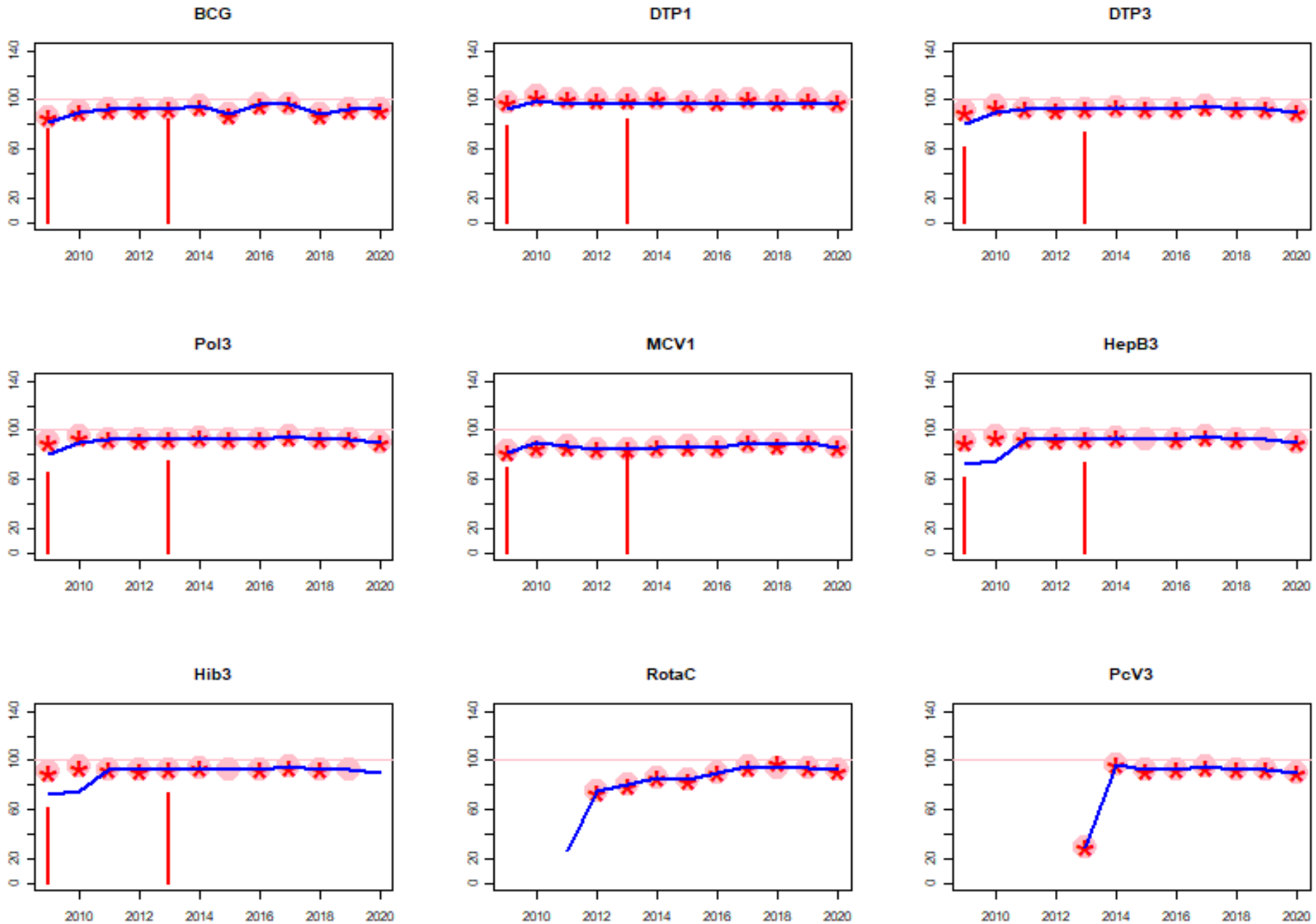


Sudan: WHO and UNICEF estimates of immunization coverage: 2020 revision



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.

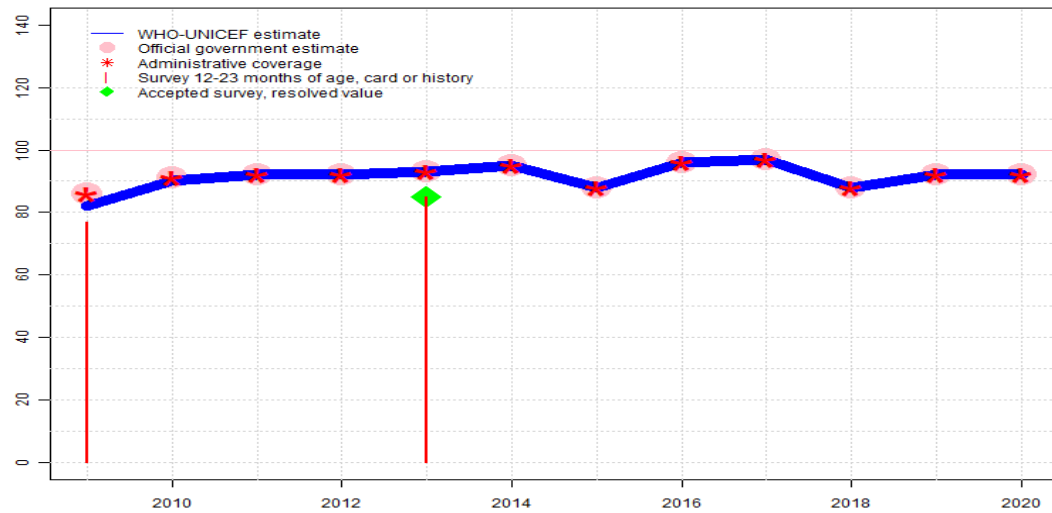
PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect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

SDN - BCG



Description:

- 2020: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the 2021 Multiple Indicator Cluster Survey and await results. Programme reports vaccine stock-out at subnational level. Estimate challenged by: D-
- 2019: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2016: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 85 percent based on 1 survey(s). Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. Prior to 2011, estimates are based on combined reports from national authorities from southern and northern Sudan. Estimate challenged by: D-
- 2010: Estimates are based on combined reports from national authorities from southern and northern Sudan. Estimate challenged by: D-R-
- 2009: Southern Sudan revised target population. Estimates are based on combined reports from national authorities from southern and northern Sudan. Sudan Household Health Survey - Second Round SHHS2 2010 results ignored by working group. While survey results reflect coverage for the Republic of Sudan, prior to 2011 WHO and UNICEF estimates of coverage were based on the combined coverage for the Republic of Sudan and Republic of South Sudan. Estimate challenged by: R-

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	82	90	92	92	93	95	88	96	97	88	92	92
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	86	91	92	92	93	95	88	96	97	88	92	92
Administrative	86	91	92	92	93	95	88	96	97	88	92	92
Survey	77	NA	NA	NA	85	NA	NA	NA	NA	NA	NA	NA

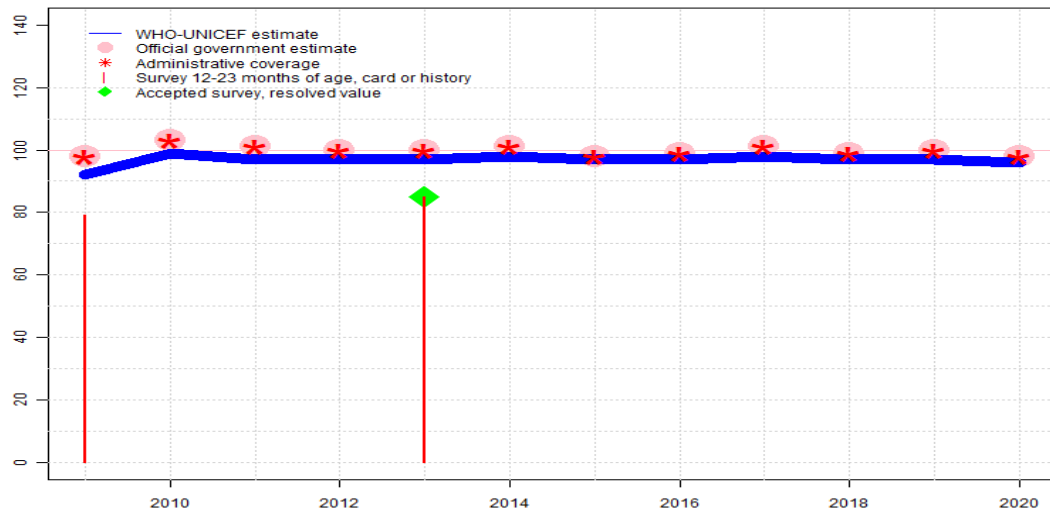
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Sudan - DTP1

SDN - DTP1



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	92	99	97	97	97	98	97	97	98	97	97	96
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	98	103	101	100	100	101	98	99	101	99	100	98
Administrative	98	103	101	100	100	101	98	99	101	99	100	98
Survey	79	NA	NA	NA	85	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.

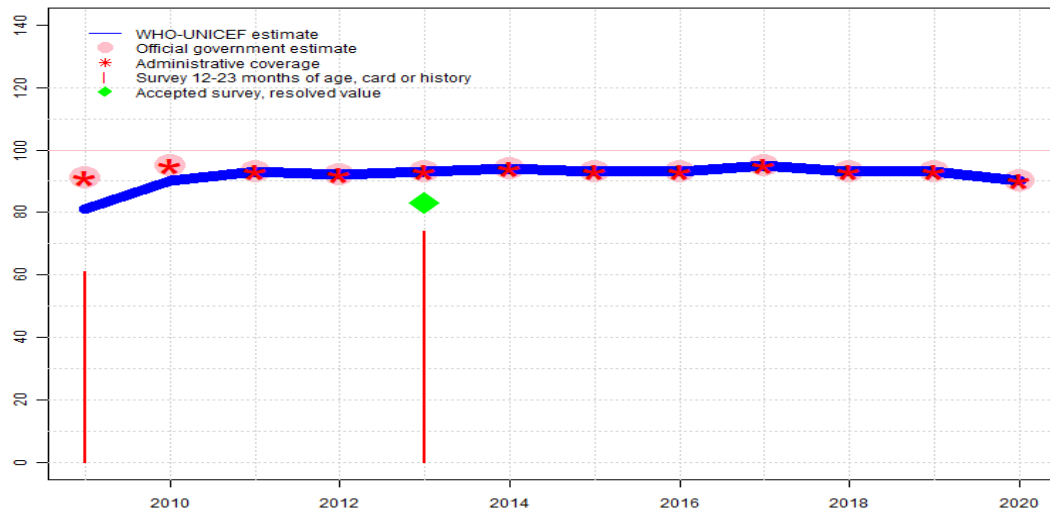
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2020: DTP1 coverage estimated based on DTP3 coverage of 90. WHO and UNICEF are aware of the 2021 Multiple Indicator Cluster Survey and await results. Programme reports vaccine stock-out at subnational level. Estimate challenged by: D-R-
- 2019: DTP1 coverage estimated based on DTP3 coverage of 93. Estimate challenged by: D-R-
- 2018: DTP1 coverage estimated based on DTP3 coverage of 93. Estimate challenged by: D-R-
- 2017: DTP1 coverage estimated based on DTP3 coverage of 95. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: D-R-
- 2016: DTP1 coverage estimated based on DTP3 coverage of 93. Estimate challenged by: D-R-
- 2015: DTP1 coverage estimated based on DTP3 coverage of 93. Estimate challenged by: D-R-S-
- 2014: DTP1 coverage estimated based on DTP3 coverage of 94. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: D-R-S-
- 2013: DTP1 coverage estimated based on DTP3 coverage of 93. Estimate challenged by: D-R-S-
- 2012: DTP1 coverage estimated based on DTP3 coverage of 92. Estimate challenged by: D-R-S-
- 2011: DTP1 coverage estimated based on DTP3 coverage of 93. Reported data excluded because 101 percent greater than 100 percent. Prior to 2011, estimates are based on combined reports from national authorities from southern and northern Sudan. Estimate challenged by: R-S-
- 2010: Estimates are based on combined reports from national authorities from southern and northern Sudan. Reported data excluded because 103 percent greater than 100 percent. Estimate challenged by: D-R-
- 2009: Southern Sudan revised target population. Estimates are based on combined reports from national authorities from southern and northern Sudan. Sudan Household Health Survey - Second Round SHHS2 2010 results ignored by working group. While survey results reflect coverage for the Republic of Sudan, prior to 2011 WHO and UNICEF estimates of coverage were based on the combined coverage for the Republic of Sudan and Republic of South Sudan. Estimate challenged by: D-R-

Sudan - DTP3

SDN - DTP3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	81	90	93	92	93	94	93	93	95	93	93	90
Estimate GoC	•	•	••	••	••	•	•	•	•	•	•	•
Official	91	95	93	92	93	94	93	93	95	93	93	90
Administrative	91	95	93	92	93	94	93	93	95	93	93	90
Survey	61	NA	NA	NA	74	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.

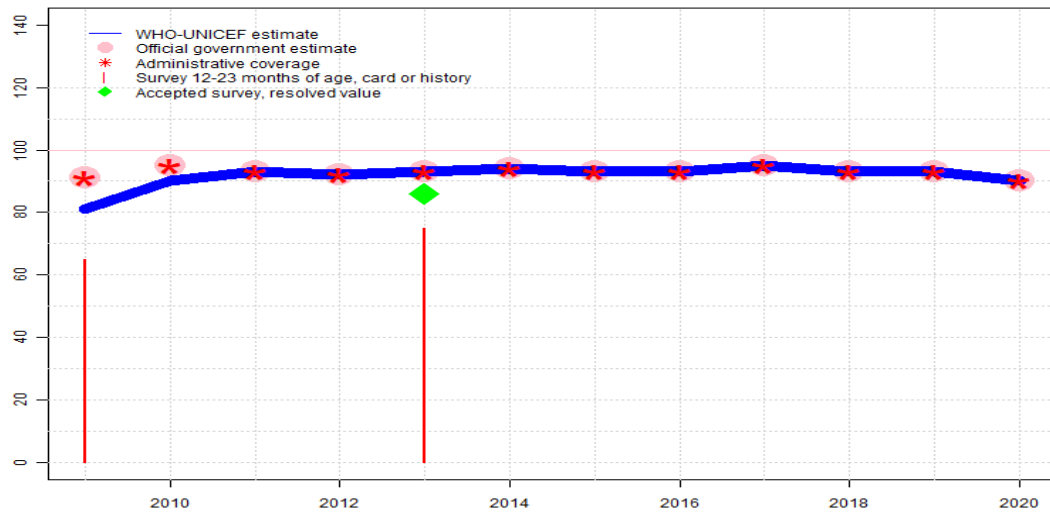
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2020: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the 2021 Multiple Indicator Cluster Survey and await results. Programme reports vaccine stock-out at subnational level. Estimate challenged by: D-
- 2019: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2016: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 83 percent based on 1 survey(s). Sudan Multiple Indicator Cluster Survey 2014 card or history results of 74 percent modified for recall bias to 83 percent based on 1st dose card or history coverage of 85 percent, 1st dose card only coverage of 44 percent and 3rd dose card only coverage of 43 percent. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2012: Estimate based on coverage reported by national government. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2011: Estimate is based on reported data from the Republic of Sudan. Prior to 2011, estimates are based on combined reports from national authorities from southern and northern Sudan. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2010: Estimates are based on combined reports from national authorities from southern and northern Sudan. Estimate challenged by: D-R-
- 2009: Southern Sudan revised target population. Estimates are based on combined reports from national authorities from southern and northern Sudan. Sudan Household Health Survey - Second Round SHHS2 2010 results ignored by working group. While survey results reflect coverage for the Republic of Sudan, prior to 2011 WHO and UNICEF estimates of coverage were based on the combined coverage for the Republic of Sudan and Republic of South Sudan. Sudan Household Health Survey - Second Round SHHS2 2010 card or history results of 61 percent modified for recall bias to 73 percent based on 1st dose card or history coverage of 79 percent, 1st dose card only coverage of 40 percent and 3rd dose card only coverage of 37 percent. Estimate challenged by: R-

Sudan - Pol3

SDN - Pol3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	81	90	93	92	93	94	93	93	95	93	93	90
Estimate GoC	•	•	••	••	••	•	•	•	•	•	•	•
Official	91	95	93	92	93	94	93	93	95	93	93	90
Administrative	91	95	93	92	93	94	93	93	95	93	93	90
Survey	65	NA	NA	NA	75	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.

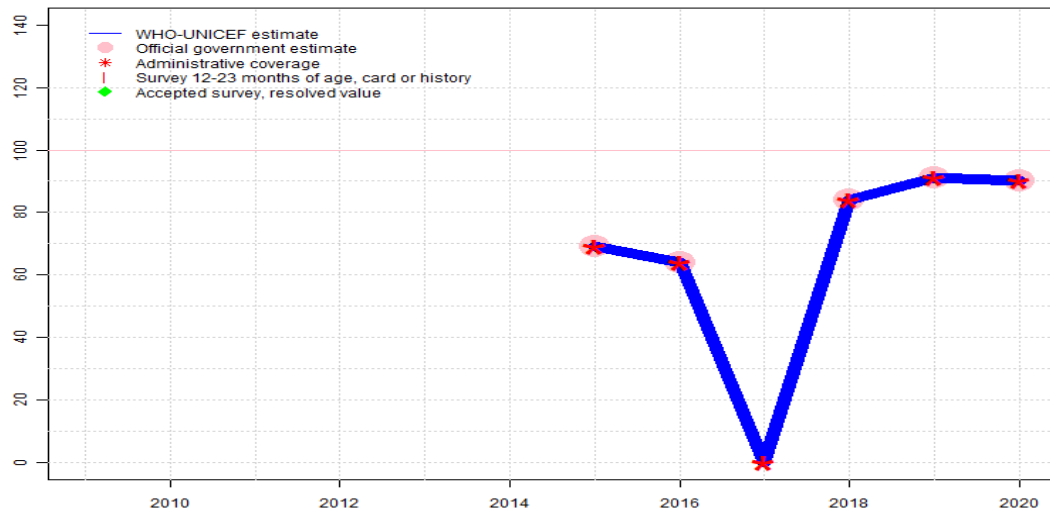
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2020: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the 2021 Multiple Indicator Cluster Survey and await results. Programme reports vaccine stock-out at subnational level. Estimate challenged by: D-
- 2019: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2016: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. GoC=Assigned by working group. GoC assigned to maintain consistency across vaccines.
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 86 percent based on 1 survey(s). Sudan Multiple Indicator Cluster Survey 2014 card or history results of 75 percent modified for recall bias to 86 percent based on 1st dose card or history coverage of 88 percent, 1st dose card only coverage of 44 percent and 3rd dose card only coverage of 43 percent. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2012: Estimate based on coverage reported by national government. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2011: Estimate is based on reported data from the Republic of Sudan. Prior to 2011, estimates are based on combined reports from national authorities from southern and northern Sudan. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2010: Estimates are based on combined reports from national authorities from southern and northern Sudan. Estimate challenged by: D-R-
- 2009: Southern Sudan revised target population. Estimates are based on combined reports from national authorities from southern and northern Sudan. Sudan Household Health Survey - Second Round SHHS2 2010 results ignored by working group. While survey results reflect coverage for the Republic of Sudan, prior to 2011 WHO and UNICEF estimates of coverage were based on the combined coverage for the Republic of Sudan and Republic of South Sudan. Sudan Household Health Survey - Second Round SHHS2 2010 card or history results of 65 percent modified for recall bias to 80 percent based on 1st dose card or history coverage of 86 percent, 1st dose card only coverage of 40 percent and 3rd dose card only coverage of 37 percent. Estimate challenged by: R-

Sudan - IPV1

SDN - IPV1



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	NA	NA	69	64	0	84	91	90
Estimate GoC	NA	NA	NA	NA	NA	NA	••	•	••	•	•	•
Official	NA	NA	NA	NA	NA	NA	69	64	NA	84	91	90
Administrative	NA	NA	NA	NA	NA	NA	69	64	0	84	91	90
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.

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 coverage reported by national government. WHO and UNICEF are aware of the 2021 Multiple Indicator Cluster Survey and await results. Estimate challenged by: D-

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

2018: Estimate based on coverage reported by national government. Evidence suggests programme recovered from previous year 12 month vaccine stock-out. Estimate challenged by: D-

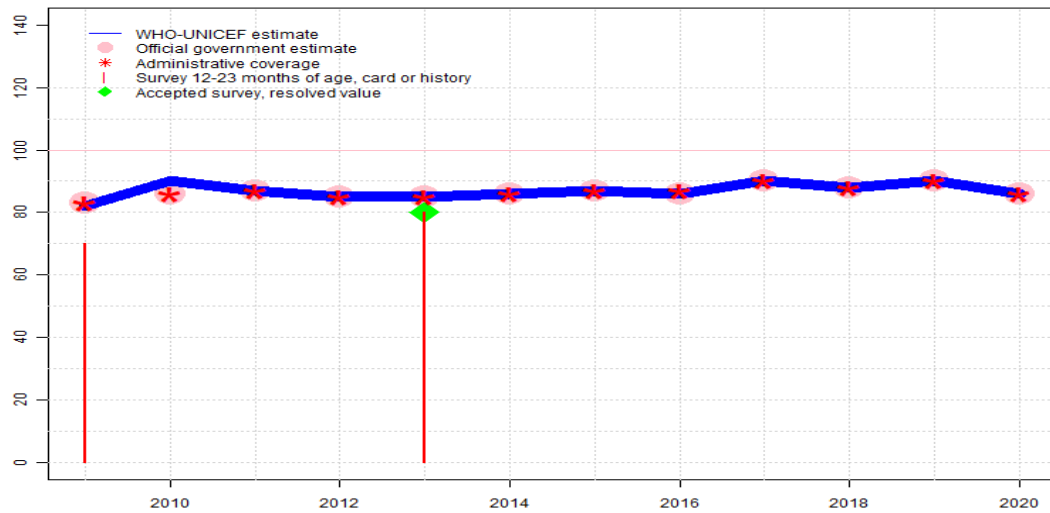
2017: Estimate based on reported administrative estimate. Programme reports 12 months vaccine stock-out. GoC=R+ D+

2016: Estimate based on coverage reported by national government. Programme reports vaccine supply disruption of unknown duration. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. Inactivated polio vaccine during June 2015. GoC=R+ D+

Sudan - MCV1

SDN - MCV1



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	82	90	87	85	85	86	87	86	90	88	90	86
Estimate GoC	•	•	••	••	••	•	•	•	•	•	•	•
Official	83	86	87	85	85	86	87	86	90	88	90	86
Administrative	83	86	87	85	85	86	87	87	90	88	90	86
Survey	70	NA	NA	NA	80	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.

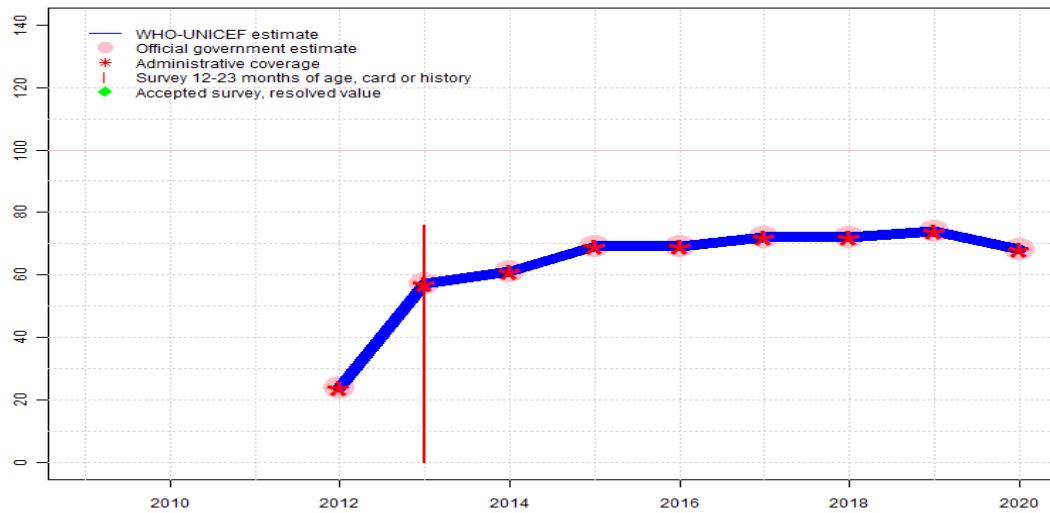
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2020: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the 2021 Multiple Indicator Cluster Survey and await results. Programme reports vaccine stock-out at subnational level. Estimate challenged by: D-
- 2019: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2016: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 80 percent based on 1 survey(s). GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2012: Estimate based on coverage reported by national government. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2011: Estimate is based on reported data from the Republic of Sudan. Prior to 2011, estimates are based on combined reports from national authorities from southern and northern Sudan. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2010: Estimates are based on combined reports from national authorities from southern and northern Sudan. Estimate challenged by: D-R-
- 2009: Southern Sudan revised target population. Estimates are based on combined reports from national authorities from southern and northern Sudan. Sudan Household Health Survey - Second Round SHHS2 2010 results ignored by working group. While survey results reflect coverage for the Republic of Sudan, prior to 2011 WHO and UNICEF estimates of coverage were based on the combined coverage for the Republic of Sudan and Republic of South Sudan. Estimate challenged by: D-R-

Sudan - MCV2

SDN - MCV2



Description:

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

2020: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the 2021 Multiple Indicator Cluster Survey and await results. Programme reports vaccine stock-out at subnational level. Estimate challenged by: D-

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

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

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

2016: Estimate based on coverage reported by national government. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. GoC=R+ D+

2014: Estimate based on coverage reported by national government. GoC=R+ D+

2013: Estimate based on coverage reported by national government. Sudan Multiple Indicator Cluster Survey 2014 results ignored by working group. Survey results likely reflect doses administered in campaigns.. GoC=R+ D+

2012: Estimate based on coverage reported by national government. Measles second dose introduced in 2012 and recommended for administration at 18 months of age. Estimate challenged by: D-

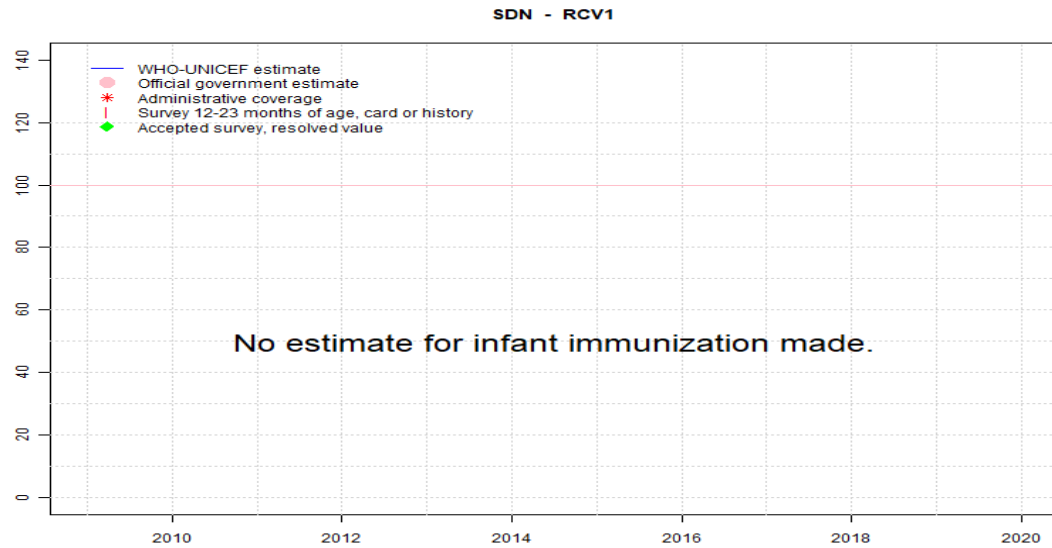
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	24	57	61	69	69	72	72	74	68
Estimate GoC	NA	NA	NA	•	••	••	••	•	•	•	•	•
Official	NA	NA	NA	24	57	61	69	69	72	72	74	68
Administrative	NA	NA	NA	24	57	61	69	69	72	72	74	68
Survey	NA	NA	NA	NA	76	NA	NA	NA	NA	NA	NA	NA

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.

Sudan - RCV1



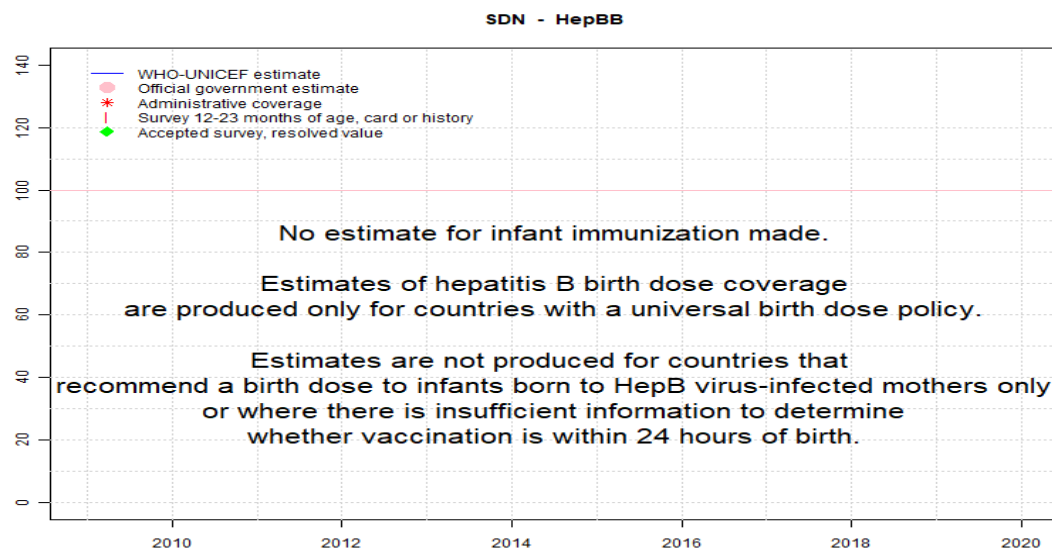
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

Sudan - 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

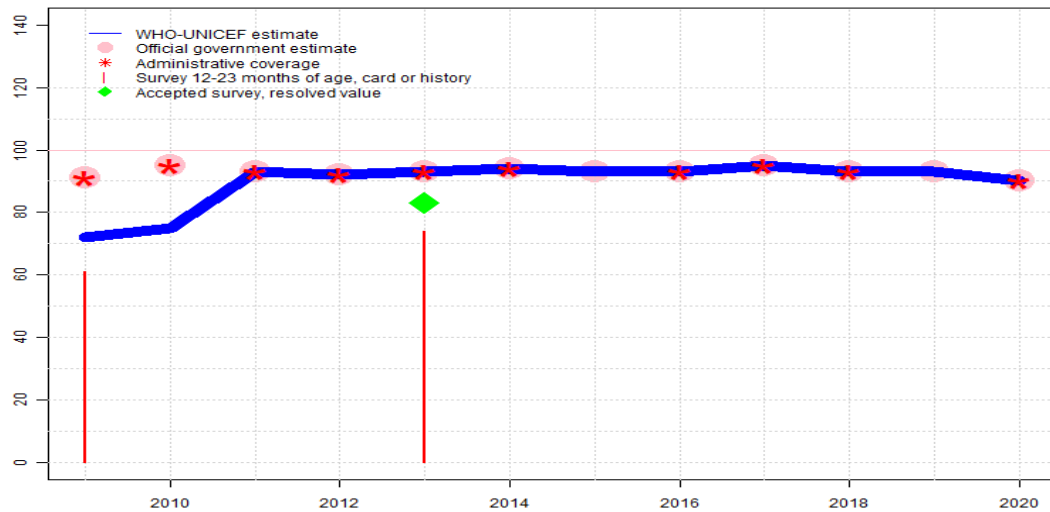
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Sudan - HepB3

SDN - HepB3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	72	75	93	92	93	94	93	93	95	93	93	90
Estimate GoC	•	•	••	••	••	•	••	•	•	•	•	•
Official	91	95	93	92	93	94	93	93	95	93	93	90
Administrative	91	95	93	92	93	94	NA	93	95	93	NA	90
Survey	61	NA	NA	NA	74	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.

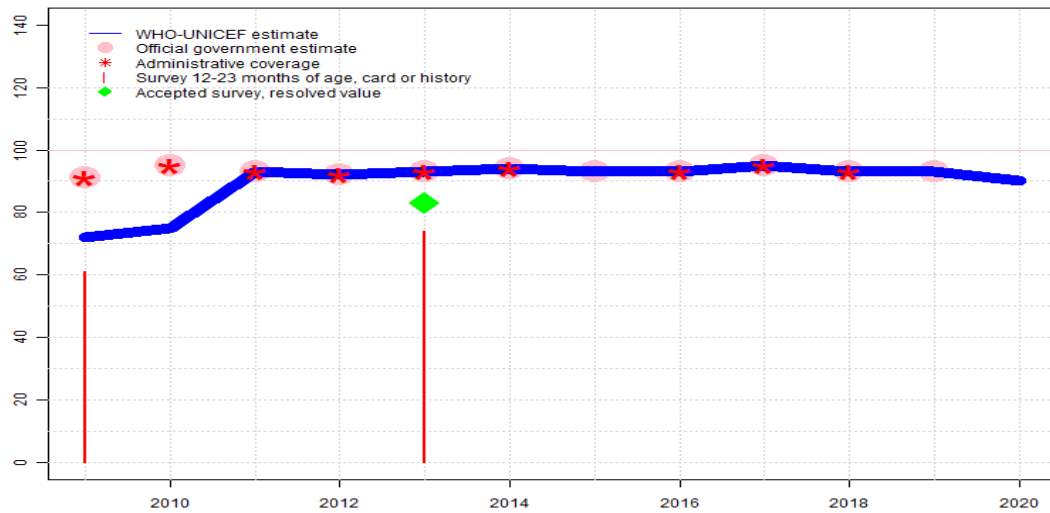
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2020: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the 2021 Multiple Indicator Cluster Survey and await results. Programme reports vaccine stock-out at subnational level. Estimate challenged by: D-
- 2019: Estimate based on coverage reported by national government. GoC=Assigned by working group. Consistent with DTP3 as part of pentavalent vaccine
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2016: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. GoC=R+ S+
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 83 percent based on 1 survey(s). Sudan Multiple Indicator Cluster Survey 2014 card or history results of 74 percent modified for recall bias to 83 percent based on 1st dose card or history coverage of 85 percent, 1st dose card only coverage of 44 percent and 3rd dose card only coverage of 43 percent. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2012: Estimate based on reported data. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2011: Estimate based on reported data. Prior to 2011, estimates are based on combined reports from national authorities from southern and northern Sudan. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2010: Estimates are based on combined reports from national authorities from southern and northern Sudan. Estimate challenged by: R-
- 2009: DTP-HepB-Hib combination vaccine used in northern Sudan. HepB vaccine not introduced in southern Sudan. Estimate adjusted to reflect the difference in vaccine availability. Sudan Household Health Survey - Second Round SHHS2 2010 results ignored by working group. While survey results reflect coverage for the Republic of Sudan, prior to 2011 WHO and UNICEF estimates of coverage were based on the combined coverage for the Republic of Sudan and Republic of South Sudan. Sudan Household Health Survey - Second Round SHHS2 2010 card or history results of 61 percent modified for recall bias to 73 percent based on 1st dose card or history coverage of 79 percent, 1st dose card only coverage of 40 percent and 3rd dose card only coverage of 37 percent. Estimate challenged by: R-

Sudan - Hib3

SDN - Hib3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	72	75	93	92	93	94	93	93	95	93	93	90
Estimate GoC	•	•	••	••	••	•	••	•	•	•	•	•
Official	91	95	93	92	93	94	93	93	95	93	93	NA
Administrative	91	95	93	92	93	94	NA	93	95	93	NA	NA
Survey	61	NA	NA	NA	74	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.

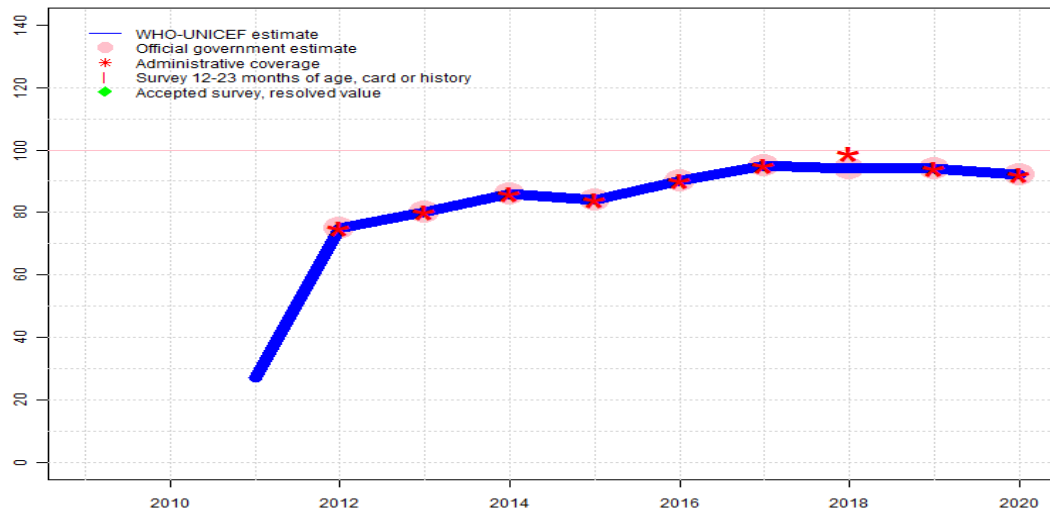
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2020: Estimate based on estimated coverage for DTP3. WHO and UNICEF are aware of the 2021 Multiple Indicator Cluster Survey and await results. Programme reports vaccine stock-out at subnational level. GoC=No accepted empirical data
- 2019: Estimate based on coverage reported by national government. GoC=Assigned by working group. Consistent with DTP3 as part of pentavalent vaccine
- 2018: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2017: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2016: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. GoC=R+ S+
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 83 percent based on 1 survey(s). Sudan Multiple Indicator Cluster Survey 2014 card or history results of 74 percent modified for recall bias to 83 percent based on 1st dose card or history coverage of 85 percent, 1st dose card only coverage of 44 percent and 3rd dose card only coverage of 43 percent. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2012: Estimate based on reported data. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2011: Estimate based on reported data. Prior to 2011, estimates are based on combined reports from national authorities from southern and northern Sudan. GoC=Assigned by working group. In spite of the observed support to reported coverage levels provided by the results of the 2014 Multiple Indicator Cluster Survey, there is concern that less than half of the survey results are derived from documented evidence.
- 2010: Estimates are based on combined reports from national authorities from southern and northern Sudan. Estimate challenged by: R-
- 2009: DTP-HepB-Hib combination vaccine used in northern Sudan. HepB vaccine not introduced in southern Sudan. Estimate adjusted to reflect the difference in vaccine availability. Sudan Household Health Survey - Second Round SHHS2 2010 results ignored by working group. While survey results reflect coverage for the Republic of Sudan, prior to 2011 WHO and UNICEF estimates of coverage were based on the combined coverage for the Republic of Sudan and Republic of South Sudan. Sudan Household Health Survey - Second Round SHHS2 2010 card or history results of 61 percent modified for recall bias to 73 percent based on 1st dose card or history coverage of 79 percent, 1st dose card only coverage of 40 percent and 3rd dose card only coverage of 37 percent. Estimate challenged by: R-

Sudan - RotaC

SDN - RotaC



Description:

2020: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the 2021 Multiple Indicator Cluster Survey and await results. Estimate challenged by: D-

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

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

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

2016: Estimate based on coverage reported by national government. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

2014: Estimate based on coverage reported by national government. GoC=R+ D+

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

2012: Estimate based on coverage reported by national government. GoC=R+ D+

2011: Rotavirus vaccine introduced in 2011. Coverage of 64 percent reached in 42 percent of the population. Prior to 2011, estimates are based on combined reports from national authorities from southern and northern Sudan. GoC=D+

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	27	75	80	86	84	90	95	94	94	92
Estimate GoC	NA	NA	••	••	••	••	•	•	•	•	•	•
Official	NA	NA	NA	75	80	86	84	90	95	94	94	92
Administrative	NA	NA	NA	75	80	86	84	90	95	99	94	92
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

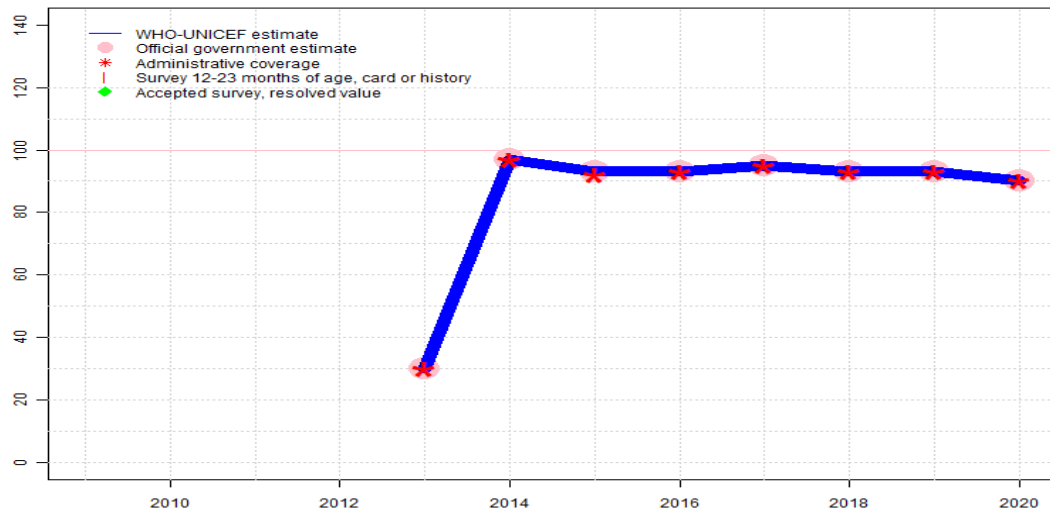
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Sudan - PcV3

SDN - PcV3



Description:

2020: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the 2021 Multiple Indicator Cluster Survey and await results. Programme reports vaccine stock-out at subnational level. Estimate challenged by: D-

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

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

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

2016: Estimate based on coverage reported by national government. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

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

2013: Estimate based on coverage reported by national government. Pneumococcal conjugate vaccine introduced in August 2013. GoC=R+ D+

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	30	97	93	93	95	93	93	90
Estimate GoC	NA	NA	NA	NA	••	•	•	•	•	•	•	•
Official	NA	NA	NA	NA	30	97	93	93	95	93	93	90
Administrative	NA	NA	NA	NA	30	97	92	93	95	93	93	90
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.

Sudan - survey details

2013 Sudan Multiple Indicator Cluster Survey 2014

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	78.5	12-23 m	-	44
BCG	Card	43.7	12-23 m	2672	44
BCG	Card or History	85.3	12-23 m	2672	44
BCG	History	41.6	12-23 m	2672	44
DTP1	C or H <12 months	81.1	12-23 m	-	44
DTP1	Card	44.2	12-23 m	2672	44
DTP1	Card or History	84.6	12-23 m	2672	44
DTP1	History	40.4	12-23 m	2672	44
DTP3	C or H <12 months	63.9	12-23 m	-	44
DTP3	Card	43.4	12-23 m	2672	44
DTP3	Card or History	73.9	12-23 m	2672	44
DTP3	History	30.5	12-23 m	2672	44
HepB1	C or H <12 months	81.1	12-23 m	-	44
HepB1	Card	44.2	12-23 m	2672	44
HepB1	Card or History	84.6	12-23 m	2672	44
HepB1	History	40.4	12-23 m	2672	44
HepB3	C or H <12 months	63.9	12-23 m	-	44
HepB3	Card	43.4	12-23 m	2672	44
HepB3	Card or History	73.9	12-23 m	2672	44
HepB3	History	30.5	12-23 m	2672	44
Hib1	C or H <12 months	81.1	12-23 m	-	44
Hib1	Card	44.2	12-23 m	2672	44
Hib1	Card or History	84.6	12-23 m	2672	44
Hib1	History	40.4	12-23 m	2672	44
Hib3	C or H <12 months	63.9	12-23 m	-	44
Hib3	Card	43.4	12-23 m	2672	44
Hib3	Card or History	73.9	12-23 m	2672	44
Hib3	History	30.5	12-23 m	2672	44
MCV1	C or H <12 months	60.9	12-23 m	-	44
MCV1	Card	41.7	12-23 m	2672	44
MCV1	Card or History	79.9	12-23 m	2672	44
MCV1	History	38.2	12-23 m	2672	44
MCV2	C or H <12 months	8.8	12-23 m	-	44
MCV2	Card	36.6	12-23 m	2672	44
MCV2	Card or History	75.6	12-23 m	2672	44
MCV2	History	39	12-23 m	2672	44
Pol1	C or H <12 months	83.7	12-23 m	-	44

Pol1	Card	43.8	12-23 m	2672	44
Pol1	Card or History	87.5	12-23 m	2672	44
Pol1	History	43.7	12-23 m	2672	44
Pol3	C or H <12 months	65.3	12-23 m	-	44
Pol3	Card	42.9	12-23 m	2672	44
Pol3	Card or History	75.1	12-23 m	2672	44
Pol3	History	32.2	12-23 m	2672	44

2009 Sudan Household Health Survey - Second Round SHHS2 2010

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	74.6	12-23 m	2612	41
BCG	Card	39.4	12-23 m	-	41
BCG	Card or History	76.8	12-23 m	2612	41
BCG	History	37.4	12-23 m	-	41
DTP1	C or H <12 months	74.8	12-23 m	2612	41
DTP1	Card	40.5	12-23 m	-	41
DTP1	Card or History	78.7	12-23 m	2612	41
DTP1	History	38.2	12-23 m	-	41
DTP3	C or H <12 months	58.4	12-23 m	2612	41
DTP3	Card	37.3	12-23 m	-	41
DTP3	Card or History	61.3	12-23 m	2612	41
DTP3	History	24	12-23 m	-	41
HepB1	C or H <12 months	74.8	12-23 m	2612	41
HepB1	Card	40.5	12-23 m	-	41
HepB1	Card or History	78.7	12-23 m	2612	41
HepB1	History	38.2	12-23 m	-	41
HepB3	C or H <12 months	58.4	12-23 m	2612	41
HepB3	Card	37.3	12-23 m	-	41
HepB3	Card or History	61.3	12-23 m	2612	41
HepB3	History	24	12-23 m	-	41
Hib1	C or H <12 months	74.8	12-23 m	2612	41
Hib1	Card	40.5	12-23 m	-	41
Hib1	Card or History	78.7	12-23 m	2612	41
Hib1	History	38.2	12-23 m	-	41
Hib3	C or H <12 months	58.4	12-23 m	2612	41
Hib3	Card	37.3	12-23 m	-	41
Hib3	Card or History	61.3	12-23 m	2612	41
Hib3	History	24	12-23 m	-	41

Sudan - survey details

MCV1	C or H <12 months	62.3	12-23 m	2612	41
MCV1	Card	37.6	12-23 m	-	41
MCV1	Card or History	70.1	12-23 m	2612	41
MCV1	History	32.5	12-23 m	-	41
Pol1	C or H <12 months	83.3	12-23 m	2612	41
Pol1	Card	40.3	12-23 m	-	41
Pol1	Card or History	86.2	12-23 m	2612	41
Pol1	History	45.9	12-23 m	-	41
Pol3	C or H <12 months	62	12-23 m	2612	41
Pol3	Card	37	12-23 m	-	41
Pol3	Card or History	64.8	12-23 m	2612	41
Pol3	History	27.8	12-23 m	-	41

2005 Sudan Household Health Survey 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	72.9	12-23 m	1165621	35
BCG	Card	32.4	12-23 m	1165621	35
BCG	Card or History	74.9	12-23 m	1165621	35
BCG	History	42.5	12-23 m	1165621	35
DTP1	C or H <12 months	71.2	12-23 m	1165621	35
DTP1	Card	33.4	12-23 m	1165621	35
DTP1	Card or History	74.1	12-23 m	1165621	35
DTP1	History	40.7	12-23 m	1165621	35
DTP3	C or H <12 months	52.9	12-23 m	1165621	35
DTP3	Card	30	12-23 m	1165621	35
DTP3	Card or History	54.8	12-23 m	1165621	35
DTP3	History	24.7	12-23 m	1165621	35
MCV1	C or H <12 months	59.3	12-23 m	1165621	35
MCV1	Card	28.5	12-23 m	1165621	35
MCV1	Card or History	66.4	12-23 m	1165621	35
MCV1	History	37.9	12-23 m	1165621	35
Pol1	C or H <12 months	79.7	12-23 m	1165621	35
Pol1	Card	33.4	12-23 m	1165621	35
Pol1	Card or History	82.7	12-23 m	1165621	35

Pol1	History	49.3	12-23 m	1165621	35
Pol3	C or H <12 months	59.5	12-23 m	1165621	35
Pol3	Card	29.4	12-23 m	1165621	35
Pol3	Card or History	61.9	12-23 m	1165621	35
Pol3	History	32.5	12-23 m	1165621	35

1999 Sudan Multiple Indicator Cluster Survey 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	65	12-23 m	3720	27
BCG	Card	24.7	12-23 m	3720	27
BCG	Card or history	66.2	12-23 m	3720	27
BCG	History	41.5	12-23 m	3720	27
DTP1	C or H <12 months	64.7	12-23 m	3720	27
DTP1	Card	24.3	12-23 m	3720	27
DTP1	Card or history	66.5	12-23 m	3720	27
DTP1	History	42.2	12-23 m	3720	27
DTP3	C or H <12 months	42	12-23 m	3720	27
DTP3	Card	20.1	12-23 m	3720	27
DTP3	Card or history	44.1	12-23 m	3720	27
DTP3	History	24	12-23 m	3720	27
MCV1	C or H <12 months	45.3	12-23 m	3720	27
MCV1	Card	18.3	12-23 m	3720	27
MCV1	Card or history	50.7	12-23 m	3720	27
MCV1	History	34.4	12-23 m	3720	27
Pol1	C or H <12 months	72.7	12-23 m	3720	27
Pol1	Card	21.4	12-23 m	3720	27
Pol1	Card or history	74.7	12-23 m	3720	27
Pol1	History	53.3	12-23 m	3720	27
Pol3	C or H <12 months	43.7	12-23 m	3720	27
Pol3	Card	18.4	12-23 m	3720	27
Pol3	Card or history	47.7	12-23 m	3720	27
Pol3	History	27.3	12-23 m	3720	27

Further information and estimates for previous years are available at:
<http://www.data.unicef.org/child-health/immunization>

Sudan - survey details

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