

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.

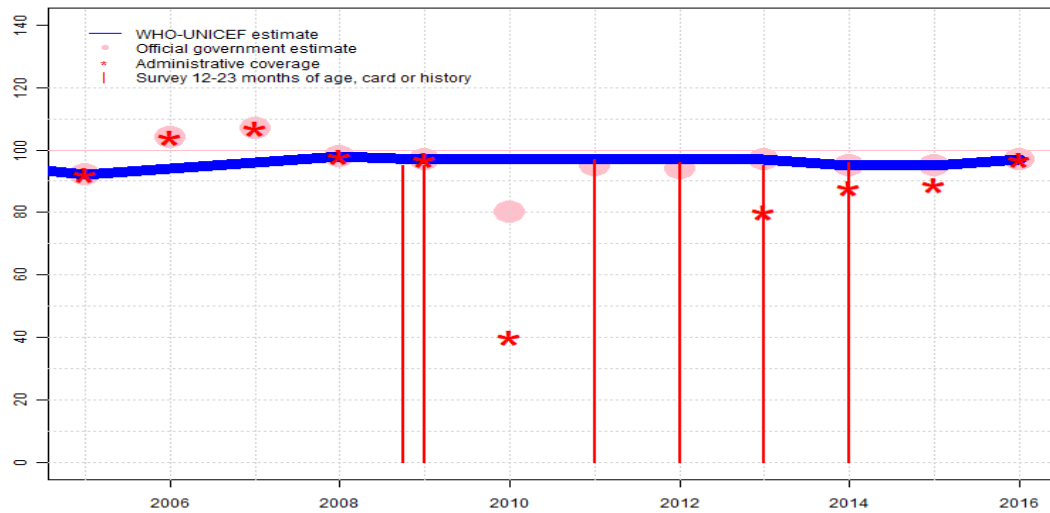
PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect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

SEN - BCG



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	92	94	96	98	97	97	97	97	97	95	95	97
Estimate GoC	•	•••	•••	•••	•••	•	••	••	•	•••	•••	•••
Official	92	104	107	98	97	80	95	94	97	95	95	97
Administrative	92	104	107	98	97	40	NA	NA	80	88	89	97
Survey	NA	NA	NA	NA	*	NA	97	96	95	96	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

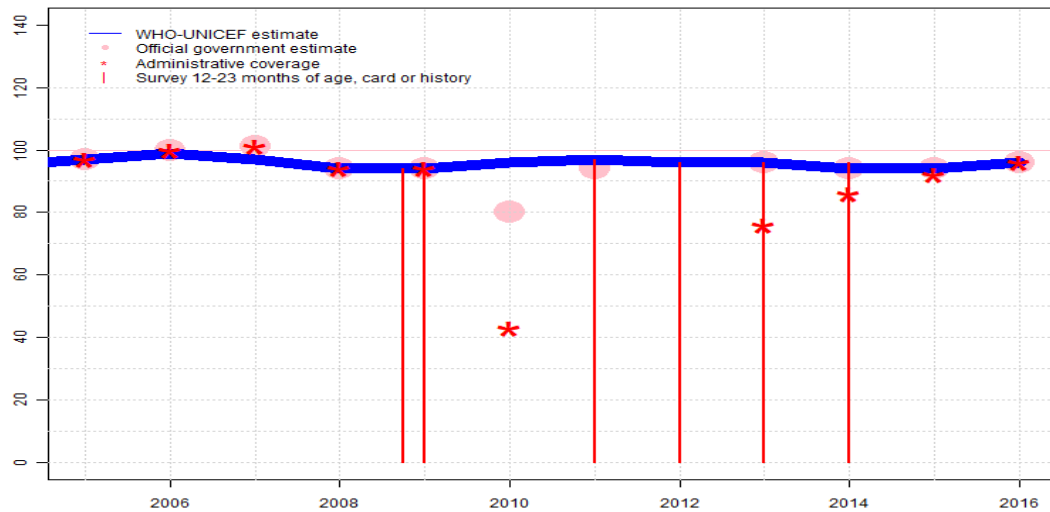
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2016: Estimate based on coverage reported by national government. Since 2014, the reported target population declined 7 percent. These declines are unexplained and are inconsistent with information on target population in the Recensement General de la Population et de l'Habitat de l'Agriculture et de l'Elevage (RGPHAE 2013) du Senegal (available at www.andsn.sn) which suggests births are increasing between 2013 and 2016. GoC=R+ S+ D+
- 2015: Estimate based on coverage reported by national government. Programme reports one month national level stock-out. GoC=R+ S+ D+
- 2014: Estimate based on coverage reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). GoC=R+ S+ D+
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 95 percent based on 1 survey(s). Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Official government estimates are based on 2013 survey results. Estimate challenged by: D-
- 2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+
- 2011: Estimates are based on final 2011 DHS results. Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+
- 2010: Estimate based on interpolation between coverage reported by national government. Reported data excluded due to decline in reported coverage from 97 percent to 80 percent with increase to 95 percent. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government supported by survey. Survey evidence of 95 percent based on 2 survey(s). Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2007: Estimate based on interpolation between coverage reported by national government. Reported data excluded because 107 percent greater than 100 percent. GoC=R+ S+ D+
- 2006: Estimate based on interpolation between coverage reported by national government. Reported data excluded because 104 percent greater than 100 percent. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-

Senegal - DTP1

SEN - DTP1



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	97	99	97	94	94	96	97	96	96	94	94	96
Estimate GoC	•	•••	•••	•••	•••	•	•	••	•	•••	•••	•••
Official	97	100	101	94	94	80	94	NA	96	94	94	96
Administrative	97	100	101	94	94	43	NA	NA	76	86	92	96
Survey	NA	NA	NA	NA	*	NA	97	96	96	96	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.

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

2014: Estimate based on coverage reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). GoC=R+ S+ D+

2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Official government estimates are based on 2013 survey results. Estimate challenged by: D-

2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=S+

2011: Estimate of 97 percent assigned by working group. Estimates are based on final 2011 DHS results. Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: R-

2010: Reported data calibrated to 2009 and 2011 levels. Reported data excluded due to decline in reported coverage from 94 percent to 80 percent with increase to 94 percent. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: D-R-

2009: Estimate based on reported data. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+ D+

2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+

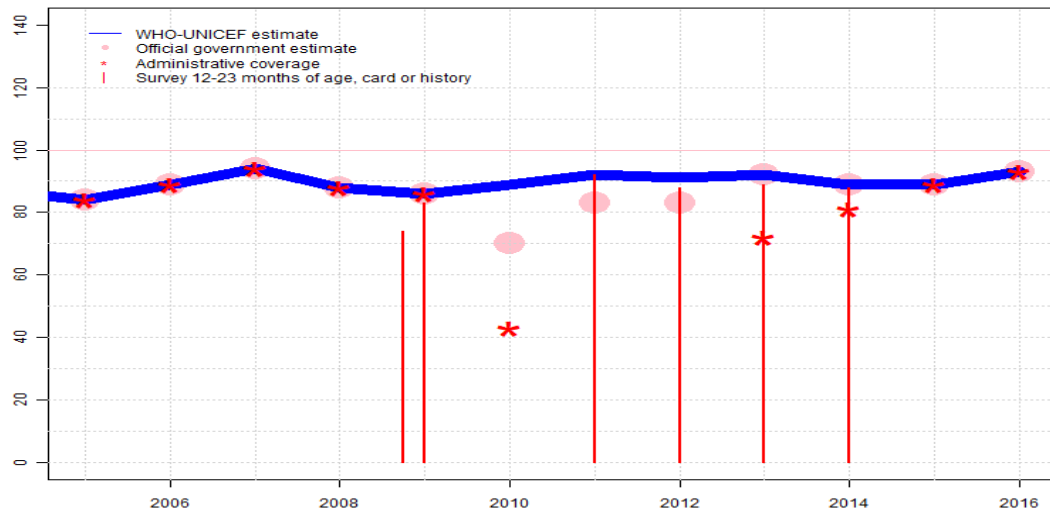
2007: Estimate based on interpolation between coverage reported by national government. Reported data excluded because 101 percent greater than 100 percent. GoC=R+ S+ D+

2006: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2005: Estimate based on coverage reported by national government. Estimate challenged by: D-

Senegal - DTP3

SEN - DTP3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	84	89	94	88	86	89	92	91	92	89	89	93
Estimate GoC	•	•••	•	•••	•••	•	•	••	•	•••	•••	•••
Official	84	89	94	88	86	70	83	83	92	89	89	93
Administrative	84	89	94	88	86	43	NA	NA	72	81	89	93
Survey	NA	NA	NA	NA	*	NA	92	88	89	88	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
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In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

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

2014: Estimate based on coverage reported by national government supported by survey. Survey evidence of 87 percent based on 1 survey(s). Senegal Demographic and Health Survey 2015 (Continuous) card or history results of 88 percent modified for recall bias to 87 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 73 percent and 3d dose card only coverage of 66 percent. GoC=R+ S+ D+

2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Official government estimates are based on 2013 survey results. Estimate challenged by: D-

2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+

2011: Estimate of 92 percent assigned by working group. Estimates are based on final 2011 DHS results. NA card or history results of 92 percent modified for recall bias to 91 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 78 percent and 3d dose card only coverage of 73 percent. Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: R-S-

2010: Reported data calibrated to 2009 and 2011 levels. Reported data excluded due to decline in reported coverage from 86 percent to 70 percent with increase to 83 percent. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: D-R-S-

2009: Estimate based on reported data. Senegal EPI External Review 2010 card or history results of 74 percent modified for recall bias to 67 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 51 percent. Senegal Demographic and Health Survey 2010-2011 card or history results of 83 percent modified for recall bias to 88 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 64 percent and 3d dose card only coverage of 60 percent. Between 2009 and 2012 health facilities

Senegal - DTP3

did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+ D+

2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+

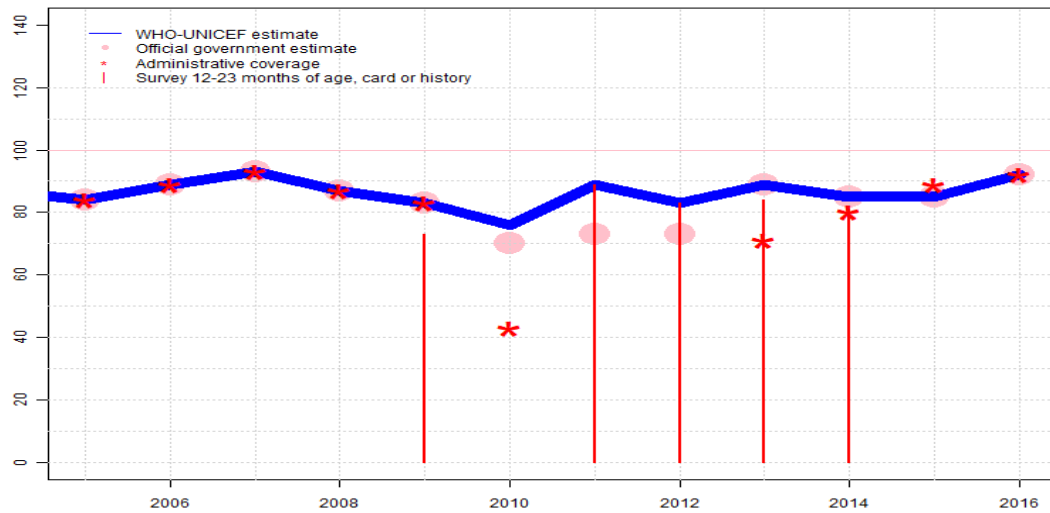
2007: Estimate based on coverage reported by national government. Estimate challenged by: S-

2006: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2005: Estimate based on coverage reported by national government. Estimate challenged by: D-

Senegal - Pol3

SEN - Pol3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	84	89	93	87	83	76	89	83	89	85	85	92
Estimate GoC	•	•••	•••	•••	•••	•	•	••	•	•••	•••	•••
Official	84	89	93	87	83	70	73	73	89	85	85	92
Administrative	84	89	93	87	83	43	NA	NA	71	80	89	92
Survey	NA	NA	NA	NA	73	NA	89	83	84	81	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
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Description:

2016: Estimate based on coverage reported by national government. Since 2014, the reported target population declined 7 percent. These declines are unexplained and are inconsistent with information on target population in the Recensement General de la Population et de l'Habitat de l'Agriculture et de l'Elevage (RGPHAE 2013) du Senegal (available at www.andsn.sn) which suggests births are increasing between 2013 and 2016. GoC=R+ S+ D+

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

2014: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Senegal Demographic and Health Survey 2015 (Continuous) card or history results of 81 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 73 percent and 3d dose card only coverage of 67 percent. GoC=R+ S+ D+

2013: Estimate is based on official government estimate. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Official government estimates are based on 2013 survey results. Estimate challenged by: D-

2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 83 percent based on 1 survey(s). Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+

2011: Estimate of 89 percent assigned by working group. Estimates are based on final 2011 DHS results. NA card or history results of 89 percent modified for recall bias to 87 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 65 percent and 3d dose card only coverage of 60 percent. Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: R-

2010: Reported data calibrated to 2009 and 2011 levels. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: D-R-S-

2009: Estimate based on coverage reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Senegal Demographic and Health Survey 2010-2011 card or history results of 73 percent modified for recall bias to 88 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 65 percent and 3d dose card only coverage of 60 percent. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+ D+

2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2007: Estimate based on coverage reported by national government. GoC=R+ S+ D+

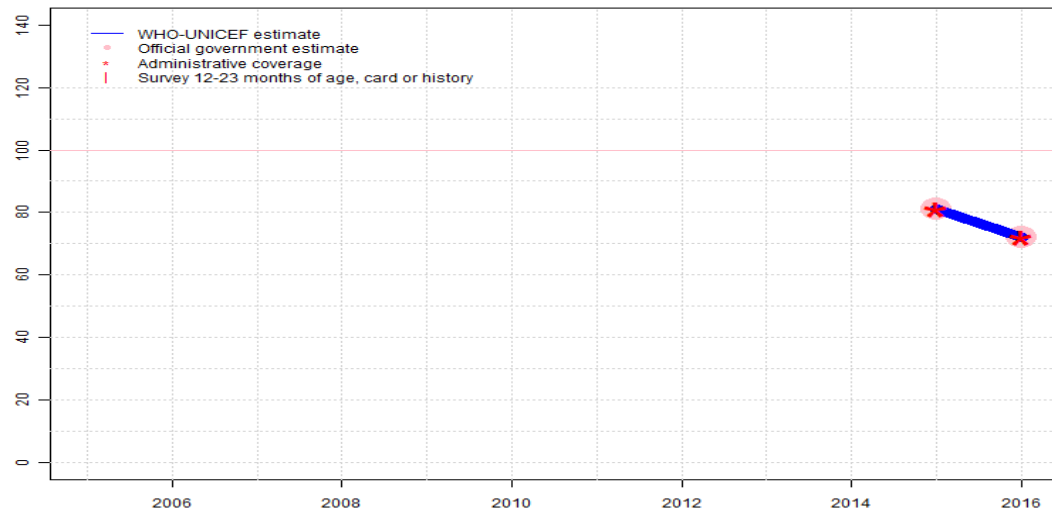
2006: Estimate based on coverage reported by national government. GoC=R+ S+ D+

Senegal - Pol3

2005: Estimate based on coverage reported by national government. Estimate challenged by: D-

Senegal - IPV1

SEN - IPV1



Description:

2016: Estimate based on coverage reported by national government. Since 2014, the reported target population declined 7 percent. These declines are unexplained and are inconsistent with information on target population in the Recensement General de la Population et de l'Habitat de l'Agriculture et de l'Elevage (RGPHAE 2013) du Senegal (available at www.andsn.sn) which suggests births are increasing between 2013 and 2016. Programme reports five month stock-out at national level. GoC=R+ D+

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

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	81	72
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●●	●●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	81	72
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	81	72
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

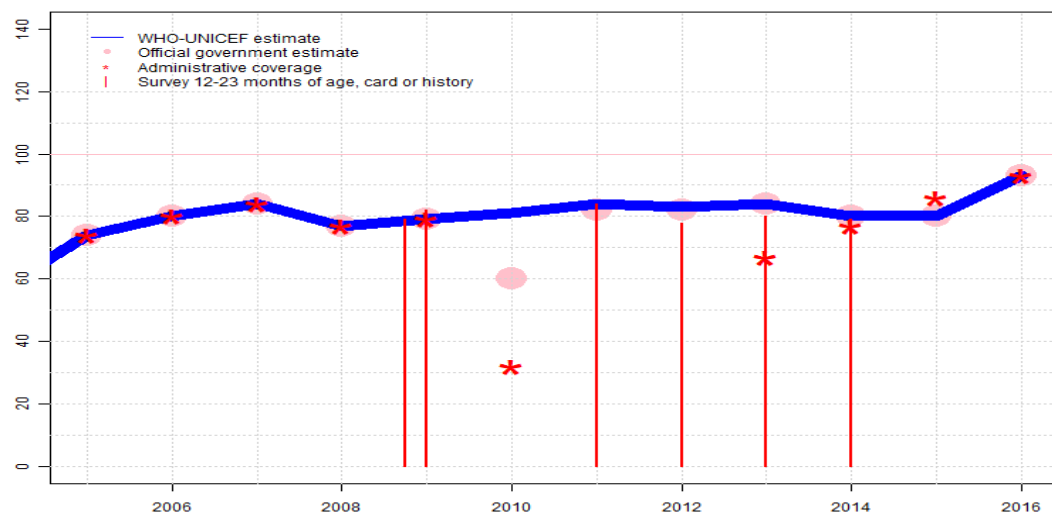
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Senegal - MCV1

SEN - MCV1



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	74	80	84	77	79	81	84	83	84	80	80	93
Estimate GoC	•	••	•••	•••	•••	•	•	••	•	•••	•••	••
Official	74	80	84	77	79	60	82	82	84	80	80	93
Administrative	74	80	84	77	79	32	NA	NA	67	77	86	93
Survey	NA	NA	NA	NA	*	NA	84	78	80	79	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.

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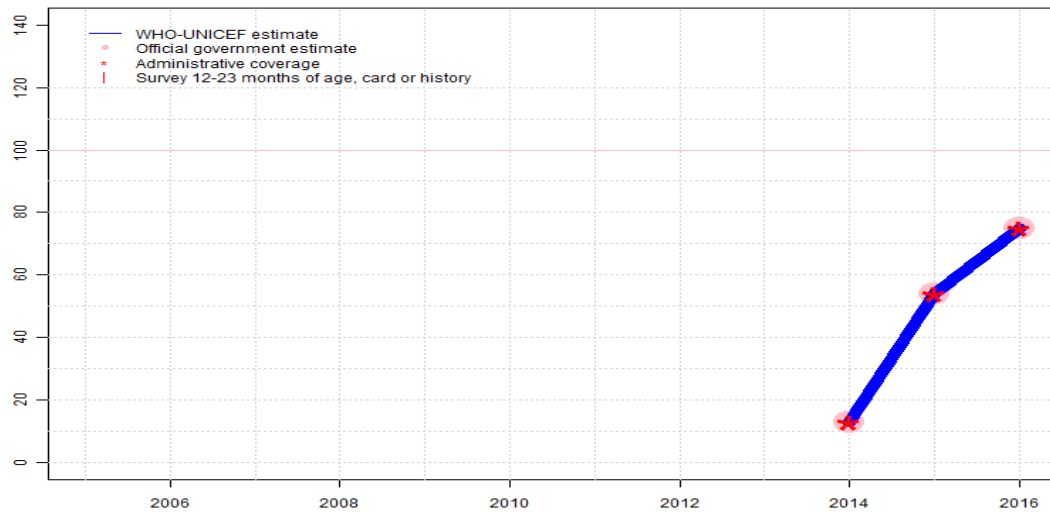
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2016: Estimate based on coverage reported by national government. Since 2014, the reported target population declined 7 percent. These declines are unexplained and are inconsistent with information on target population in the Recensement General de la Population et de l'Habitat de l'Agriculture et de l'Elevage (RGPHAE 2013) du Senegal (available at www.andsn.sn) which suggests births are increasing between 2013 and 2016. Reported number of children vaccinated increased from 2015 to 2016. Rapid increase in coverage is likely an artefact of a decrease in reported target population rather than a true increase in performance for MCV1. Estimated coverage is likely an overestimate. Estimate challenged by: S-
- 2015: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2014: Estimate based on coverage reported by national government supported by survey. Survey evidence of 79 percent based on 1 survey(s). GoC=R+ S+ D+
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 80 percent based on 1 survey(s). Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Official government estimates are based on 2013 survey results. Estimate challenged by: D-
- 2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 78 percent based on 1 survey(s). Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+
- 2011: Estimate of 84 percent assigned by working group. Estimates are based on final 2011 DHS results. Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: R-
- 2010: Reported data calibrated to 2009 and 2011 levels. Reported data excluded due to decline in reported coverage from 79 percent to 60 percent with increase to 82 percent. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: D-R-
- 2009: Estimate based on coverage reported by national government supported by survey. Survey evidence of 81 percent based on 2 survey(s). Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-

Senegal - MCV2

SEN - MCV2



Description:

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

2016: Estimate based on coverage reported by national government. Since 2014, the reported target population declined 7 percent. These declines are unexplained and are inconsistent with information on target population in the Recensement General de la Population et de l'Habitat de l'Agriculture et de l'Elevage (RGPHAE 2013) du Senegal (available at www.andsn.sn) which suggests births are increasing between 2013 and 2016. Estimate based on reported data following introduction. GoC=R+ D+

2015: Estimate based on coverage reported by national government. Reported coverage for national target population following introduction in 2014. GoC=R+ D+

2014: Estimate based on coverage reported by national government. Introduced in national schedule in October 2014, recommended administration at 15 months, vaccine presentation MR. GoC=Assigned by working group. Introduction period.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	13	54	75
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	••	••
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	13	54	75
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	13	54	75
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

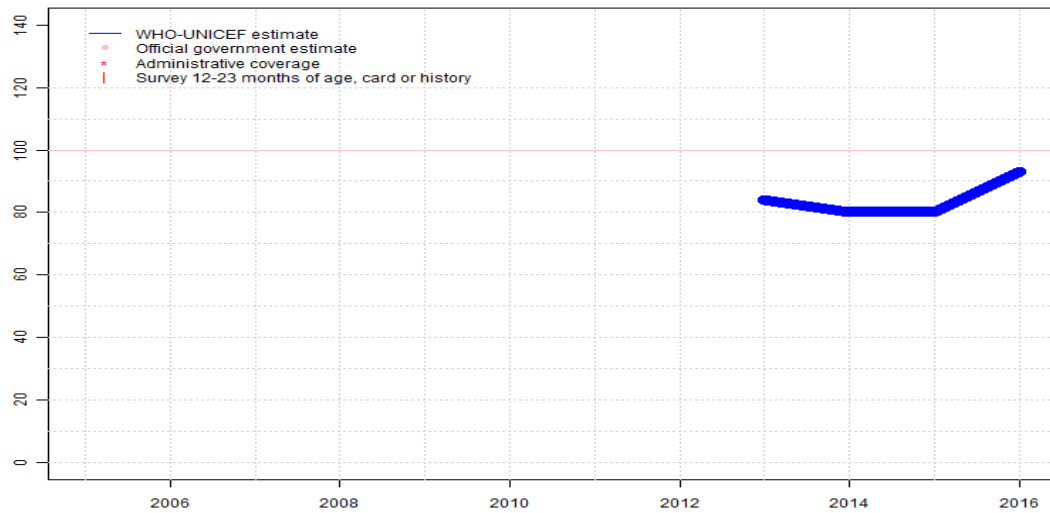
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Senegal - RCV1

SEN - RCV1



Description:

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

2016: Estimate based on estimated MCV1. Since 2014, the reported target population declined 7 percent. These declines are unexplained and are inconsistent with information on target population in the Recensement General de la Population et de l Habitat de l Agriculture et de l Elevage (RGPHAE 2013) du Senegal (available at www.andsn.sn) which suggests births are increasing between 2013 and 2016. Estimate challenged by: S-

2015: Estimate based on estimated MCV1. GoC=R+ S+ D+

2014: Estimate based on estimated MCV1. GoC=R+ S+ D+

2013: Estimate based on estimated MCV1. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Official government estimates are based on 2013 survey results. Rubella containing vaccine introduced in 2013 and administered with measles as part of measles-rubella vaccine. Estimate challenged by: D-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	84	80	80	93
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	•	•••	•••	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

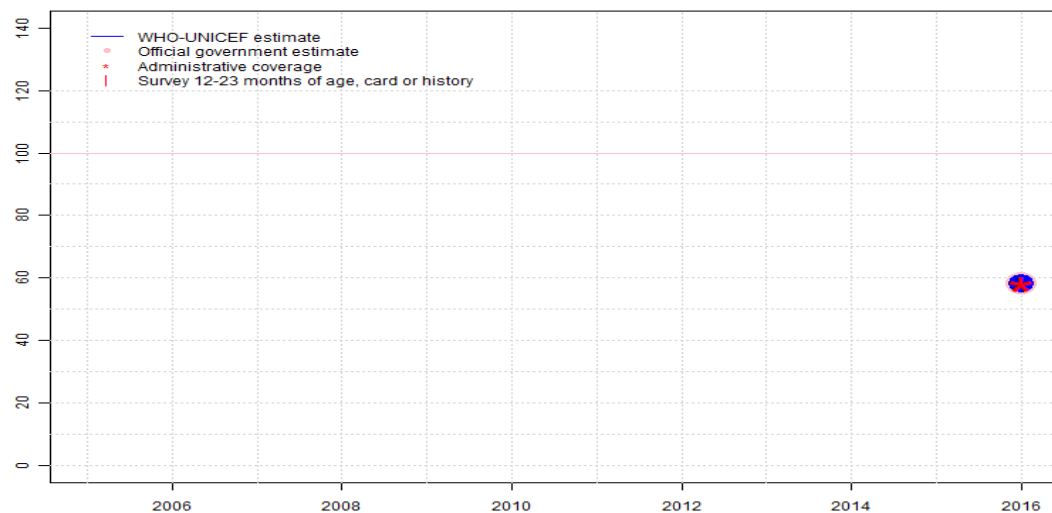
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Senegal - HepBB

SEN - HepBB



Description:

2016: Estimate based on coverage reported by national government. Since 2014, the reported target population declined 7 percent. These declines are unexplained and are inconsistent with information on target population in the Recensement General de la Population et de l'Habitat de l'Agriculture et de l'Elevage (RGPHAE 2013) du Senegal (available at www.andsn.sn) which suggests births are increasing between 2013 and 2016. Birth dose of hepatitis B introduced during 2016. GoC=R+ D+

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	58
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	58
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	58
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

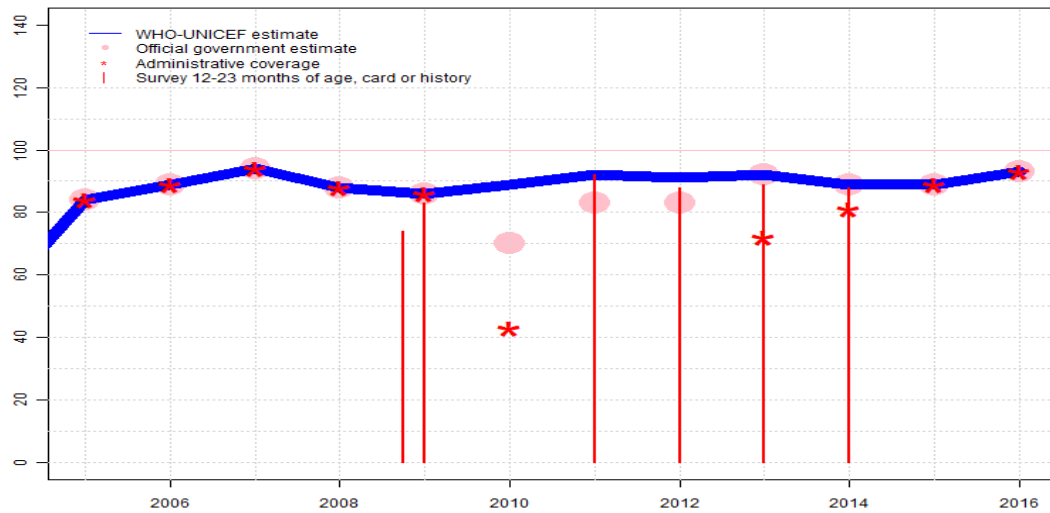
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Senegal - HepB3

SEN - HepB3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	84	89	94	88	86	89	92	91	92	89	89	93
Estimate GoC	•	••	•	•••	•••	•	•	••	•	•••	•••	•••
Official	84	89	94	88	86	70	83	83	92	89	89	93
Administrative	84	89	94	88	86	43	NA	NA	72	81	89	93
Survey	NA	NA	NA	NA	*	NA	92	88	89	88	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

2016: Estimate based on coverage reported by national government. Since 2014, the reported target population declined 7 percent. These declines are unexplained and are inconsistent with information on target population in the Recensement General de la Population et de l'Habitat de l'Agriculture et de l'Elevage (RGPHAE 2013) du Senegal (available at www.andsn.sn) which suggests births are increasing between 2013 and 2016. GoC=R+ S+ D+

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

2014: Estimate based on coverage reported by national government supported by survey. Survey evidence of 87 percent based on 1 survey(s). Senegal Demographic and Health Survey 2015 (Continuous) card or history results of 88 percent modified for recall bias to 87 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 73 percent and 3d dose card only coverage of 66 percent. GoC=R+ S+ D+

2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Official government estimates are based on 2013 survey results. Estimate challenged by: D-

2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+

2011: Estimate of 92 percent assigned by working group. Estimates are based on final 2011 DHS results. NA card or history results of 92 percent modified for recall bias to 91 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 78 percent and 3d dose card only coverage of 73 percent. Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: R-S-

2010: Reported data calibrated to 2009 and 2011 levels. Reported data excluded due to decline in reported coverage from 86 percent to 70 percent with increase to 83 percent. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: D-R-S-

2009: Estimate based on reported data. Senegal EPI External Review 2010 card or history results of 74 percent modified for recall bias to 67 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 51 percent. Senegal Demographic and Health Survey 2010-2011 card or history results of 83 percent modified for recall bias to 88 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 64 percent and 3d dose card only coverage of 60 percent. Between 2009 and 2012 health facilities

Senegal - HepB3

did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+ D+

2008: Estimate based on reported data. GoC=R+ S+ D+

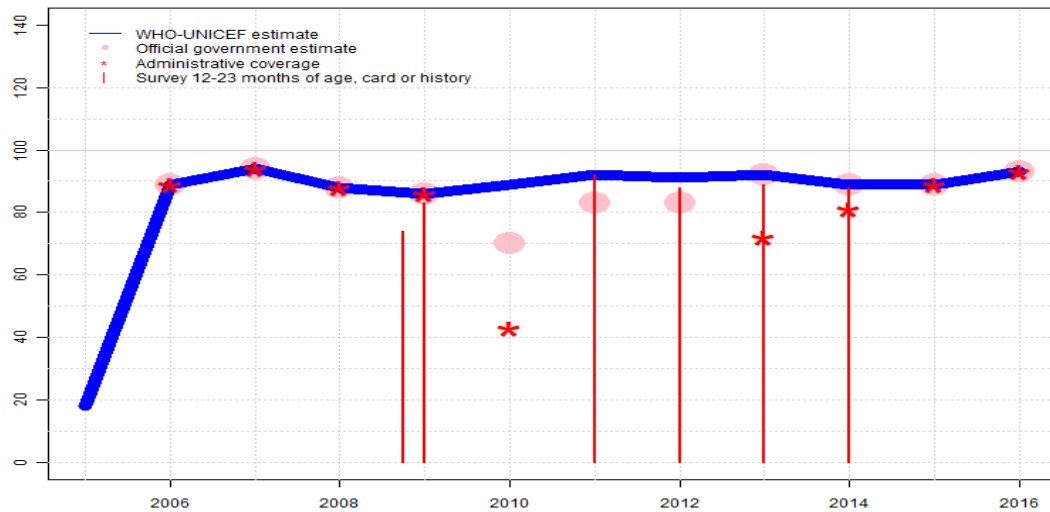
2007: Estimate based on reported data. Estimate challenged by: S-

2006: Estimate based on reported data. GoC=R+ D+

2005: Estimate based on reported data. Estimate challenged by: D-

Senegal - Hib3

SEN - Hib3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	18	89	94	88	86	89	92	91	92	89	89	93
Estimate GoC	••	••	•	•••	•••	•	•	••	•	•••	•••	•••
Official	NA	89	94	88	86	70	83	83	92	89	89	93
Administrative	NA	89	94	88	86	43	NA	NA	72	81	89	93
Survey	NA	NA	NA	NA	*	NA	92	88	89	88	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

2016: Estimate based on coverage reported by national government. Since 2014, the reported target population declined 7 percent. These declines are unexplained and are inconsistent with information on target population in the Recensement General de la Population et de l'Habitat de l'Agriculture et de l'Elevage (RGPHAE 2013) du Senegal (available at www.andsn.sn) which suggests births are increasing between 2013 and 2016. GoC=R+ S+ D+

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

2014: Estimate based on coverage reported by national government supported by survey. Survey evidence of 87 percent based on 1 survey(s). Senegal Demographic and Health Survey 2015 (Continuous) card or history results of 88 percent modified for recall bias to 87 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 73 percent and 3d dose card only coverage of 66 percent. GoC=R+ S+ D+

2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Official government estimates are based on 2013 survey results. Estimate challenged by: D-

2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+

2011: Estimate of 92 percent assigned by working group. Estimates are based on final 2011 DHS results. NA card or history results of 92 percent modified for recall bias to 91 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 78 percent and 3d dose card only coverage of 73 percent. Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: R-S-

2010: Reported data calibrated to 2009 and 2011 levels. Reported data excluded due to decline in reported coverage from 86 percent to 70 percent with increase to 83 percent. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: D-R-S-

2009: Estimate based on reported data. Senegal EPI External Review 2010 card or history results of 74 percent modified for recall bias to 67 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 51 percent. Senegal Demographic and Health Survey 2010-2011 card or history results of 83 percent modified for recall bias to 88 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 64 percent and 3d dose card only coverage of 60 percent. Between 2009 and 2012 health facilities

Senegal - Hib3

did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+ D+

2008: Estimate based on reported data. GoC=R+ S+ D+

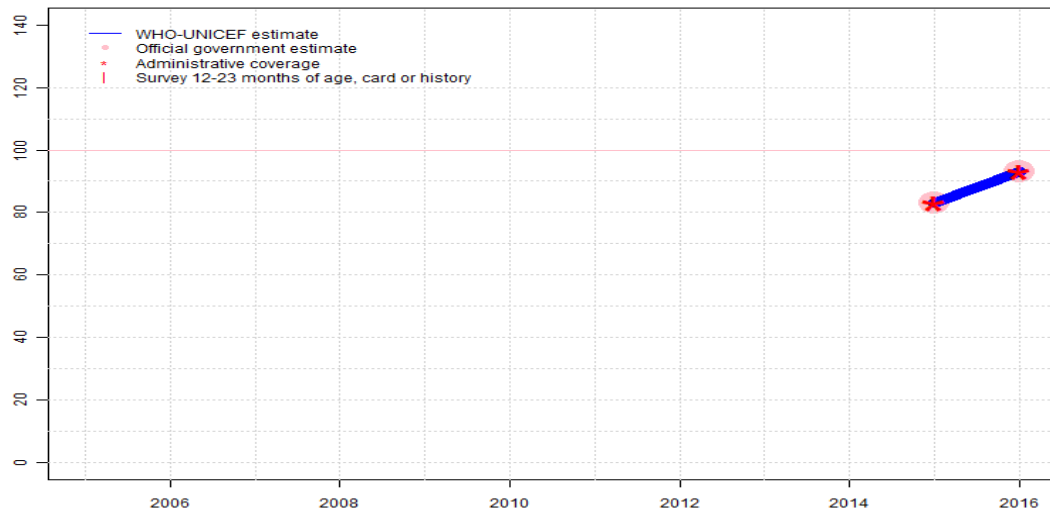
2007: Estimate based on reported data. Estimate challenged by: S-

2006: Estimate based on reported data. GoC=R+ D+

2005: DTP-HepB-Hib pentavalent vaccine introduced in July 2005. Coverage of 67 percent was reached in 25 percent of the country Hib vaccine introduced in 2005 Vaccine presentation is DTP-HepB-Hib. GoC=D+

Senegal - RotaC

SEN - RotaC



Description:

2016: Estimate based on coverage reported by national government. Since 2014, the reported target population declined 7 percent. These declines are unexplained and are inconsistent with information on target population in the Recensement General de la Population et de l Habitat de l Agriculture et de l Elevage (RGPHAE 2013) du Senegal (available at www.andsn.sn) which suggests births are increasing between 2013 and 2016. GoC=R+ D+

2015: Estimate based on coverage reported by national government. Rotavirus vaccine introduced in November 2014. Reporting began in 2015. GoC=R+ D+

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	83	93
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●●	●●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	83	93
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	83	93
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

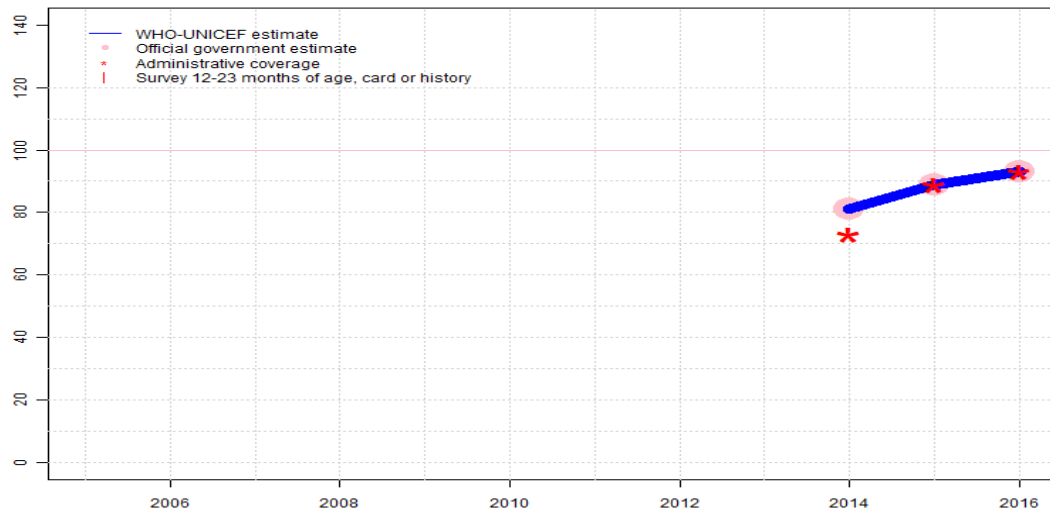
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Senegal - PcV3

SEN - PcV3



Description:

2016: Estimate based on coverage reported by national government. Since 2014, the reported target population declined 7 percent. These declines are unexplained and are inconsistent with information on target population in the Recensement General de la Population et de l Habitat de l Agriculture et de l Elevage (RGPHAE 2013) du Senegal (available at www.andsn.sn) which suggests births are increasing between 2013 and 2016. GoC=R+ D+

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

2014: Estimate based on coverage reported by national government. Introduced in national schedule in November 2013, reporting started in 2014. GoC=Assigned by working group. Introduction period.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	81	89	93
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	••	••
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	81	89	93
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	73	89	93
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

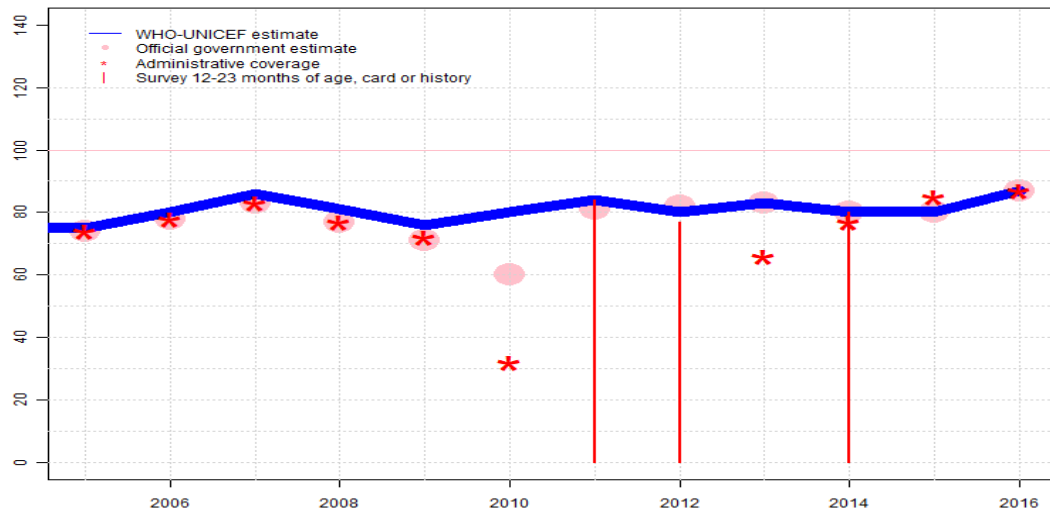
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Senegal - YFV

SEN - YFV



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	75	80	86	81	76	80	84	80	83	80	80	87
Estimate GoC	•	•	•	•	•	•	•	••	•	•••	•••	•••
Official	74	78	83	77	71	60	81	82	83	80	80	87
Administrative	74	78	83	77	72	32	NA	NA	66	77	85	87
Survey	NA	NA	NA	NA	NA	NA	84	77	NA	80	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2016: Estimate based on coverage reported by national government. Since 2014, the reported target population declined 7 percent. These declines are unexplained and are inconsistent with information on target population in the Recensement General de la Population et de l'Habitat de l'Agriculture et de l'Elevage (RGPHAE 2013) du Senegal (available at www.andsn.sn) which suggests births are increasing between 2013 and 2016. Programme reports three month vaccine stock-out at national level. GoC=R+ S+ D+
- 2015: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2014: Estimate based on coverage reported by national government supported by survey. Survey evidence of 80 percent based on 1 survey(s). GoC=R+ S+ D+
- 2013: Estimate based on coverage reported by national government. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Official government estimates are based on 2013 survey results. Estimate challenged by: D-
- 2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 77 percent based on 1 survey(s). Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+
- 2011: Estimate of 84 percent assigned by working group. Estimates are based on final 2011 DHS results. Reported data excluded. Nationally reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: R-
- 2010: Reported data calibrated to 2004 and 2011 levels. Reported data excluded due to decline in reported coverage from 71 percent to 60 percent with increase to 81 percent. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: D-R-
- 2009: Reported data calibrated to 2004 and 2011 levels. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Estimate challenged by: R-
- 2008: Reported data calibrated to 2004 and 2011 levels. Estimate challenged by: R-
- 2007: Reported data calibrated to 2004 and 2011 levels. Estimate challenged by: R-
- 2006: Reported data calibrated to 2004 and 2011 levels. Estimate challenged by: R-
- 2005: Reported data calibrated to 2004 and 2011 levels. Estimate challenged by: D-R-

Senegal - survey details

2014 Sénégal Enquête Démographique et de Santé Continue 2015

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	95	12-23 m	1165	73
BCG	Card	72	12-23 m	853	73
BCG	Card or History	96	12-23 m	1165	73
DTP1	C or H <12 months	96	12-23 m	1165	73
DTP1	Card	73	12-23 m	853	73
DTP1	Card or History	96	12-23 m	1165	73
DTP3	C or H <12 months	86	12-23 m	1165	73
DTP3	Card	66	12-23 m	853	73
DTP3	Card or History	88	12-23 m	1165	73
HepB1	C or H <12 months	96	12-23 m	1165	73
HepB1	Card	73	12-23 m	853	73
HepB1	Card or History	96	12-23 m	1165	73
HepB3	C or H <12 months	86	12-23 m	1165	73
HepB3	Card	66	12-23 m	853	73
HepB3	Card or History	88	12-23 m	1165	73
Hib1	C or H <12 months	96	12-23 m	1165	73
Hib1	Card	73	12-23 m	853	73
Hib1	Card or History	96	12-23 m	1165	73
Hib3	C or H <12 months	86	12-23 m	1165	73
Hib3	Card	66	12-23 m	853	73
Hib3	Card or History	88	12-23 m	1165	73
MCV1	C or H <12 months	70	12-23 m	1165	73
MCV1	Card	60	12-23 m	853	73
MCV1	Card or History	79	12-23 m	1165	73
Pol1	C or H <12 months	96	12-23 m	1165	73
Pol1	Card	73	12-23 m	853	73
Pol1	Card or History	97	12-23 m	1165	73
Pol3	C or H <12 months	79	12-23 m	1165	73
Pol3	Card	67	12-23 m	853	73
Pol3	Card or History	81	12-23 m	1165	73
YFV	C or H <12 months	70	12-23 m	1165	73
YFV	Card	60	12-23 m	853	73
YFV	Card or History	80	12-23 m	1165	73

2013 Sénégal Enquête Démographique et de Santé Continue 2014

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	95	12-23 m	1211	69
DTP1	Card or History	96	12-23 m	1211	69
DTP3	Card or History	89	12-23 m	1211	69
HepB1	Card or History	96	12-23 m	1211	69
HepB3	Card or History	89	12-23 m	1211	69
Hib1	Card or History	96	12-23 m	1211	69
Hib3	Card or History	89	12-23 m	1211	69
MCV1	Card or History	80	12-23 m	1211	69
Pol1	Card or History	96	12-23 m	1211	69
Pol3	Card or History	84	12-23 m	1211	69

2012 Sénégal Enquête Démographique et de Santé Continue, 2012-2013

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	96	12-23 m	1230	71
DTP1	Card or History	96	12-23 m	1230	71
DTP3	Card or History	88	12-23 m	1230	71
HepB1	Card or History	96	12-23 m	1230	71
HepB3	Card or History	88	12-23 m	1230	71
Hib1	Card or History	96	12-23 m	1230	71
Hib3	Card or History	88	12-23 m	1230	71
MCV1	Card or History	78	12-23 m	1230	71
Pol1	Card or History	96	12-23 m	1230	71
Pol3	Card or History	83	12-23 m	1230	71
YFV	Card or History	77	12-23 m	1230	71

2011 Enquête Nationale de Couvertures Vaccinales du PEV, Sénégal, 2013

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	78	12-23 m	-	81
BCG	Card or History	97	12-23 m	16755	81
BCG	Card or History or Scar	93	12-23 m	-	81
DTP1	Card	78	12-23 m	-	81
DTP1	Card or History	97	12-23 m	16755	81
DTP3	Card	73	12-23 m	-	81

Senegal - survey details

DTP3	Card or History	92	12-23 m	16755	81
HepB1	Card	78	12-23 m	-	81
HepB1	Card or History	97	12-23 m	16755	81
HepB3	Card	73	12-23 m	-	81
HepB3	Card or History	92	12-23 m	16755	81
Hib1	Card	78	12-23 m	-	81
Hib1	Card or History	97	12-23 m	16755	81
Hib3	Card	73	12-23 m	-	81
Hib3	Card or History	92	12-23 m	16755	81
MCV1	Card	66	12-23 m	-	81
MCV1	Card or History	84	12-23 m	16755	81
Pol1	Card	65	12-23 m	-	81
Pol1	Card or History	94	12-23 m	16755	81
Pol3	Card	60	12-23 m	-	81
Pol3	Card or History	89	12-23 m	16755	81
YFV	Card	66	12-23 m	-	81
YFV	Card or History	84	12-23 m	16755	81

2009 Sénégal Enquête Démographique et de Santé à Indicateurs Multiples 2010-2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	93	12-23 m	2199	66
BCG	Card	64	12-23 m	1460	66
BCG	Card or History	95	12-23 m	2199	66
BCG	History	30	12-23 m	738	66
DTP1	C or H <12 months	93	12-23 m	2199	66
DTP1	Card	64	12-23 m	1460	66
DTP1	Card or History	94	12-23 m	2199	66
DTP1	History	29	12-23 m	738	66
DTP3	C or H <12 months	80	12-23 m	2199	66
DTP3	Card	60	12-23 m	1460	66
DTP3	Card or History	83	12-23 m	2199	66
DTP3	History	22	12-23 m	738	66
HepB1	C or H <12 months	93	12-23 m	2199	66
HepB1	Card	64	12-23 m	1460	66
HepB1	Card or History	94	12-23 m	2199	66
HepB1	History	29	12-23 m	738	66
HepB3	C or H <12 months	80	12-23 m	2199	66
HepB3	Card	60	12-23 m	1460	66
HepB3	Card or History	83	12-23 m	2199	66
HepB3	History	22	12-23 m	738	66
Hib1	C or H <12 months	93	12-23 m	2199	66
Hib1	Card	64	12-23 m	1460	66
Hib1	Card or History	94	12-23 m	2199	66
Hib1	History	29	12-23 m	738	66
Hib3	C or H <12 months	80	12-23 m	2199	66
Hib3	Card	60	12-23 m	1460	66
Hib3	Card or History	83	12-23 m	2199	66
Hib3	History	22	12-23 m	738	66
MCV1	C or H <12 months	71	12-23 m	2199	66
MCV1	Card	56	12-23 m	1460	66
MCV1	Card or History	82	12-23 m	2199	66
MCV1	History	26	12-23 m	738	66
Pol1	C or H <12 months	94	12-23 m	2199	66
Pol1	Card	65	12-23 m	1460	66
Pol1	Card or History	95	12-23 m	2199	66

2009 Revue externe du Programme Elargi de Vaccination du Senegal 2010

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	92	12-23 m	13650	76
BCG	Card or History	95	12-23 m	13650	76
DTP1	Card	72	12-23 m	13650	76
DTP1	Card or History	94	12-23 m	13650	76
DTP3	Card	51	12-23 m	13650	76
DTP3	Card or History	74	12-23 m	13650	76
HepB1	Card	72	12-23 m	13650	76
HepB1	Card or History	94	12-23 m	13650	76
HepB3	Card	51	12-23 m	13650	76
HepB3	Card or History	74	12-23 m	13650	76
Hib1	Card	72	12-23 m	13650	76
Hib1	Card or History	94	12-23 m	13650	76
Hib3	Card	51	12-23 m	13650	76
Hib3	Card or History	74	12-23 m	13650	76
MCV1	Card	47	12-23 m	13650	76
MCV1	Card or History	79	12-23 m	13650	76

Senegal - survey details

Pol1	History	30	12-23 m	738	66
Pol3	C or H <12 months	70	12-23 m	2199	66
Pol3	Card	60	12-23 m	1460	66
Pol3	Card or History	73	12-23 m	2199	66
Pol3	History	12	12-23 m	738	66

2004 Enquête Démographique et de Santé, Sénégal 2005

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	91	12-23 m	2040	70
BCG	Card	66	12-23 m	2040	70
BCG	Card or History	92	12-23 m	2040	70
BCG	History	25	12-23 m	2040	70
DTP1	C or H <12 months	92	12-23 m	2040	70
DTP1	Card	68	12-23 m	2040	70
DTP1	Card or History	93	12-23 m	2040	70
DTP1	History	25	12-23 m	2040	70
DTP3	C or H <12 months	74	12-23 m	2040	70
DTP3	Card	61	12-23 m	2040	70
DTP3	Card or History	78	12-23 m	2040	70
DTP3	History	17	12-23 m	2040	70
MCV1	C or H <12 months	61	12-23 m	2040	70
MCV1	Card	53	12-23 m	2040	70
MCV1	Card or History	74	12-23 m	2040	70
MCV1	History	20	12-23 m	2040	70
Pol1	C or H <12 months	93	12-23 m	2040	70
Pol1	Card	69	12-23 m	2040	70
Pol1	Card or History	94	12-23 m	2040	70
Pol1	History	25	12-23 m	2040	70
Pol3	C or H <12 months	69	12-23 m	2040	70
Pol3	Card	61	12-23 m	2040	70
Pol3	Card or History	73	12-23 m	2040	70
Pol3	History	12	12-23 m	2040	70
YFV	C or H <12 months	62	12-23 m	2040	70
YFV	Card	54	12-23 m	2040	70
YFV	Card or History	73	12-23 m	2040	70
YFV	History	19	12-23 m	2040	70

1999 Rapport final revue externe PEV du Senegal, Jan 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	89	12-23 m	2100	81
BCG	Card	88	12-23 m	2100	81
BCG	Card <12 months	87	12-23 m	2100	81
BCG	Card or History	90	12-23 m	2100	81
DTP1	C or H <12 months	79	12-23 m	2100	81
DTP1	Card	71	12-23 m	2100	81
DTP1	Card <12 months	68	12-23 m	2100	81
DTP1	Card or History	82	12-23 m	2100	81
DTP3	C or H <12 months	52	12-23 m	2100	81
DTP3	Card	52	12-23 m	2100	81
DTP3	Card <12 months	45	12-23 m	2100	81
DTP3	Card or History	60	12-23 m	2100	81
MCV1	C or H <12 months	48	12-23 m	2100	81
MCV1	Card	53	12-23 m	2100	81
MCV1	Card <12 months	42	12-23 m	2100	81
MCV1	Card or History	60	12-23 m	2100	81
Pol1	C or H <12 months	73	12-23 m	2100	81
Pol1	Card	66	12-23 m	2100	81
Pol1	Card <12 months	64	12-23 m	2100	81
Pol1	Card or History	76	12-23 m	2100	81
Pol3	C or H <12 months	49	12-23 m	2100	81
Pol3	Card	50	12-23 m	2100	81
Pol3	Card <12 months	43	12-23 m	2100	81
Pol3	Card or History	56	12-23 m	2100	81
YFV	Card	43	12-23 m	2100	81
YFV	Card <12 months	34	12-23 m	2100	81
YFV	Card or History	50	12-23 m	2100	81

1998 Sénégal, Enquête Sénégalaise sur les Indicateurs de Santé (ESIS) 1999, 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	82	12-23 m	2137	59
BCG	Card	59	12-23 m	2137	59
BCG	Card or History	88	12-23 m	2137	59

Senegal - survey details

BCG	History	29	12-23 m	2137	59	MCV1	Card or History	61	12-23 m	2137	59
DTP1	C or H <12 months	69	12-23 m	2137	59	MCV1	History	20	12-23 m	2137	59
DTP1	Card	55	12-23 m	2137	59	Pol1	C or H <12 months	80	12-23 m	2137	59
DTP1	Card or History	73	12-23 m	2137	59	Pol1	Card	57	12-23 m	2137	59
DTP1	History	18	12-23 m	2137	59	Pol1	Card or History	86	12-23 m	2137	59
DTP3	C or H <12 months	43	12-23 m	2137	59	Pol1	History	28	12-23 m	2137	59
DTP3	Card	42	12-23 m	2137	59	Pol3	C or H <12 months	50	12-23 m	2137	59
DTP3	Card or History	50	12-23 m	2137	59	Pol3	Card	43	12-23 m	2137	59
DTP3	History	8	12-23 m	2137	59	Pol3	Card or History	58	12-23 m	2137	59
MCV1	C or H <12 months	46	12-23 m	2137	59	Pol3	History	15	12-23 m	2137	59
MCV1	Card	42	12-23 m	2137	59						

Further information and estimates for previous years are available at:

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

http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index4.html