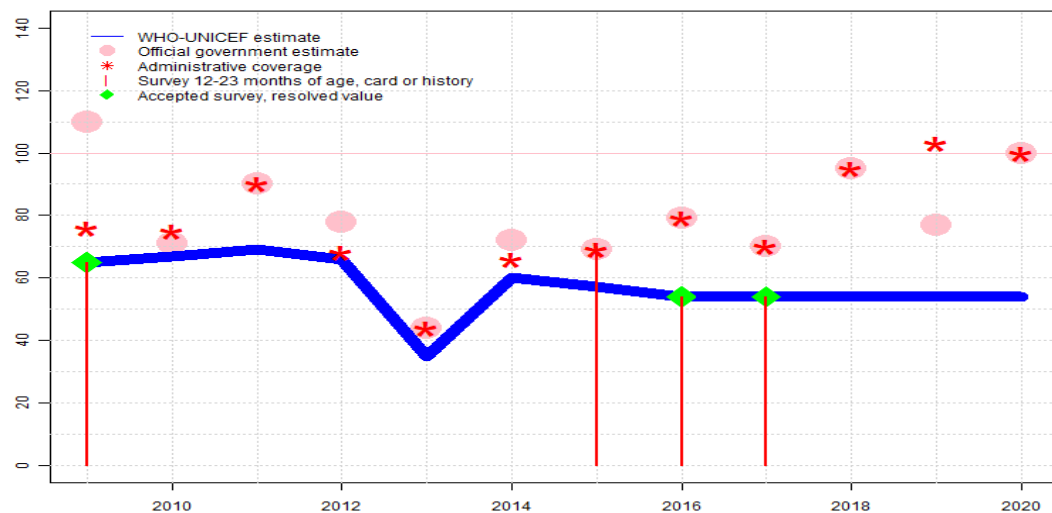
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coverage increased from 2013 level, however the number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 68 percent changed from previous revision value of 74 percent. Estimate challenged by: D-R-

- 2013: Decline in coverage associated with the interruption of health services during period of civil unrest. National immunization programme and partners estimate that civil unrest have resulted in a 50 percent decrease in coverage from prior annual performance. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 61 percent to 39 percent with increase to 50 percent. Estimate challenged by: R-S-
- 2012: Estimate of 74 percent assigned by working group. Estimate is based on extrapolation from survey. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2011: Estimate of 74 percent assigned by working group. Based on survey results for children vaccinated by 23 months of age. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2010: Estimate based on interpolation between 2009 and 2011 levels. Fluctuations in reported data suggest poor quality administrative recording and reporting. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2009: Estimate of 74 percent assigned by working group. Based on survey results for children vaccinated by 23 months of age. Reported data excluded due to an increase from 70 percent to 87 percent with decrease 64 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.

# Central African Republic - DTP1

CAF - DTP1



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	65	67	69	66	35	60	57	54	54	54	54	54
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	110	71	90	78	44	72	69	79	70	95	77	100
Administrative	76	75	90	68	44	66	69	79	70	95	103	100
Survey	65	NA	NA	NA	NA	NA	70	54	54	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: 2020 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:

2020: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to sudden change in coverage from 77 level to 100 percent. Programme notes issues with data quality and use including that the denominators come from projections from a 2003 census. Estimate challenged by: D-R-

2019: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 95 percent to 77 percent with increase to 100 percent. Estimate of 54 percent changed from previous revision value of 69 percent. Estimate challenged by: D-R-

2018: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to an increase from 70 percent to 95 percent with decrease 77 percent. Estimate of 54 percent changed from previous revision value of 69 percent. Estimate challenged by: D-R-

2017: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 54 percent based on 1 survey(s). Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level. Estimate of 54 percent changed from previous revision value of 69 percent. Estimate challenged by: D-R-

2016: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 54 percent based on 1 survey(s). Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level that impacted service delivery. Estimate of 54 percent changed from previous revision value of 69 percent. Estimate challenged by: D-R-

2015: Reported data calibrated to 2011 and 2016 levels. Survey results ignored. Sample size 0 less than 300. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Survey reported values for vaccination coverage by documented evidence in home-based records are illogical for the first and third doses for several vaccines. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. The reported number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 57 percent changed from previous revision value of 69 percent. Estimate challenged by: D-R-

2014: Reported data calibrated to 2011 and 2016 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Government reports the conduct of multiple routine intensification activities during 2014. Reported coverage increased from 2013 level, however the number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. Given concerns

# Central African Republic - DTP1

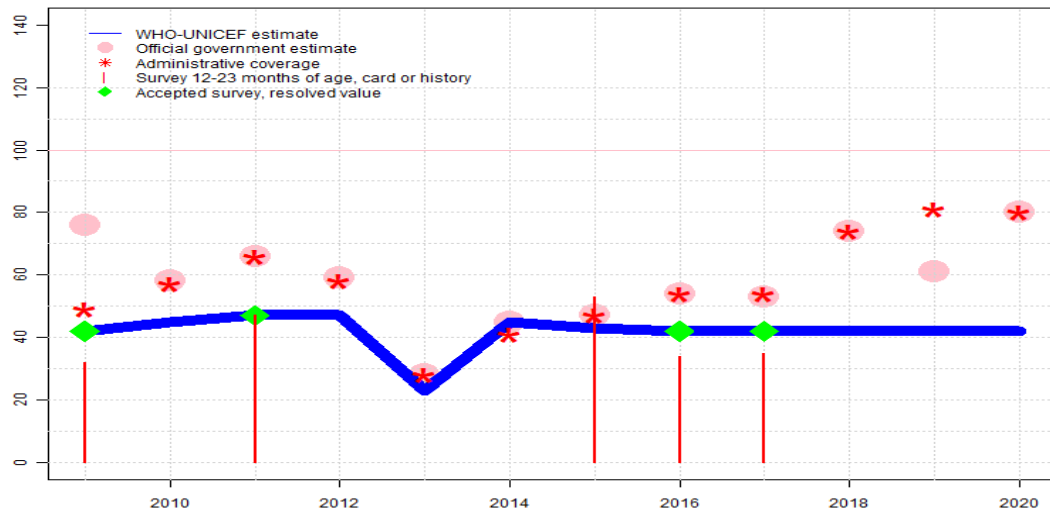
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with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 60 percent changed from previous revision value of 69 percent. Estimate challenged by: R-

- 2013: Decline in coverage associated with the interruption of health services during period of civil unrest. National immunization programme and partners estimate that civil unrest have resulted in a 50 percent decrease in coverage from prior annual performance. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 78 percent to 44 percent with increase to 72 percent. Estimate challenged by: R-
- 2012: Reported data calibrated to 2011 and 2016 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate of 66 percent changed from previous revision value of 69 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2011: Estimate of 69 percent assigned by working group. RMF, based on survey results for DTP3 with children vaccinated by 23 months of age. Reported data excluded due to an increase from 71 percent to 90 percent with decrease 78 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2010: Estimate based on interpolation between 2009 and 2011 levels. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 110 percent to 71 percent with increase to 90 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2009: Estimate of 65 percent assigned by working group. Based on survey results for children vaccinated by 23 months of age. Reported data excluded because 110 percent greater than 100 percent. Reported data excluded due to an increase from 87 percent to 110 percent with decrease 71 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.

# Central African Republic - DTP3

CAF - DTP3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	42	45	47	47	23	45	43	42	42	42	42	42
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	76	58	66	59	28	45	47	54	53	74	61	80
Administrative	49	57	66	58	28	41	47	54	54	74	81	80
Survey	32	NA	47	NA	NA	NA	53	34	35	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: 2020 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:

2020: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to sudden change in coverage from 61 level to 80 percent. Programme notes issues with data quality and use including that the denominators come from projections from a 2003 census. Estimate challenged by: D-R-

2019: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 74 percent to 61 percent with increase to 80 percent. Estimate of 42 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2018: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to an increase from 53 percent to 74 percent with decrease 61 percent. Estimate of 42 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2017: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 42 percent based on 1 survey(s). Central African Republic Multiple Indicator Cluster Survey 2018-2019 card or history results of 35 percent modified for recall bias to 42 percent based on 1st dose card or history coverage of 54 percent, 1st dose card only coverage of 23 percent and 3rd dose card only coverage of 18 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level. Estimate of 42 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2016: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 42 percent based on 1 survey(s). Central African Republic Multiple Indicator Cluster Survey 2018-2019 card or history results of 34 percent modified for recall bias to 42 percent based on 1st dose card or history coverage of 54 percent, 1st dose card only coverage of 14 percent and 3rd dose card only coverage of 11 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level that impacted service delivery. Estimate of 42 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2015: Reported data calibrated to 2012 and 2016 levels. Survey results ignored. Sample size 0 less than 300. Central African Republic EPI Coverage Survey 2016 card or history results of 53 percent modified for recall bias to 75 percent based on 1st dose card or history coverage of 70 percent, 1st dose card only coverage of 13 percent and 3rd dose card only coverage of 14 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Survey reported values for vaccination coverage by documented evidence in home-based records are illogical for the first and third doses for several vaccines. Given concerns with the quality of reported

# Central African Republic - DTP3

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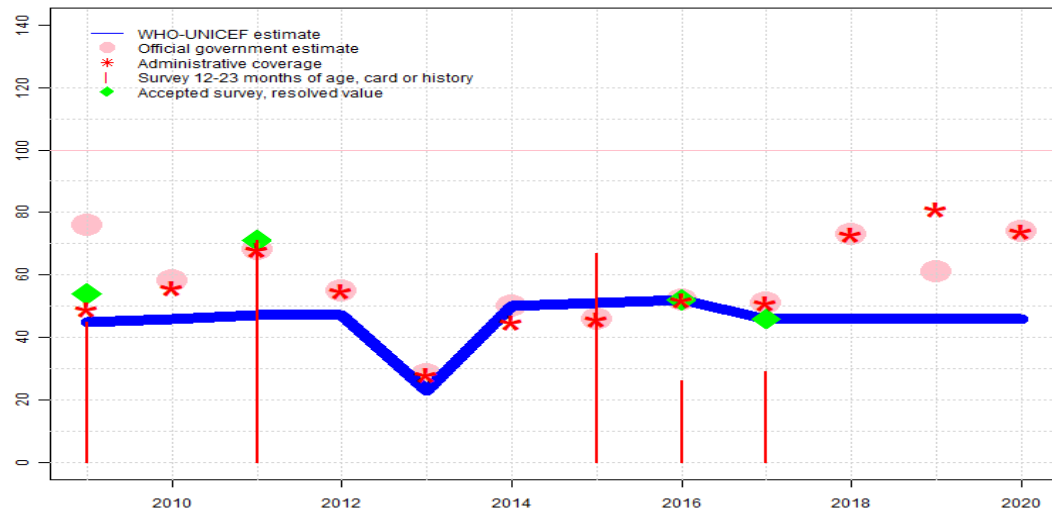
data, the estimate is based on pre-conflict levels determined by the 2012 survey. The reported number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 43 percent changed from previous revision value of 47 percent. Estimate challenged by: R-

- 2014: Reported data calibrated to 2012 and 2016 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Government reports the conduct of multiple routine intensification activities during 2014. Reported coverage increased from 2013 level, however the number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 45 percent changed from previous revision value of 47 percent. Estimate challenged by: R-
- 2013: Decline in coverage associated with the interruption of health services during period of civil unrest. National immunization programme and partners estimate that civil unrest have resulted in a 50 percent decrease in coverage from prior annual performance. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 59 percent to 28 percent with increase to 45 percent. Estimate challenged by: R-S-
- 2012: Estimate of 47 percent assigned by working group. Estimate is based on extrapolation from survey. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2011: Estimate of 47 percent assigned by working group. Based on survey results for children vaccinated by 23 months of age. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2010: Estimate based on interpolation between 2009 and 2011 levels. Fluctuations in reported data suggest poor quality administrative recording and reporting. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2009: Estimate of 42 percent assigned by working group. Based on survey results for children vaccinated by 23 months of age. Central African Republic Multiple Indicator Cluster Survey 2010 card or history results of 32 percent modified for recall bias to 42 percent based on 1st dose card or history coverage of 65 percent, 1st dose card only coverage of 25 percent and 3rd dose card only coverage of 16 percent. Reported data excluded due to an increase from 51 percent to 76 percent with decrease 58 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.



# Central African Republic - Pol3

CAF - Pol3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	45	46	47	47	23	50	51	52	46	46	46	46
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	76	58	68	55	28	50	46	52	51	73	61	74
Administrative	49	56	68	55	28	45	46	52	51	73	81	74
Survey	45	NA	71	NA	NA	NA	67	26	29	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: 2020 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:

2020: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to sudden change in coverage from 61 level to 74 percent. Programme notes issues with data quality and use including that the denominators come from projections from a 2003 census. Estimate challenged by: D-R-

2019: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 73 percent to 61 percent with increase to 74 percent. Estimate of 46 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2018: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to an increase from 51 percent to 73 percent with decrease 61 percent. Estimate of 46 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2017: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 46 percent based on 1 survey(s). Central African Republic Multiple Indicator Cluster Survey 2018-2019 card or history results of 29 percent modified for recall bias to 46 percent based on 1st dose card or history coverage of 61 percent, 1st dose card only coverage of 24 percent and 3rd dose card only coverage of 18 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate of 46 percent changed from previous revision value of 47 percent. Estimate challenged by: R-

2016: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 52 percent based on 1 survey(s). Central African Republic Multiple Indicator Cluster Survey 2018-2019 card or history results of 26 percent modified for recall bias to 52 percent based on 1st dose card or history coverage of 61 percent, 1st dose card only coverage of 14 percent and 3rd dose card only coverage of 12 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level that impacted service delivery. Estimate of 52 percent changed from previous revision value of 47 percent. Estimate challenged by: R-

2015: Reported data calibrated to 2012 and 2016 levels. Survey results ignored. Sample size 0 less than 300. Central African Republic EPI Coverage Survey 2016 card or history results of 67 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 82 percent, 1st dose card only coverage of 11 percent and 3rd dose card only coverage of 12 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Survey reported values for vaccination coverage by documented evidence in home-based records are illogical for the first and third doses for several vaccines. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. The

# Central African Republic - Pol3

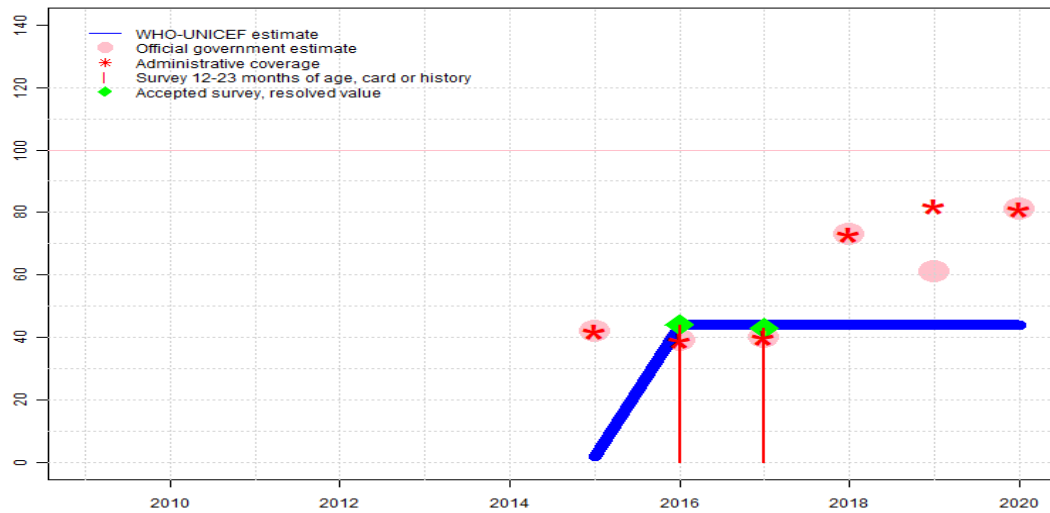
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reported number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 51 percent changed from previous revision value of 47 percent. Estimate challenged by: R-

- 2014: Reported data calibrated to 2012 and 2016 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Government reports the conduct of multiple routine intensification activities during 2014. Reported coverage increased from 2013 level, however the number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 50 percent changed from previous revision value of 47 percent. Estimate challenged by: R-
- 2013: Decline in coverage associated with the interruption of health services during period of civil unrest. National immunization programme and partners estimate that civil unrest have resulted in a 50 percent decrease in coverage from prior annual performance. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 55 percent to 28 percent with increase to 50 percent. Estimate challenged by: R-S-
- 2012: Estimate of 47 percent assigned by working group. Estimate is based on extrapolation from survey. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2011: Estimate of 47 percent assigned by working group. Based on survey results of DTP3 coverage for children vaccinated by 23 months of age. Survey results for polio likely include campaign doses. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2010: Estimate based on interpolation between 2009 and 2011 levels. Fluctuations in reported data suggest poor quality administrative recording and reporting. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2009: Estimate of 45 percent assigned by working group. Based on survey results for children vaccinated by 23 months of age. Central African Republic Multiple Indicator Cluster Survey 2010 card or history results of 45 percent modified for recall bias to 54 percent based on 1st dose card or history coverage of 83 percent, 1st dose card only coverage of 23 percent and 3rd dose card only coverage of 15 percent. Reported data excluded due to an increase from 56 percent to 76 percent with decrease 58 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.

# Central African Republic - IPV1

CAF - IPV1



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	NA	NA	2	44	44	44	44	44
Estimate GoC	NA	NA	NA	NA	NA	NA	•	•	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	42	39	40	73	61	81
Administrative	NA	NA	NA	NA	NA	NA	42	39	40	73	82	81
Survey	NA	NA	NA	NA	NA	NA	NA	44	43	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: 2020 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:

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).

2020: Estimate based on survey results. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to sudden change in coverage from 61 level to 81 percent. Programme notes issues with data quality and use including that the denominators come from projections from a 2003 census. Estimate challenged by: D-R-

2019: Estimate based on survey results. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 73 percent to 61 percent with increase to 81 percent. Programme reports less than one month vaccine stock-out at the national level. Estimate of 44 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2018: Estimate based on survey results. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to an increase from 40 percent to 73 percent with decrease 61 percent. Estimate of 44 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

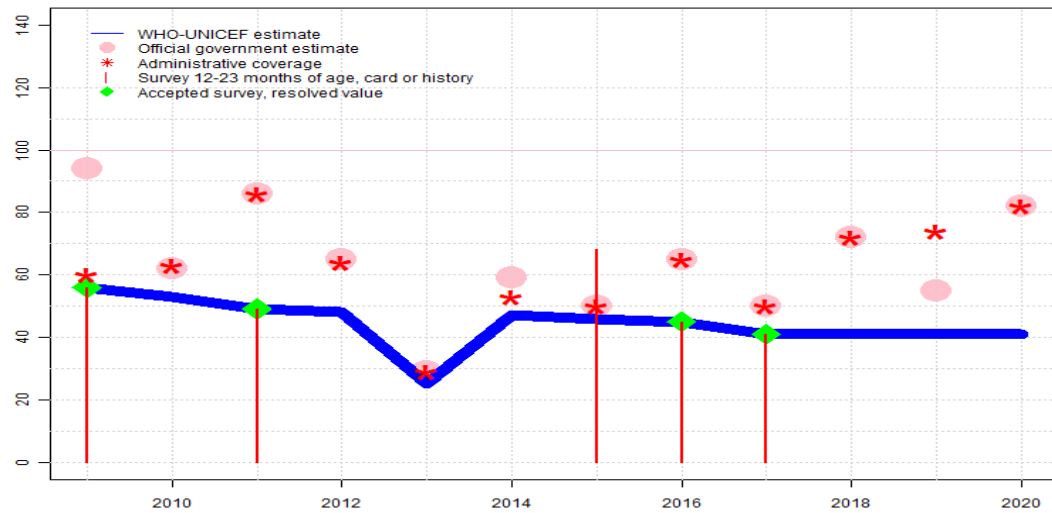
2017: Estimate based on survey results. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate of 44 percent changed from previous revision value of 47 percent. Estimate challenged by: R-

2016: Estimate based on survey results. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level that impacted service delivery. Estimate of 44 percent changed from previous revision value of 47 percent. Estimate challenged by: R-

2015: Inactivated polio vaccine introduced in September 2015. Programme reports 42 percent coverage achieved in 6 percent of the national target population. Estimate is based on coverage achieved in the total annual national target population. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Survey reported values for vaccination coverage by documented evidence in home-based records are illogical for the first and third doses for several vaccines. Estimate challenged by: R-S-

# Central African Republic - MCV1

CAF - MCV1



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	56	53	49	48	25	47	46	45	41	41	41	41
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	94	62	86	65	29	59	50	65	50	72	55	82
Administrative	60	63	86	64	29	53	50	65	50	72	74	82
Survey	56	NA	49	NA	NA	NA	68	45	41	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: 2020 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:

2020: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to sudden change in coverage from 55 level to 82 percent. Programme notes issues with data quality and use including that the denominators come from projections from a 2003 census. Estimate challenged by: D-R-

2019: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 72 percent to 55 percent with increase to 82 percent. WHO and UNICEF are aware of a SMART nutrition survey where the measles coverage estimate for children aged 9 to 59 months suggests higher coverage levels than estimated here. Programme reports less than two month vaccine stock-out at the national level. Estimate of 41 percent changed from previous revision value of 49 percent. Estimate challenged by: D-R-

2018: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to an increase from 50 percent to 72 percent with decrease 55 percent. Estimate of 41 percent changed from previous revision value of 49 percent. Estimate challenged by: D-R-

2017: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 41 percent based on 1 survey(s). Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 65 percent to 50 percent with increase to 72 percent. Programme reports vaccine supply disruptions at district level. Estimate of 41 percent changed from previous revision value of 49 percent. Estimate challenged by: D-R-

2016: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 45 percent based on 1 survey(s). Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to an increase from 50 percent to 65 percent with decrease 50 percent. Programme reports vaccine supply disruptions at district level that impacted service delivery. Estimate of 45 percent changed from previous revision value of 49 percent. Estimate challenged by: D-R-

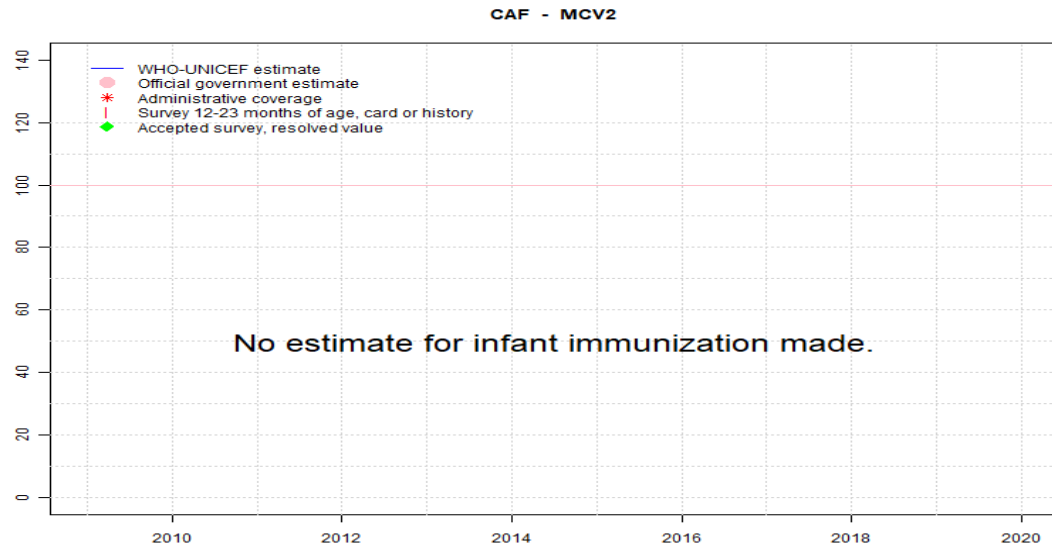
2015: Reported data calibrated to 2011 and 2016 levels. Survey results ignored. Sample size 0 less than 300. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Survey reported values for vaccination coverage by documented evidence in home-based records are illogical for the first and third doses for several vaccines. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. The reported number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 46 percent changed from previous revision

# Central African Republic - MCV1

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- value of 49 percent. Estimate challenged by: R-
- 2014: Reported data calibrated to 2011 and 2016 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Government reports the conduct of multiple routine intensification activities during 2014. Reported coverage increased from 2013 level, however the number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 47 percent changed from previous revision value of 49 percent. Estimate challenged by: R-
- 2013: Decline in coverage associated with the interruption of health services during period of civil unrest. National immunization programme and partners estimate that civil unrest have resulted in a 50 percent decrease in coverage from prior annual performance. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 65 percent to 29 percent with increase to 59 percent. Estimate challenged by: R-S-
- 2012: Reported data calibrated to 2011 and 2016 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate of 48 percent changed from previous revision value of 49 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2011: Estimate of 49 percent assigned by working group. Based on survey results for children vaccinated by 23 months of age. Reported data excluded due to an increase from 62 percent to 86 percent with decrease 65 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2010: Estimate based on interpolation between 2009 and 2011 levels. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 94 percent to 62 percent with increase to 86 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2009: Estimate of 56 percent assigned by working group. Based on survey results for children vaccinated by 23 months of age. Reported data excluded due to an increase from 61 percent to 94 percent with decrease 62 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.

# Central African Republic - MCV2



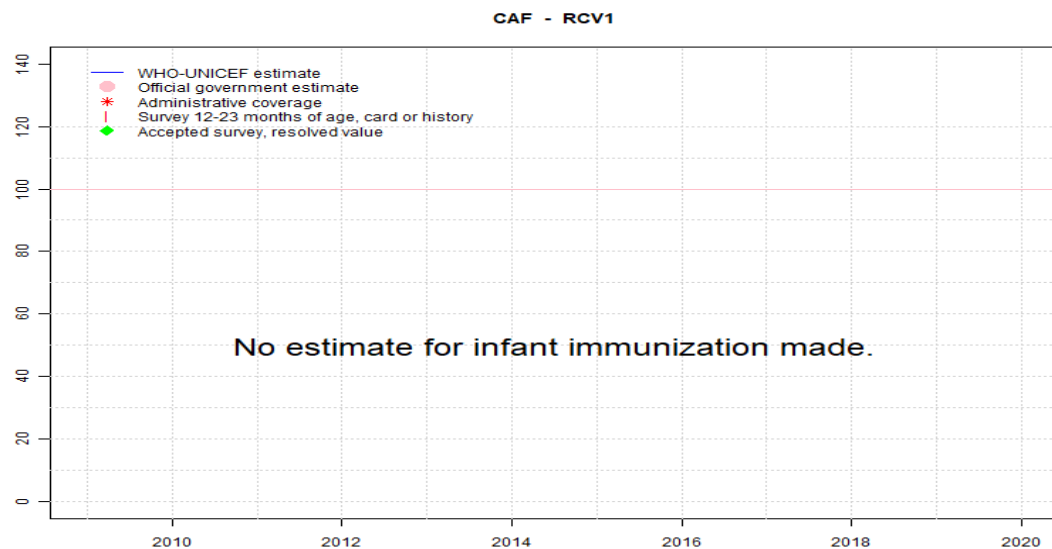
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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: 2020 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.

# Central African Republic - RCV1



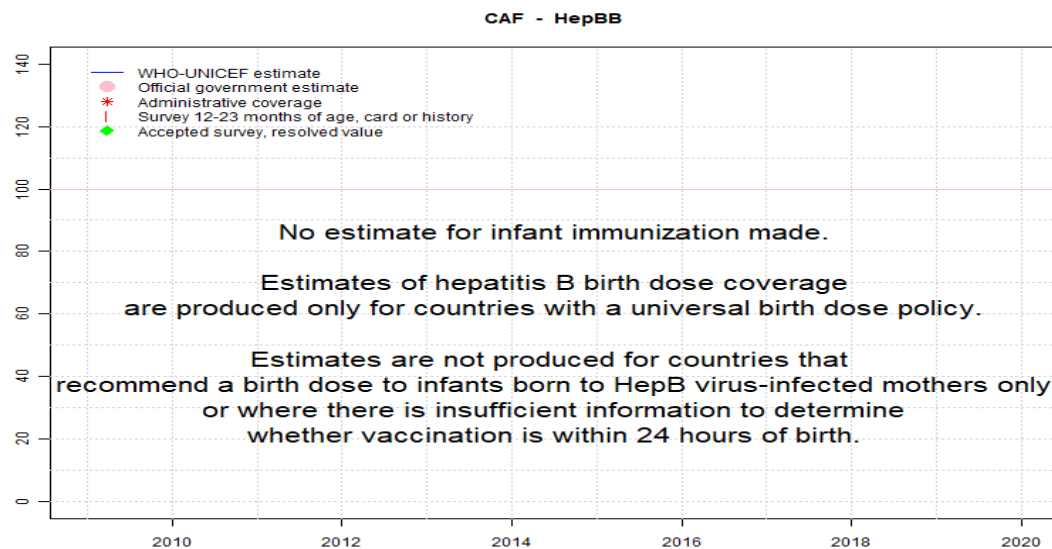
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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: 2020 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.

# Central African Republic - HepBB



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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.

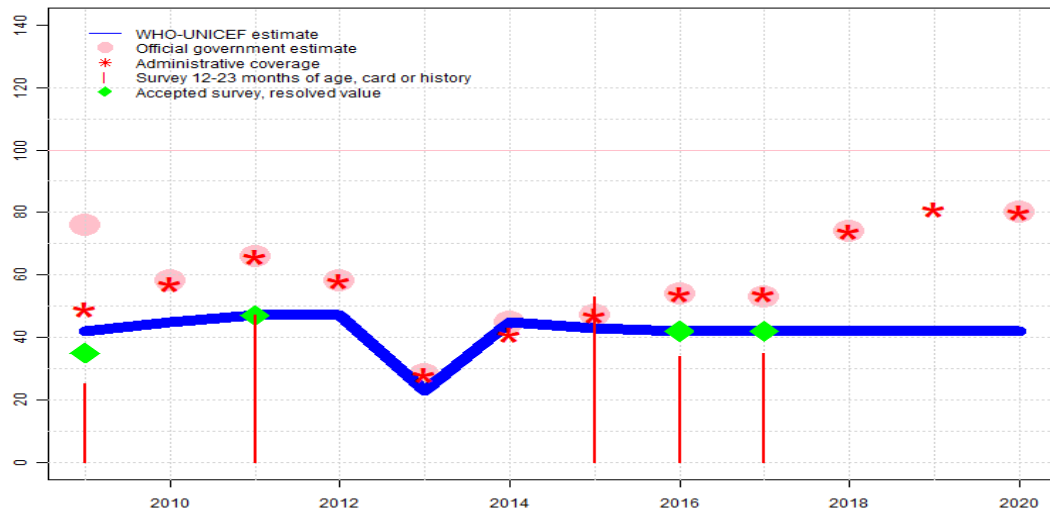
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2020 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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.



# Central African Republic - HepB3

CAF - HepB3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	42	45	47	47	23	45	43	42	42	42	42	42
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	76	58	66	58	28	45	47	54	53	74	NA	80
Administrative	49	57	66	58	28	41	47	54	54	74	81	80
Survey	25	NA	47	NA	NA	NA	53	34	35	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: 2020 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:

2020: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme notes issues with data quality and use including that the denominators come from projections from a 2003 census. Estimate challenged by: D-R-

2019: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate of 42 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2018: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate of 42 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2017: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 42 percent based on 1 survey(s). Central African Republic Multiple Indicator Cluster Survey 2018-2019 card or history results of 35 percent modified for recall bias to 42 percent based on 1st dose card or history coverage of 54 percent, 1st dose card only coverage of 23 percent and 3rd dose card only coverage of 18 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level. Estimate of 42 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2016: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 42 percent based on 1 survey(s). Central African Republic Multiple Indicator Cluster Survey 2018-2019 card or history results of 34 percent modified for recall bias to 42 percent based on 1st dose card or history coverage of 54 percent, 1st dose card only coverage of 14 percent and 3rd dose card only coverage of 11 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level that impacted service delivery. Estimate of 42 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2015: Reported data calibrated to 2012 and 2016 levels. Survey results ignored. Sample size 0 less than 300. Central African Republic EPI Coverage Survey 2016 card or history results of 53 percent modified for recall bias to 75 percent based on 1st dose card or history coverage of 70 percent, 1st dose card only coverage of 13 percent and 3rd dose card only coverage of 14 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Survey reported values for vaccination coverage by documented evidence in home-based records are illogical for the first and third doses for several vaccines. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. The reported number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 43 percent changed from previous revision value of 47 percent. Estimate challenged by: R-

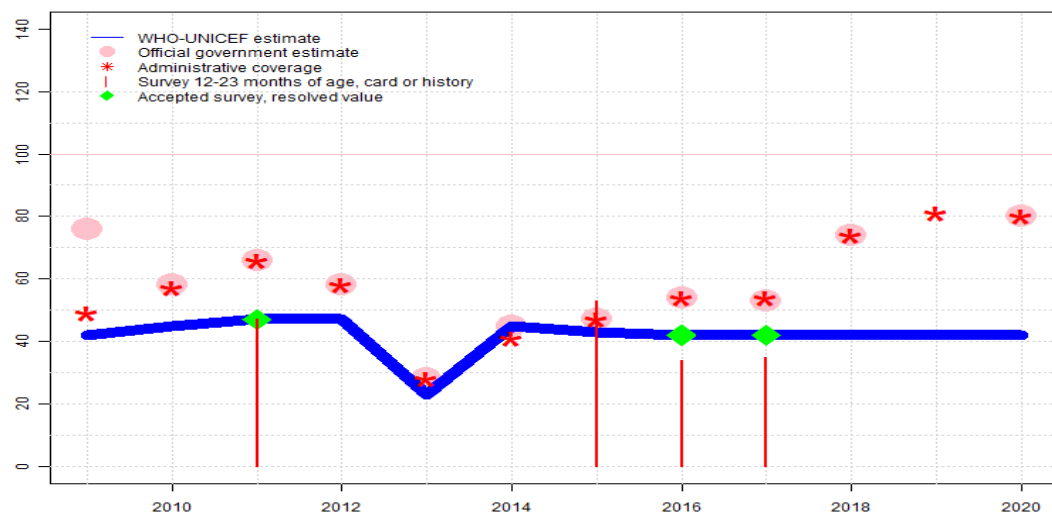
# Central African Republic - HepB3

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- 2014: Reported data calibrated to 2012 and 2016 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Government reports the conduct of multiple routine intensification activities during 2014. Reported coverage increased from 2013 level, however the number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 45 percent changed from previous revision value of 47 percent. Estimate challenged by: R-
- 2013: Decline in coverage associated with the interruption of health services during period of civil unrest. National immunization programme and partners estimate that civil unrest have resulted in a 50 percent decrease in coverage from prior annual performance. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 58 percent to 28 percent with increase to 45 percent. Estimate challenged by: R-S-
- 2012: Estimate of 47 percent assigned by working group. Estimate is based on third dose DTP containing vaccine coverage. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2011: Estimate of 47 percent assigned by working group. Estimate follows DTP3 coverage levels. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2010: Estimate based on interpolation between 2009 and 2011 levels. Fluctuations in reported data suggest poor quality administrative recording and reporting. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2009: Estimate of 42 percent assigned by working group. Estimate follows DTP3 coverage levels. Central African Republic Multiple Indicator Cluster Survey 2010 card or history results of 25 percent modified for recall bias to 35 percent based on 1st dose card or history coverage of 54 percent, 1st dose card only coverage of 25 percent and 3rd dose card only coverage of 16 percent. HepB vaccine introduced in 2008. Reporting started in 2009. Vaccine presentation is DTP-HepB-Hib. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.

# Central African Republic - Hib3

CAF - Hib3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	42	45	47	47	23	45	43	42	42	42	42	42
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	76	58	66	58	28	45	47	54	53	74	NA	80
Administrative	49	57	66	58	28	41	47	54	54	74	81	80
Survey	NA	NA	47	NA	NA	NA	53	34	35	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: 2020 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:

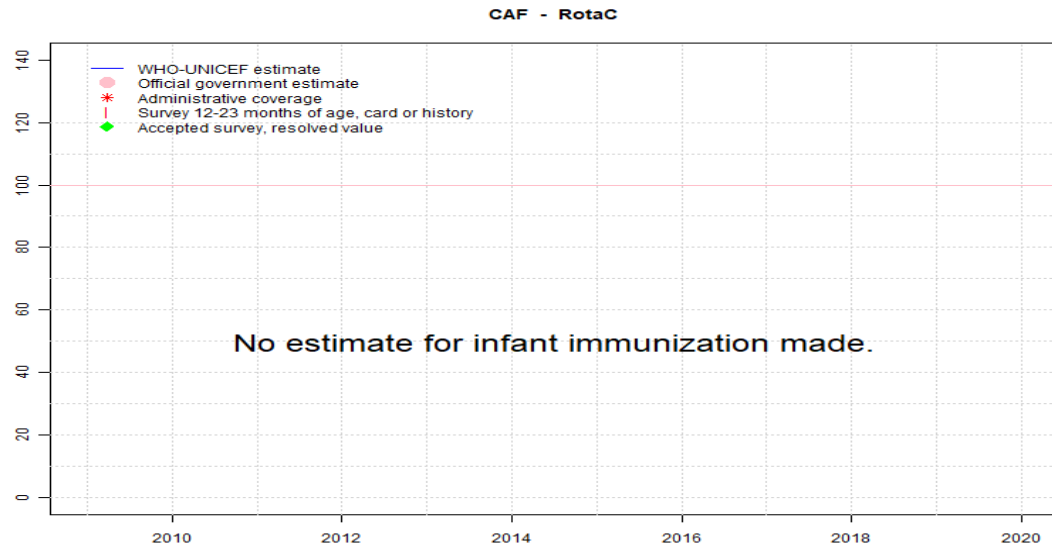
- 2020: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme notes issues with data quality and use including that the denominators come from projections from a 2003 census. Estimate challenged by: D-R-
- 2019: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate of 42 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-
- 2018: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate of 42 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-
- 2017: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 42 percent based on 1 survey(s). Central African Republic Multiple Indicator Cluster Survey 2018-2019 card or history results of 35 percent modified for recall bias to 42 percent based on 1st dose card or history coverage of 54 percent, 1st dose card only coverage of 23 percent and 3rd dose card only coverage of 18 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level. Estimate of 42 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-
- 2016: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 42 percent based on 1 survey(s). Central African Republic Multiple Indicator Cluster Survey 2018-2019 card or history results of 34 percent modified for recall bias to 42 percent based on 1st dose card or history coverage of 54 percent, 1st dose card only coverage of 14 percent and 3rd dose card only coverage of 11 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level that impacted service delivery. Estimate of 42 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-
- 2015: Reported data calibrated to 2012 and 2016 levels. Survey results ignored. Sample size 0 less than 300. Central African Republic EPI Coverage Survey 2016 card or history results of 53 percent modified for recall bias to 75 percent based on 1st dose card or history coverage of 70 percent, 1st dose card only coverage of 13 percent and 3rd dose card only coverage of 14 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Survey reported values for vaccination coverage by documented evidence in home-based records are illogical for the first and third doses for several vaccines. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. The reported number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 43 percent changed from previous revision value of 47 percent. Estimate challenged by: R-

# Central African Republic - Hib3

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- 2014: Reported data calibrated to 2012 and 2016 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Government reports the conduct of multiple routine intensification activities during 2014. Reported coverage increased from 2013 level, however the number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 45 percent changed from previous revision value of 47 percent. Estimate challenged by: R-
- 2013: Decline in coverage associated with the interruption of health services during period of civil unrest. National immunization programme and partners estimate that civil unrest have resulted in a 50 percent decrease in coverage from prior annual performance. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 58 percent to 28 percent with increase to 45 percent. Estimate challenged by: R-S-
- 2012: Estimate of 47 percent assigned by working group. Estimate is based on third dose DTP containing vaccine coverage. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2011: Estimate of 47 percent assigned by working group. Estimate follows DTP3 coverage levels. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2010: Estimate based on interpolation between 2009 and 2011 levels. Fluctuations in reported data suggest poor quality administrative recording and reporting. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2009: Estimate of 42 percent assigned by working group. Estimate follows DTP3 coverage levels. Hib vaccine introduced in 2008. Reporting started in 2009. Vaccine presentation is DTP-HepB-Hib. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.

# Central African Republic - RotaC



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

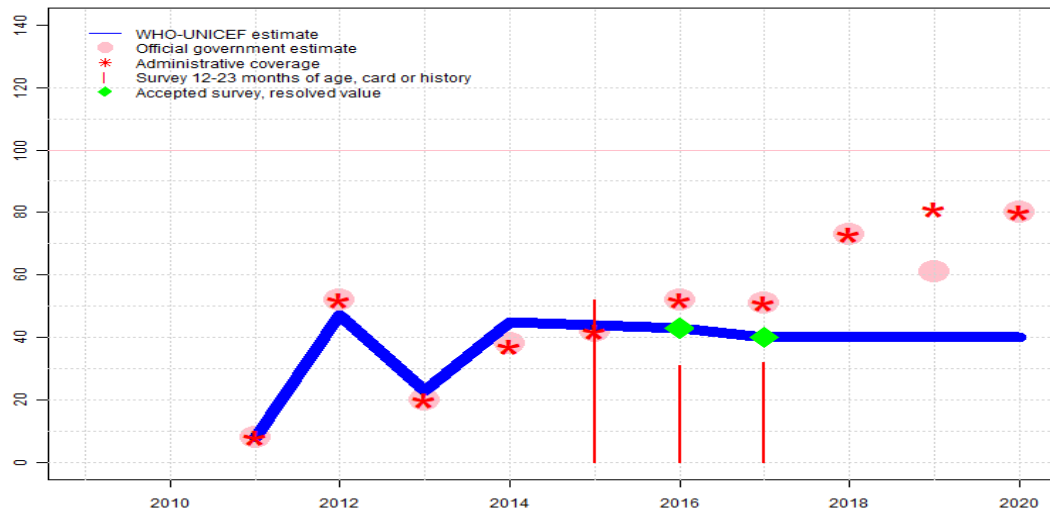
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2020 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.

# Central African Republic - PcV3

CAF - PcV3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	8	47	23	45	44	43	40	40	40	40
Estimate GoC	NA	NA	•	•	•	•	•	•	•	•	•	•
Official	NA	NA	8	52	20	38	42	52	51	73	61	80
Administrative	NA	NA	8	52	20	37	42	52	51	73	81	80
Survey	NA	NA	NA	NA	NA	NA	52	31	32	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: 2020 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:

2020: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme notes issues with data quality and use including that the denominators come from projections from a 2003 census. Estimate challenged by: D-R-

2019: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 73 percent to 61 percent with increase to 80 percent. Programme notes that only two doses of PCV are administered (at 6 and 24 weeks). Estimate of 40 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2018: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to an increase from 51 percent to 73 percent with decrease 61 percent. Estimate of 40 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2017: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 40 percent based on 1 survey(s). Central African Republic Multiple Indicator Cluster Survey 2018-2019 card or history results of 32 percent modified for recall bias to 40 percent based on 1st dose card or history coverage of 50 percent, 1st dose card only coverage of 20 percent and 3rd dose card only coverage of 16 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level. Estimate of 40 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2016: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 43 percent based on 1 survey(s). Central African Republic Multiple Indicator Cluster Survey 2018-2019 card or history results of 31 percent modified for recall bias to 43 percent based on 1st dose card or history coverage of 51 percent, 1st dose card only coverage of 12 percent and 3rd dose card only coverage of 10 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level that impacted service delivery. Estimate of 43 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-

2015: Reported data calibrated to 2012 and 2016 levels. Survey results ignored. Sample size 0 less than 300. Central African Republic EPI Coverage Survey 2016 card or history results of 52 percent modified for recall bias to 69 percent based on 1st dose card or history coverage of 69 percent, 1st dose card only coverage of 13 percent and 3rd dose card only coverage of 13 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Survey reported values for vaccination coverage by documented evidence in home-based records are illogical for the first and third doses for several vaccines. Estimate of 44 percent changed from previous

# Central African Republic - PcV3

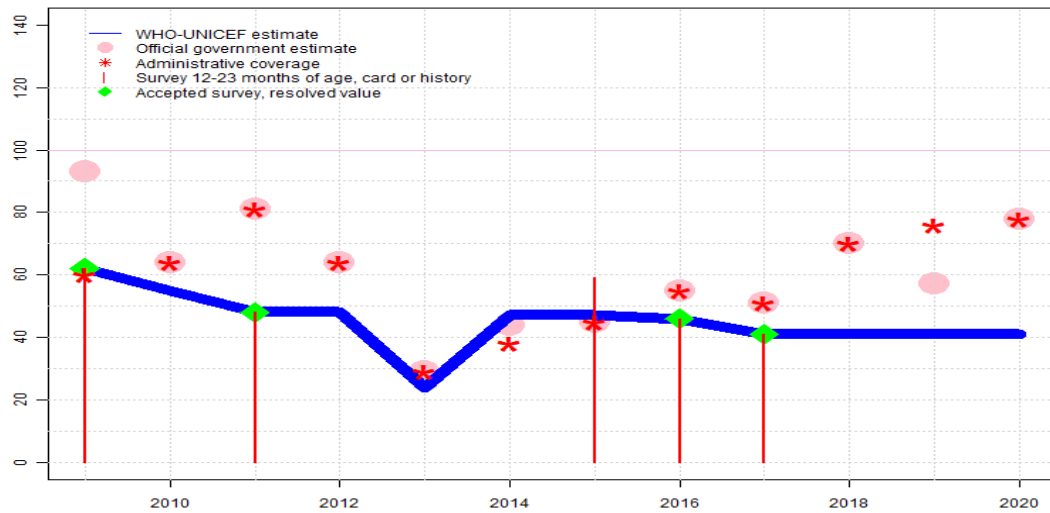
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revision value of 47 percent. Estimate challenged by: R-

- 2014: Reported data calibrated to 2012 and 2016 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Government reports the conduct of multiple routine intensification activities during 2014. Reported coverage increased from 2013 level, however the number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 45 percent changed from previous revision value of 47 percent. Estimate challenged by: R-
- 2013: Decline in coverage associated with the interruption of health services during period of civil unrest. National immunization programme and partners estimate that civil unrest have resulted in a 50 percent decrease in coverage from prior annual performance. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 52 percent to 20 percent with increase to 38 percent. Estimate challenged by: R-
- 2012: Estimate of 47 percent assigned by working group. Estimate follows DTP3 coverage level. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to an increase from 8 percent to 52 percent with decrease 20 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2011: Pneumococcal conjugate vaccine was introduced in 2011. Estimate based on reported data. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.

# Central African Republic - YFV

CAF - YFV



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	62	55	48	48	24	47	47	46	41	41	41	41
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	93	64	81	64	29	44	45	55	51	70	57	78
Administrative	60	64	81	64	29	38	45	55	51	70	76	78
Survey	62	NA	48	NA	NA	NA	59	46	41	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: 2020 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:

2020: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to sudden change in coverage from 57 level to 78 percent. Programme notes issues with data quality and use including that the denominators come from projections from a 2003 census. Estimate challenged by: D-R-

2019: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 70 percent to 57 percent with increase to 78 percent. Programme reports less than one month vaccine stock-out at the national level. Estimate of 41 percent changed from previous revision value of 48 percent. Estimate challenged by: D-R-

2018: Reported data calibrated to 2017 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to an increase from 51 percent to 70 percent with decrease 57 percent. Programme reports one month vaccine stock-out at the national level. Estimate of 41 percent changed from previous revision value of 48 percent. Estimate challenged by: D-R-

2017: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 41 percent based on 1 survey(s). Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level. Estimate of 41 percent changed from previous revision value of 48 percent. Estimate challenged by: D-R-

2016: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 46 percent based on 1 survey(s). Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Programme reports vaccine supply disruptions at district level that impacted service delivery. Estimate of 46 percent changed from previous revision value of 48 percent. Estimate challenged by: R-

2015: Reported data calibrated to 2012 and 2016 levels. Survey results ignored. Sample size 0 less than 300. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Survey reported values for vaccination coverage by documented evidence in home-based records are illogical for the first and third doses for several vaccines. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. The reported number of children vaccinated has not returned to levels observed during 2011, prior to the decrease in coverage. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Estimate of 47 percent changed from previous revision value of 48 percent. Estimate challenged by: R-

2014: Reported data calibrated to 2012 and 2016 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Government reports the conduct of multiple routine intensification activities during 2014. Reported coverage increased from 2013 level, however the number of children vaccinated has not



# Central African Republic - YFV

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returned to levels observed during 2011, prior to the decrease in coverage. Given concerns with the quality of reported data, the estimate is based on pre-conflict levels determined by the 2012 survey. WHO and UNICEF encourage continued efforts to improve delivery of immunization services. Programme reports two months yellow fever stock-out at national level. Estimate of 47 percent changed from previous revision value of 48 percent. Estimate challenged by: R-

- 2013: Decline in coverage associated with the interruption of health services during period of civil unrest. National immunization programme and partners estimate that civil unrest have resulted in a 50 percent decrease in coverage from prior annual performance. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 64 percent to 29 percent with increase to 44 percent. Estimate challenged by: R-S-
- 2012: Estimate of 48 percent assigned by working group. Estimate is based on extrapolation from survey. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2011: Estimate of 48 percent assigned by working group. Estimate follows MCV coverage levels. Reported data excluded due to an increase from 64 percent to 81 percent with decrease 64 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2010: Estimate based on interpolation between 2009 and 2011 levels. Fluctuations in reported data suggest poor quality administrative recording and reporting. Reported data excluded due to decline in reported coverage from 93 percent to 64 percent with increase to 81 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.
- 2009: Estimate of 62 percent assigned by working group. Estimate follows MCV coverage levels. Reported data excluded due to an increase from 53 percent to 93 percent with decrease 64 percent. GoC=Assigned by working group. Low confidence in WHO and UNICEF estimates due to conflicting and inconsistent data from national reports.

# Central African Republic - survey details

## 2017 République Centrafricaine Enquête par grappes a' indicateurs multiples 2018-2019

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	59.2	12-23 m	1679	27
BCG	Card	24.3	12-23 m	1679	27
BCG	Card or History	61.3	12-23 m	1679	27
BCG	History	37	12-23 m	1679	27
DTP1	C or H <12 months	48.9	12-23 m	1679	27
DTP1	Card	22.6	12-23 m	1679	27
DTP1	Card or History	54.2	12-23 m	1679	27
DTP1	History	31.6	12-23 m	1679	27
DTP3	C or H <12 months	30.5	12-23 m	1679	27
DTP3	Card	18	12-23 m	1679	27
DTP3	Card or History	35.1	12-23 m	1679	27
DTP3	History	17.1	12-23 m	1679	27
HepB1	C or H <12 months	48.9	12-23 m	1679	27
HepB1	Card	22.6	12-23 m	1679	27
HepB1	Card or History	54.2	12-23 m	1679	27
HepB1	History	31.6	12-23 m	1679	27
HepB3	C or H <12 months	30.5	12-23 m	1679	27
HepB3	Card	18	12-23 m	1679	27
HepB3	Card or History	35.1	12-23 m	1679	27
HepB3	History	17.1	12-23 m	1679	27
Hib1	C or H <12 months	48.9	12-23 m	1679	27
Hib1	Card	22.6	12-23 m	1679	27
Hib1	Card or History	54.2	12-23 m	1679	27
Hib1	History	31.6	12-23 m	1679	27
Hib3	C or H <12 months	30.5	12-23 m	1679	27
Hib3	Card	18	12-23 m	1679	27
Hib3	Card or History	35.1	12-23 m	1679	27
Hib3	History	17.1	12-23 m	1679	27
IPV1	Card	15.5	12-23 m	1679	27
IPV1	Card or History	42.9	12-23 m	1679	27
IPV1	History	27.4	12-23 m	1679	27
MCV1	C or H <12 months	29.9	12-23 m	1679	27
MCV1	Card	14.1	12-23 m	1679	27
MCV1	Card or History	40.6	12-23 m	1679	27
MCV1	History	26.5	12-23 m	1679	27

PCV1	C or H <12 months	44.2	12-23 m	1679	27
PCV1	Card	20.5	12-23 m	1679	27
PCV1	Card or History	50.1	12-23 m	1679	27
PCV1	History	29.6	12-23 m	1679	27
PCV3	C or H <12 months	26.7	12-23 m	1679	27
PCV3	Card	16.4	12-23 m	1679	27
PCV3	Card or History	32.1	12-23 m	1679	27
PCV3	History	15.7	12-23 m	1679	27
Pol1	C or H <12 months	56.9	12-23 m	1679	27
Pol1	Card	23.5	12-23 m	1679	27
Pol1	Card or History	60.7	12-23 m	1679	27
Pol1	History	37.2	12-23 m	1679	27
Pol3	C or H <12 months	25.3	12-23 m	1679	27
Pol3	Card	18.5	12-23 m	1679	27
Pol3	Card or History	28.8	12-23 m	1679	27
Pol3	History	10.3	12-23 m	1679	27
YFV	C or H <12 months	34	12-23 m	1679	27
YFV	Card	15.9	12-23 m	1679	27
YFV	Card or History	41.3	12-23 m	1679	27
YFV	History	25.4	12-23 m	1679	27

## 2016 République Centrafricaine Enquête par grappes a' indicateurs multiples 2018-2019

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	56.7	24-35 m	1734	27
BCG	Card	14.4	24-35 m	1734	27
BCG	Card or History	61.3	24-35 m	1734	27
BCG	History	46.9	24-35 m	1734	27
DTP1	C or H <12 months	44.3	24-35 m	1734	27
DTP1	Card	13.7	24-35 m	1734	27
DTP1	Card or History	54.3	24-35 m	1734	27
DTP1	History	40.7	24-35 m	1734	27
DTP3	C or H <12 months	26.7	24-35 m	1734	27
DTP3	Card	11.3	24-35 m	1734	27
DTP3	Card or History	34.4	24-35 m	1734	27
DTP3	History	23.2	24-35 m	1734	27
HepB1	C or H <12 months	44.3	24-35 m	1734	27
HepB1	Card	13.7	24-35 m	1734	27

# Central African Republic - survey details

HepB1	Card or History	54.3	24-35 m	1734	27
HepB1	History	40.7	24-35 m	1734	27
HepB3	C or H <12 months	26.7	24-35 m	1734	27
HepB3	Card	11.3	24-35 m	1734	27
HepB3	Card or History	34.4	24-35 m	1734	27
HepB3	History	23.2	24-35 m	1734	27
Hib1	C or H <12 months	44.3	24-35 m	1734	27
Hib1	Card	13.7	24-35 m	1734	27
Hib1	Card or History	54.3	24-35 m	1734	27
Hib1	History	40.7	24-35 m	1734	27
Hib3	C or H <12 months	26.7	24-35 m	1734	27
Hib3	Card	11.3	24-35 m	1734	27
Hib3	Card or History	34.4	24-35 m	1734	27
Hib3	History	23.2	24-35 m	1734	27
IPV1	Card	9.7	24-35 m	1734	27
IPV1	Card or History	44.4	24-35 m	1734	27
IPV1	History	34.7	24-35 m	1734	27
MCV1	C or H <12 months	32.2	24-35 m	1734	27
MCV1	Card	8.4	24-35 m	1734	27
MCV1	Card or History	45	24-35 m	1734	27
MCV1	History	36.6	24-35 m	1734	27
PCV1	C or H <12 months	41.7	24-35 m	1734	27
PCV1	Card	12.4	24-35 m	1734	27
PCV1	Card or History	50.9	24-35 m	1734	27
PCV1	History	38.5	24-35 m	1734	27
PCV3	C or H <12 months	24.7	24-35 m	1734	27
PCV3	Card	10.5	24-35 m	1734	27
PCV3	Card or History	31.1	24-35 m	1734	27
PCV3	History	20.6	24-35 m	1734	27
Pol1	C or H <12 months	50.2	24-35 m	1734	27
Pol1	Card	13.7	24-35 m	1734	27
Pol1	Card or History	61.2	24-35 m	1734	27
Pol1	History	47.5	24-35 m	1734	27
Pol3	C or H <12 months	20.6	24-35 m	1734	27
Pol3	Card	11.8	24-35 m	1734	27
Pol3	Card or History	26	24-35 m	1734	27
Pol3	History	14.2	24-35 m	1734	27
YFV	C or H <12 months	33.1	24-35 m	1734	27
YFV	Card	9.7	24-35 m	1734	27
YFV	Card or History	46.2	24-35 m	1734	27

YFV	History	36.4	24-35 m	1734	27
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## 2015 République Centrafricaine Enquête de Couverture Vaccinale 2016

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	13.5	12-23 m	-	-
BCG	Card or History	71.1	12-23 m	-	-
DTP1	Card	12.9	12-23 m	-	-
DTP1	Card or History	69.9	12-23 m	-	-
DTP3	Card	13.6	12-23 m	-	-
DTP3	Card or History	53.3	12-23 m	-	-
HepB1	Card	12.9	12-23 m	-	-
HepB1	Card or History	69.9	12-23 m	-	-
HepB3	Card	13.6	12-23 m	-	-
HepB3	Card or History	53.3	12-23 m	-	-
Hib1	Card	12.9	12-23 m	-	-
Hib1	Card or History	69.9	12-23 m	-	-
Hib3	Card	13.6	12-23 m	-	-
Hib3	Card or History	53.3	12-23 m	-	-
MCV1	Card	28.3	12-23 m	-	-
MCV1	Card or History	68.1	12-23 m	-	-
PcV1	Card	13.3	12-23 m	-	-
PcV1	Card or History	68.6	12-23 m	-	-
PcV3	Card	13.3	12-23 m	-	-
PcV3	Card or History	51.9	12-23 m	-	-
Pol1	Card	11.3	12-23 m	-	-
Pol1	Card or History	81.9	12-23 m	-	-
Pol3	Card	11.5	12-23 m	-	-
Pol3	Card or History	67.2	12-23 m	-	-
YFV	Card	13.1	12-23 m	-	-
YFV	Card or History	59.4	12-23 m	-	-

## 2011 République Centrafricaine Enquête de Couverture Vaccinale 2012

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	39	12-23 m	1774	50
BCG	Card or History	74	12-23 m	1774	50

# Central African Republic - survey details

DTP3	Card	41	12-23 m	1774	50
DTP3	Card or History	47	12-23 m	1774	50
HepB3	Card	41	12-23 m	1774	50
HepB3	Card or History	47	12-23 m	1774	50
Hib3	Card	41	12-23 m	1774	50
Hib3	Card or History	47	12-23 m	1774	50
MCV1	Card	34	12-23 m	1774	50
MCV1	Card or History	49	12-23 m	1774	50
Pol3	Card	28	12-23 m	1774	50
Pol3	Card or History	71	12-23 m	1774	50
YFV	Card	34	12-23 m	1774	50
YFV	Card or History	48	12-23 m	1774	50

MCV1	Card or History	55.8	12-23 m	2105	32
MCV1	History	42.4	12-23 m	-	32
Pol1	C or H <12 months	80.5	12-23 m	-	32
Pol1	Card	23.2	12-23 m	-	32
Pol1	Card or History	82.9	12-23 m	2105	32
Pol1	History	59.7	12-23 m	-	32
Pol3	C or H <12 months	43.6	12-23 m	-	32
Pol3	Card	15.4	12-23 m	-	32
Pol3	Card or History	45.3	12-23 m	2105	32
Pol3	History	30	12-23 m	-	32
YFV	C or H <12 months	46	12-23 m	-	32
YFV	Card	16.1	12-23 m	-	32
YFV	Card or History	61.6	12-23 m	2105	32
YFV	History	45.5	12-23 m	-	32

## 2009 République Centrafricaine, Enquête par grappes à indicateurs multiples, 2010

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	72.4	12-23 m	-	32
BCG	Card	23.8	12-23 m	-	32
BCG	Card or History	73.9	12-23 m	2105	32
BCG	History	50	12-23 m	-	32
DTP1	C or H <12 months	62.8	12-23 m	-	32
DTP1	Card	25.1	12-23 m	-	32
DTP1	Card or History	64.6	12-23 m	2105	32
DTP1	History	39.5	12-23 m	-	32
DTP3	C or H <12 months	30.9	12-23 m	-	32
DTP3	Card	16.5	12-23 m	-	32
DTP3	Card or History	32.1	12-23 m	2105	32
DTP3	History	15.7	12-23 m	-	32
HepB1	C or H <12 months	52.4	12-23 m	-	32
HepB1	Card	25.1	12-23 m	-	32
HepB1	Card or History	53.9	12-23 m	2105	32
HepB1	History	28.8	12-23 m	-	32
HepB3	C or H <12 months	24	12-23 m	-	32
HepB3	Card	16.5	12-23 m	-	32
HepB3	Card or History	24.9	12-23 m	2105	32
HepB3	History	8.4	12-23 m	-	32
MCV1	C or H <12 months	49.8	12-23 m	-	32
MCV1	Card	13.4	12-23 m	-	32

## 2005 République Centrafricaine, Enquête par Grappe à Indicateurs Multiples, couplée avec la Sérologie VIH et Anémie, 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	71.1	12-23 m	1844	37
BCG	Card	33.6	12-23 m	1844	37
BCG	Card or History	73.8	12-23 m	1844	37
BCG	History	40.3	12-23 m	1844	37
DTP1	C or H <12 months	59.7	12-23 m	1844	37
DTP1	Card	32.2	12-23 m	1844	37
DTP1	Card or History	64.1	12-23 m	1844	37
DTP1	History	31.9	12-23 m	1844	37
DTP3	C or H <12 months	33.5	12-23 m	1844	37
DTP3	Card	26.6	12-23 m	1844	37
DTP3	Card or History	39	12-23 m	1844	37
DTP3	History	12.4	12-23 m	1844	37
MCV1	C or H <12 months	49.9	12-23 m	1844	37
MCV1	Card	28.1	12-23 m	1844	37
MCV1	Card or History	62	12-23 m	1844	37
MCV1	History	34	12-23 m	1844	37
Pol1	C or H <12 months	75.1	12-23 m	1844	37
Pol1	Card	32.3	12-23 m	1844	37
Pol1	Card or History	80.6	12-23 m	1844	37
Pol1	History	48.4	12-23 m	1844	37

# Central African Republic - survey details

Pol3	C or H <12 months	40.1	12-23 m	1844	37
Pol3	Card	26.6	12-23 m	1844	37
Pol3	Card or History	46.9	12-23 m	1844	37
Pol3	History	20.3	12-23 m	1844	37

Pol1	C or H <12 months	63	12-23 m	-	58
Pol3	C or H <12 months	40	12-23 m	-	58

2001 Rapport Final de la Revue externe du PEV en Republique Centrafricaine 2002

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	70	12-23 m	-	58
DTP1	C or H <12 months	65	12-23 m	-	58
DTP3	C or H <12 months	40	12-23 m	-	58
MCV1	C or H <12 months	35	12-23 m	-	58

1999 Enquête à Indicateurs Multiples en Republique Centrafricaine, 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	61.8	12-23 m	2932	39
DTP1	C or H <12 months	55.1	12-23 m	2932	39
DTP3	C or H <12 months	33	12-23 m	2932	39
MCV1	C or H <12 months	37	12-23 m	2932	39
Pol1	C or H <12 months	66.3	12-23 m	2932	39
Pol3	C or H <12 months	36.3	12-23 m	2932	39

Further information and estimates for previous years are available at:

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

<https://www.who.int/teams/immunization-vaccines-and-biologicals/immunization-analysis-and-insights/global-monitoring/data-statistics-and-graphics>