Senegal: WHO and UNICEF estimates of immunization coverage: 2022 revision

WHO and UNICEF estimates of national immunization coverage - next revision available July 15, 2024
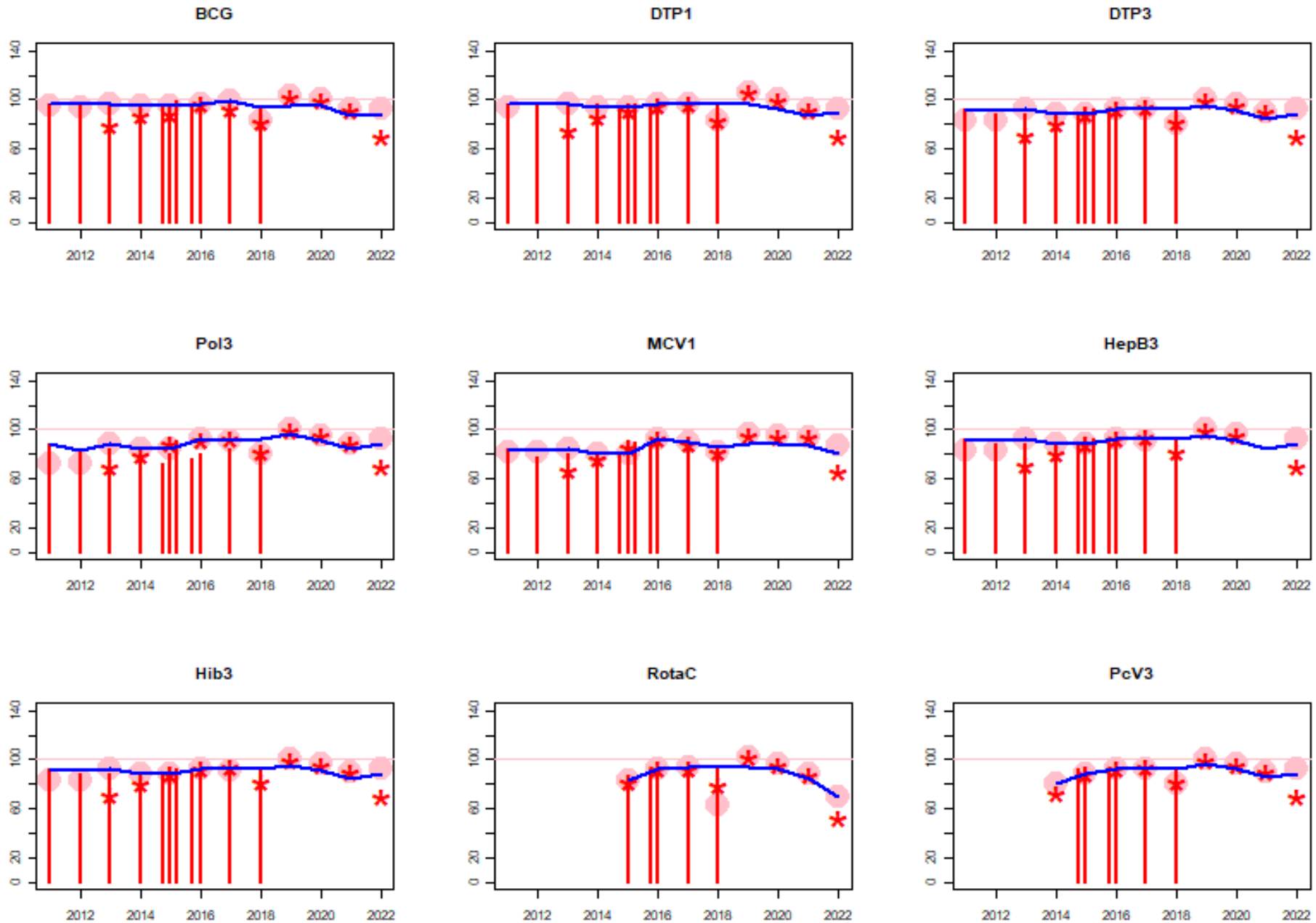
BACKGROUND NOTE: Each year WHO and UNICEF jointly review reports submitted by Member States regarding national immunization coverage, finalized survey reports as well as data from the published and grey literature. Based on these data, with due consideration to potential biases and the views of local 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.
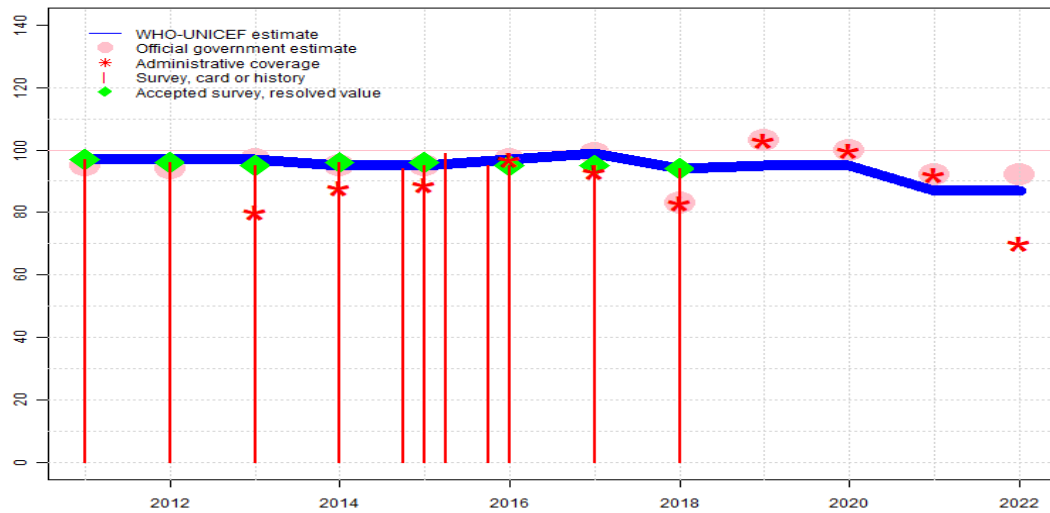
PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect 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.

Senegal - BCG

SEN - BCG

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	97	97	97	95	95	97	99	94	95	95	87	87
Estimate GoC	••	••	•	•••	•••	•••	•••	•	•	•	•	•
Official	95	94	97	95	95	97	99	83	103	100	92	92
Administrative	NA	NA	80	88	89	97	93	83	103	100	92	70
Survey	97	96	95	96	*	*	95	94	NA	NA	NA	NA

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

••• Estimate is supported by reported data [R+], coverage recalculated with an independent denominator
from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at
least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk
of being wrong.

•• Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or
[S-], challenges the estimate.

• There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.
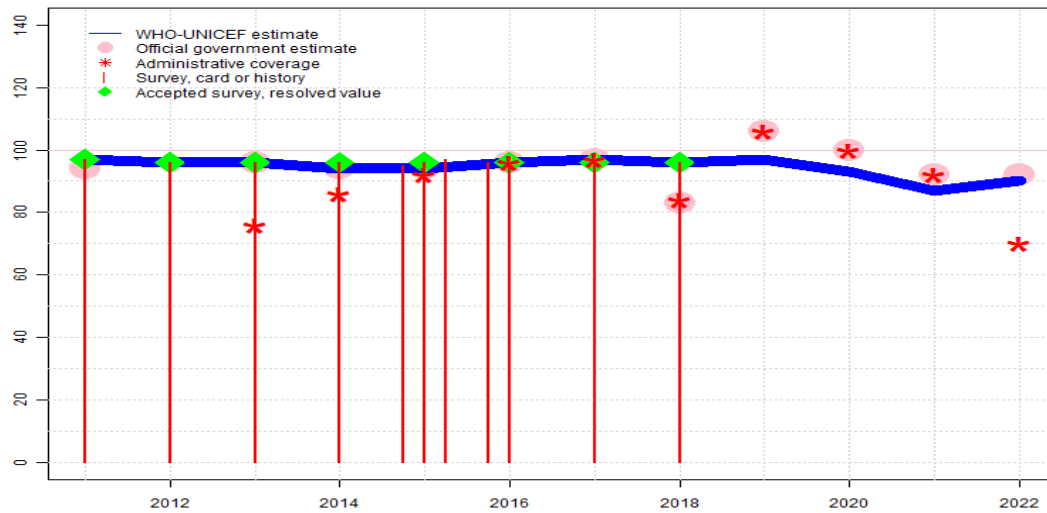
In all cases these estimates should be used with caution and should be assessed in light
of the objective for which they are being used.

Description:

2022: Reported data calibrated to 2018 levels. Programme notes healthcare worker strikes with resultant impacts on data completeness. Estimate challenged by: D-R-

2021: Reported data calibrated to 2018 levels. Estimate challenged by: D-R-

2020: Reported data calibrated to 2018 levels. Estimate challenged by: D-R-

2019: Reported data calibrated to 2018 levels. Reported data excluded because 103 percent greater than 100 percent. Reported data may include catch-up doses following healthcare worker strikes in 2018. Estimate challenged by: D-R-

2018: Estimate of 94 percent assigned by working group. Estimate based on survey results. Reported data excluded. Programme reports health worker strikes that significantly affected vaccination service delivery. Strikes were conducted from May 2018 to January 2019 reducing service delivery to three days per week.Reported data excluded due to decline in reported coverage from 99 percent to 83 percent with increase to 103 percent. Estimate challenged by: R-

2017: Estimate informed by reported data supported by survey. Survey evidence of 95 percent based on 1 survey(s). Programme reports four months stockout at national level. GoC=R+ S+ D+

2016: Estimate informed by reported data supported by survey. Survey evidence of 95 percent based on 2 survey(s). 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 informed by reported data supported by survey. Survey evidence of 96 percent based on 3 survey(s). Programme reports one month national level stockout. GoC=R+ S+ D+

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

2013: Estimate informed by reported data 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 informed by interpolation between reported data 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+

Senegal - DTP1

SEN - DTP1

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	97	96	96	94	94	96	97	96	97	93	87	90
Estimate GoC	●	●●	●	●●●	●●●	●●●	●●●	●	●	●	●	●
Official	94	NA	96	94	94	96	97	83	106	100	92	92
Administrative	NA	NA	76	86	92	96	97	84	106	100	92	70
Survey	97	96	96	96	*	*	96	96	NA	NA	NA	NA

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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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●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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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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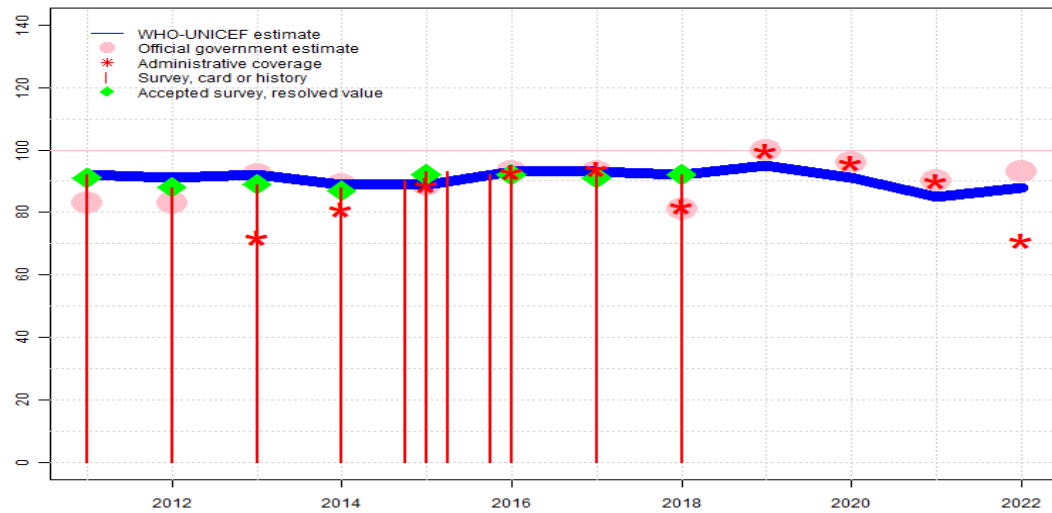
Description:

2022: Reported data calibrated to 2018 levels. Programme notes healthcare worker strikes with resultant impacts on data completeness. Estimate challenged by: D-R-

2021: Estimate is based on trend in reported coverage. Estimate challenged by: D-R-

2020: Estimate reflects decline trend in reported coverage 2019 to 2020 for most vaccine doses. Estimate challenged by: D-R-

2019: Reported data calibrated to 2018 levels. Reported data excluded because 106 percent greater than 100 percent. Reported data may include catch-up doses following healthcare worker strikes in 2018. Estimate challenged by: D-R-

2018: Estimate of 96 percent assigned by working group. Estimate based on survey results. Reported data excluded. Programme reports health worker strikes that significantly affected vaccination service delivery. Strikes were conducted from May 2018 to January 2019 reducing service delivery to three days per week.Reported data excluded due to decline in reported coverage from 97 percent to 83 percent with increase to 106 percent. Programme reports a one month vaccine stockout at the national level. Estimate challenged by: R-

2017: Estimate informed by reported data supported by survey. Survey evidence of 96 percent based on 1 survey(s). Programme reports three months stockout at national level. GoC=R+ S+ D+

2016: Estimate informed by reported data supported by survey. Survey evidence of 96 percent based on 2 survey(s). 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 informed by reported data supported by survey. Survey evidence of 96 percent based on 3 survey(s). GoC=R+ S+ D+

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

2013: Estimate informed by reported data 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 informed by interpolation between reported data 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-

Senegal - DTP3

SEN - DTP3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	92	91	92	89	89	93	93	92	95	91	85	88
Estimate GoC	•	••	•	•••	•••	•••	•••	•	•	•	•	•
Official	83	83	92	89	89	93	93	81	100	96	90	93
Administrative	NA	NA	72	81	89	93	94	82	100	96	90	71
Survey	92	88	89	88	*	*	93	92	NA	NA	NA	NA

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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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••• Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

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• There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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In all cases these estimates should be used with caution and should be assessed in light
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Description:

2022: Reported data calibrated to 2018 levels. Programme notes healthcare worker strikes with resultant impacts on data completeness. Estimate challenged by: D-R-

2021: Reported data calibrated to 2018 levels. Estimate challenged by: D-R-

2020: Reported data calibrated to 2018 levels. Estimate challenged by: D-R-

2019: Reported data calibrated to 2018 levels. Reported data may include catch-up doses following healthcare worker strikes in 2018. Estimate challenged by: D-R-

2018: Estimate of 92 percent assigned by working group. Estimate based on survey results. Reported data excluded. Programme reports health worker strikes that significantly affected vaccination service delivery. Strikes were conducted from May 2018 to January 2019 reducing service delivery to three days per week.Reported data excluded due to decline in reported coverage from 93 percent to 81 percent with increase to 100 percent. Programme reports a one month vaccine stockout at the national level. Estimate challenged by: R-

2017: Estimate informed by reported data supported by survey. Survey evidence of 91 percent based on 1 survey(s). Senegal Demographic and Health Survey (Continuous) 2018 card or history results of 93 percent modifed for recall bias to 91 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 80 percent and 3rd dose card only coverage of 76 percent. Programme reports three months stockout at national level. GoC=R+ S+ D+

2016: Estimate informed by reported data supported by survey. Survey evidence of 92 percent based on 2 survey(s). Senegal Demographic and Health Survey 2017 card or history results of 92 percent modifed for recall bias to 91 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 79 percent and 3rd dose card only coverage of 75 percent. 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 informed by reported data supported by survey. Survey evidence of 92 percent based on 3 survey(s). GoC=R+ S+ D+

2014: Estimate informed by reported data 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 modifed 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 3rd dose card only coverage of 66 percent. GoC=R+ S+ D+

2013: Estimate informed by reported data 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-

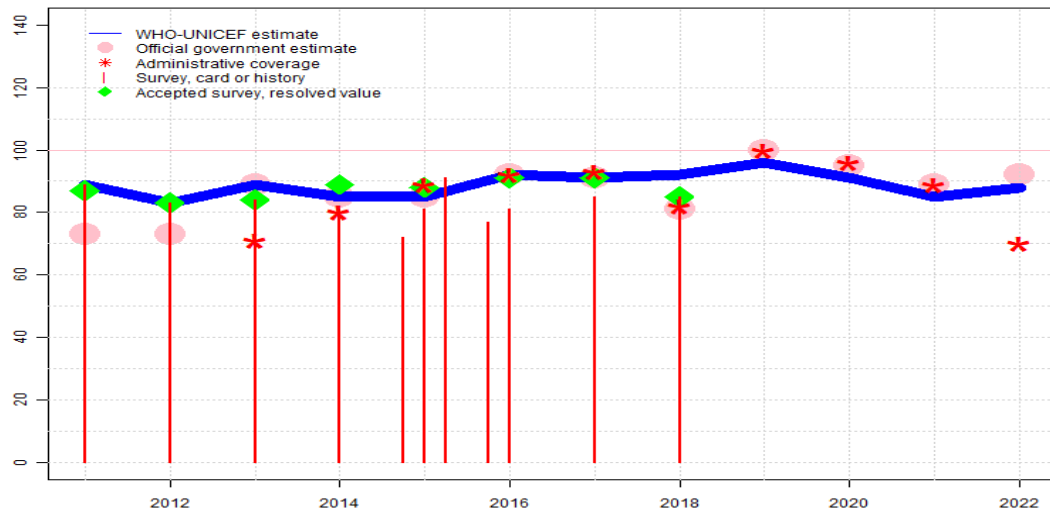2012: Estimate informed by interpolation between reported data supported by survey. Sur-

vey 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. Senegal National EPI Coverage Survey, 2013 card or history results of 92 percent modifed 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 3rd 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-

Senegal - Pol3

SEN - Pol3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	89	83	89	85	85	92	91	92	96	91	85	88
Estimate GoC	●	●●	●	●●●	●	●●●	●●●	●	●	●	●	●
Official	73	73	89	85	85	92	91	81	100	95	89	92
Administrative	NA	NA	71	80	89	92	93	82	100	96	89	70
Survey	89	83	84	81	*	*	85	85	NA	NA	NA	NA

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

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

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● 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:

2022: Reported data calibrated to 2018 levels. Programme notes healthcare worker strikes with resultant impacts on data completeness. Estimate challenged by: D-R-

2021: Reported data calibrated to 2018 levels. Programme reports less than one month vaccine stockout at national level. Estimate of 85 percent changed from previous revision value of 78 percent. Estimate challenged by: D-R-

2020: Reported data calibrated to 2018 levels. Estimate of 91 percent changed from previous revision value of 84 percent. Estimate challenged by: D-R-

2019: Reported data calibrated to 2018 levels. Reported data may include catch-up doses following healthcare worker strikes in 2018. Estimate of 96 percent changed from previous revision value of 89 percent. Estimate challenged by: D-R-S-

2018: Estimate of 92 percent assigned by working group. Estimate based on DTP3 survey results to reflect consistency between vaccines recommended to be given at the same age. Reported data excluded. Programme reports health worker strikes that significantly affected vaccination service delivery. Strikes were conducted from May 2018 to January 2019 reducing service delivery to three days per week. Programme reports a two months vaccine stockout at the national level. Estimate of 92 percent changed from previous revision value of 85 percent. Estimate challenged by: R-

2017: Estimate informed by reported data supported by survey. Survey evidence of 91 percent based on 1 survey(s). Senegal Demographic and Health Survey (Continuous) 2018 card or history results of 85 percent modfied for recall bias to 91 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 80 percent and 3rd dose card only coverage of 76 percent. GoC=R+ S+ D+

2016: Estimate informed by reported data supported by survey. Survey evidence of 91 percent based on 2 survey(s). Senegal Demographic and Health Survey 2017 card or history results of 81 percent modfied for recall bias to 90 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 79 percent and 3rd dose card only coverage of 75 percent. Senegal Demographic and Health Survey (Continuous) 2018 card or history results of 77 percent modfied for recall bias to 91 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 62 percent and 3rd dose card only coverage of 60 percent. 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 informed by reported data supported by survey. Survey evidence of 88 percent based on 3 survey(s). Senegal Demographic and Health Survey 2017 card or history results of 72 percent modfied for recall bias to 91 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 62 percent and 3rd dose card only coverage of 60 percent. Estimate challenged by: D-

2014: Estimate informed by reported data 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 modifed 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 3rd dose card only coverage of 67 percent. GoC=R+ S+ D+
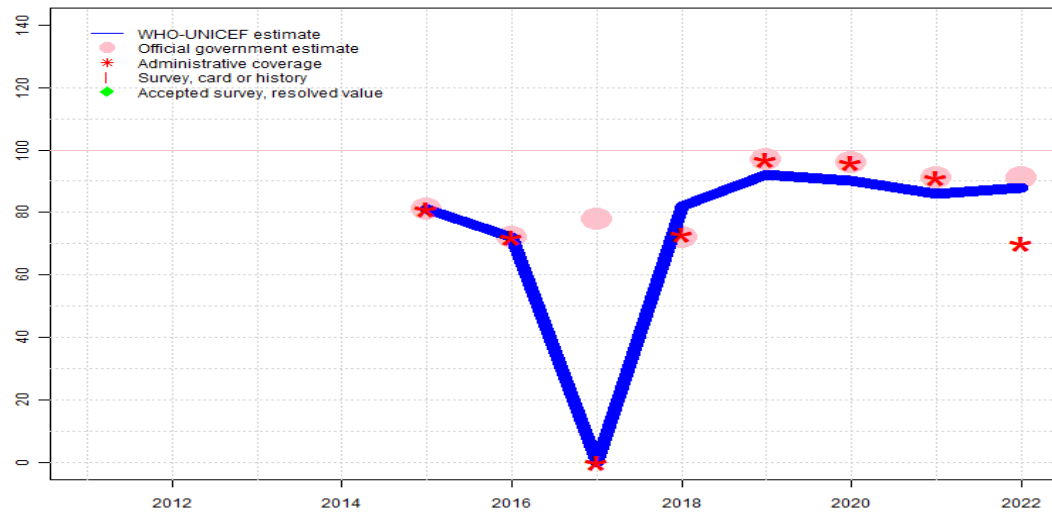
2013: Estimate is based on official government estimate. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. Official government estimates are based on 2013 survey results. Estimate challenged by: D-

2012: Estimate informed by interpolation between reported data 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. Senegal National EPI Coverage Survey, 2013 card or history results of 89 percent modifed 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 3rd 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-

Senegal - IPV1

SEN - IPV1

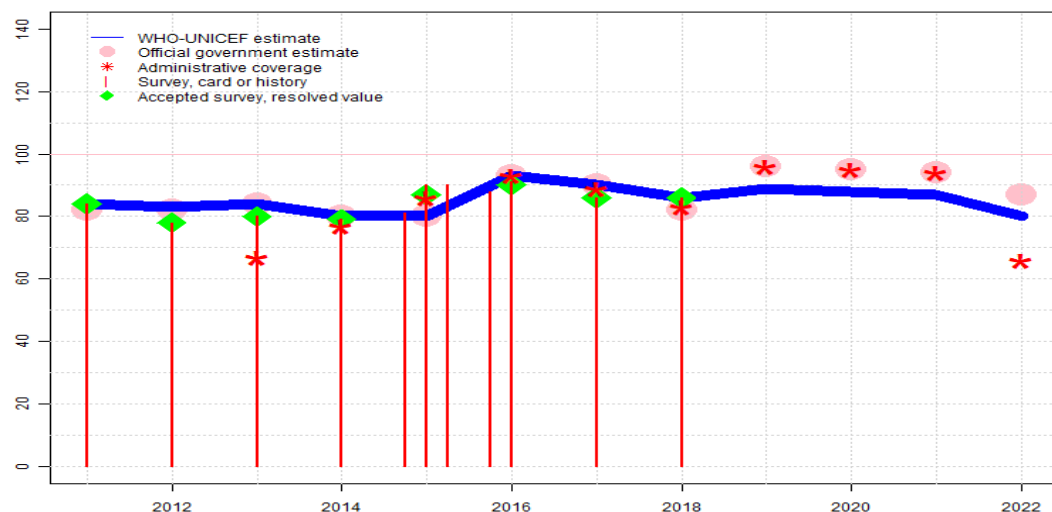|	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	81	72	0	82	92	90	86	88
Estimate GoC	NA	NA	NA	NA	●●	●●	●●	●	●	●	●	●
Official	NA	NA	NA	NA	81	72	78	72	97	96	91	91
Administrative	NA	NA	NA	NA	81	72	0	73	97	96	91	70
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

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● 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).

2022: Estimate informed by estimated DTP3 coverage. Programme notes healthcare worker strikes with resultant impacts on data completeness. Estimate challenged by: D-R-

2021: Estimate is based on the difference between reported coverage for IPV1 and DTP3 applied to estimated DTP3 coverage. Estimate challenged by: D-R-

2020: Estimate is based on difference between reported coverage for DTP3 and IPV1 applied to estimated DTP3 coverage. Estimate challenged by: D-R-

2019: Estimate is based on difference between reported coverage for DTP3 and IPV1 applied to estimated DTP3 coverage. Reported data may include catch-up doses following healthcare worker strikes in 2018. Estimate challenged by: D-R-

2018: Estimate is based on difference between reported coverage for DTP3 and IPV1 applied to estimated DTP3 coverage. Reported data excluded. Programme reports health worker strikes that significantly affected vaccination service delivery. Strikes were conducted from May 2018 to January 2019 reducing service delivery to three days per week. Estimate challenged by: R-

2017: Estimate informed by reported administrative data. Programme reports twelve month stockout at national level. Official estimate does not take into account 2017 stockout at national level. GoC=R+ D+

2016: Estimate informed by reported data. 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 stockout at national level. GoC=R+ D+

2015: Estimate informed by reported data. Inactivated polio vaccine introduced during January 2015. GoC=R+ D+

Senegal - MCV1

SEN - MCV1

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	84	83	84	80	80	93	90	86	89	88	87	80
Estimate GoC	●	●●	●	●●●	●	●	●●●	●	●	●	●	●
Official	82	82	84	80	80	93	90	82	96	95	94	87
Administrative	NA	NA	67	77	86	93	89	83	96	95	94	66
Survey	84	78	80	79	*	*	86	86	NA	NA	NA	NA

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

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.
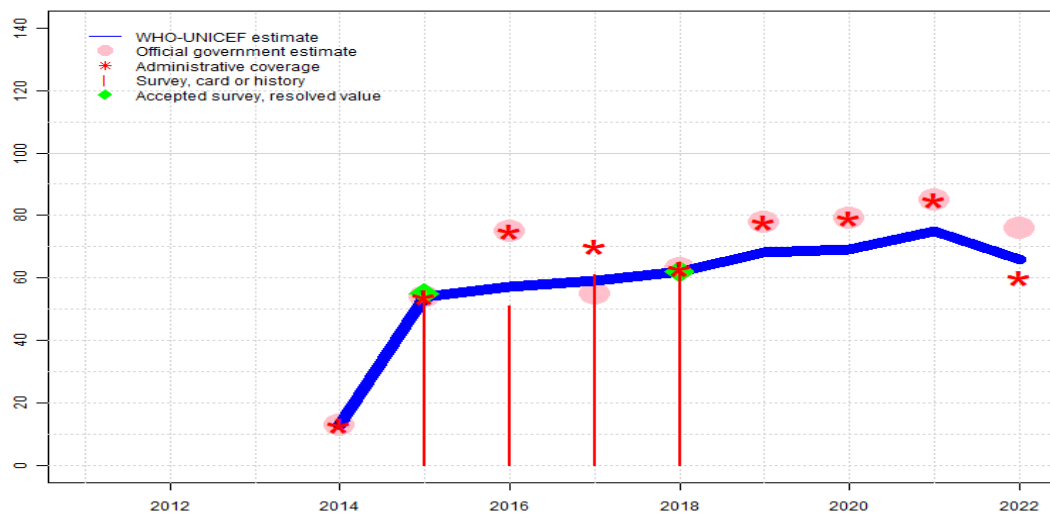
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2022: Reported data calibrated to 2018 levels. Programme notes healthcare worker strikes with resultant impacts on data completeness. Estimate challenged by: R-

2021: Reported data calibrated to 2018 levels. Estimate challenged by: D-R-

2020: Reported data calibrated to 2018 levels. Estimate challenged by: D-R-

2019: Reported data calibrated to 2018 levels. Reported data may include catch-up doses following healthcare worker strikes in 2018. Estimate challenged by: D-R-

2018: Estimate of 86 percent assigned by working group. Estimate based on survey results. Reported data excluded. Programme reports health worker strikes that significantly affected vaccination service delivery. Strikes were conducted from May 2018 to January 2019 reducing service delivery to three days per week. Estimate challenged by: R-

2017: Estimate informed by reported data supported by survey. Survey evidence of 86 percent based on 1 survey(s). Programme reports one month stockout at national level. GoC=R+ S+ D+

2016: Estimate informed by reported data supported by survey. Survey evidence of 90 percent based on 2 survey(s). 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 informed by reported data supported by survey. Survey evidence of 87 percent based on 3 survey(s). Estimate challenged by: D-

2014: Estimate informed by reported data supported by survey. Survey evidence of 79 percent based on 1 survey(s). GoC=R+ S+ D+

2013: Estimate informed by reported data 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 informed by interpolation between reported data 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-

Senegal - MCV2

SEN - MCV2

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	13	54	57	59	62	68	69	75	66
Estimate GoC	NA	NA	NA	●	●●●	●	●	●	●	●	●	●
Official	NA	NA	NA	13	54	75	55	63	78	79	85	76
Administrative	NA	NA	NA	13	54	75	70	63	78	79	85	60
Survey	NA	NA	NA	NA	55	51	61	62	NA	NA	NA	NA

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

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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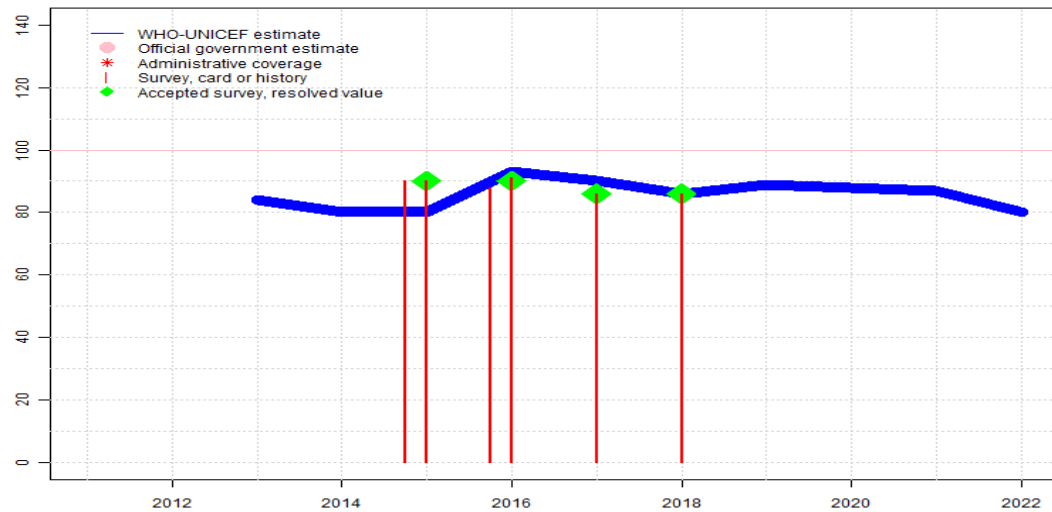
Description:

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

2022: Reported data calibrated to 2018 levels. Programme notes healthcare worker strikes with resultant impacts on data completeness. Estimate challenged by: R-

2021: Reported data calibrated to 2018 levels. Estimate challenged by: D-R-

2020: Reported data calibrated to 2018 levels. Estimate challenged by: D-R-

2019: Reported data calibrated to 2018 levels. Reported data may include catch-up doses following healthcare worker strikes in 2018. Reported data include catch-up doses following healthcare worker strikes in 2018. Estimate challenged by: D-R-

2018: Estimate of 62 percent assigned by working group. Estimate based on survey results. Reported data excluded. Programme reports health worker strikes that significantly affected vaccination service delivery. Strikes were conducted from May 2018 to January 2019 reducing service delivery to three days per week. Estimate challenged by: R-

2017: Estimate informed by interpolation between 2015 and 2018 levels. Inconsistent trend in reported coverage. Senegal Demographic and Health Survey (Continuous) 2018 results ignored by working group. Estimate based on reported data for consistency with other antigens.Reported data excluded. Official estimate may not consider recent dose introduction. Programme reports one month stockout at national level. Estimate challenged by: D-R-

2016: Estimate informed by interpolation between 2015 and 2018 levels. Inconsistent trend in reported coverage. Senegal Demographic and Health Survey 2017 results ignored by working group. Estimate based on reported data for consistency with other antigens.Reported data excluded. .Reported data excluded due to an increase from 54 percent to 75 percent with decrease 55 percent. 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: D-R-

2015: Estimate informed by reported data supported by survey. Survey evidence of 55 percent based on 1 survey(s). Reported coverage for national target population following introduction in 2014. GoC=R+ S+ D+

2014: Estimate informed by reported data. Introduced in national schedule in October 2014 as MR vaccine with recommended administration at 15 months. GoC=Assigned by working group. Introduction period.

Senegal - RCV1

SEN - RCV1

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	84	80	80	93	90	86	89	88	87	80
Estimate GoC	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	*	*	86	86	NA	NA	NA	NA

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

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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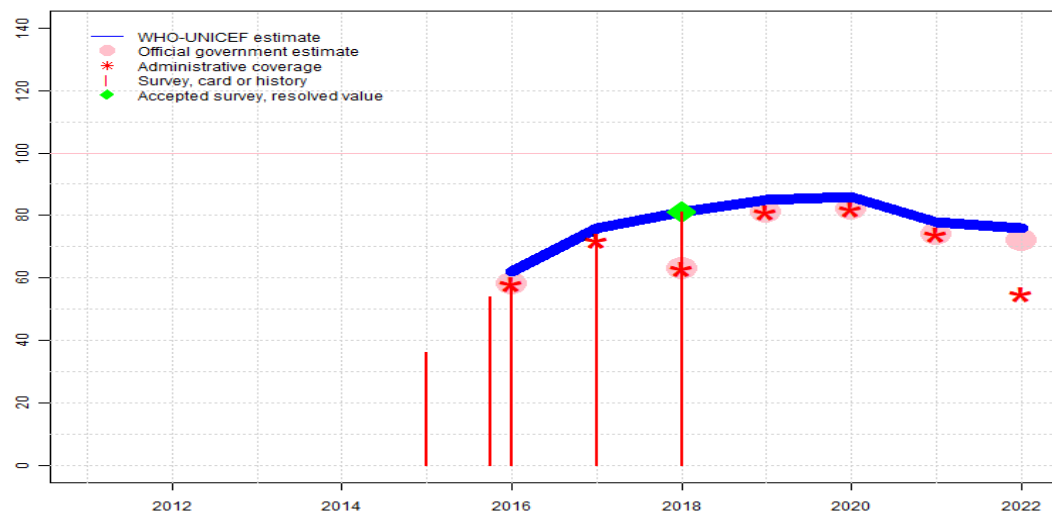
Description:

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

2022: Estimate based on estimated MCV1. Programme notes healthcare worker strikes with resultant impacts on data completeness. Estimate challenged by: R-

2021: Estimate based on estimated MCV1. Estimate challenged by: D-R-

2020: Estimate based on estimated MCV1. Estimate challenged by: D-R-

2019: Estimate based on estimated MCV1. Reported data may include catch-up doses following healthcare worker strikes in 2018. Estimate challenged by: D-R-

2018: Estimate based on estimated MCV1. Estimate challenged by: R-

2017: Estimate based on estimated MCV1. Programme reports one month stockout at national level. GoC=R+ S+ D+

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. Estimate challenged by: 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-

Senegal - HepBB

SEN - HepBB

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	NA	62	76	81	85	86	78	76
Estimate GoC	NA	NA	NA	NA	NA	●	●	●	●	●	●	●
Official	NA	NA	NA	NA	NA	58	NA	63	81	82	74	72
Administrative	NA	NA	NA	NA	NA	58	72	63	81	82	74	55
Survey	NA	NA	NA	NA	36	*	74	81	NA	NA	NA	NA

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

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

2022: Reported data calibrated to 2018 levels. Programme notes healthcare worker strikes with resultant impacts on data completeness. Estimate challenged by: D-R-

2021: Reported data calibrated to 2018 levels. Estimate challenged by: R-

2020: Reported data calibrated to 2018 levels. Estimate challenged by: R-

2019: Reported data calibrated to 2018 levels. Reported data may include catch-up doses following healthcare worker strikes in 2018.. Estimate challenged by: R-
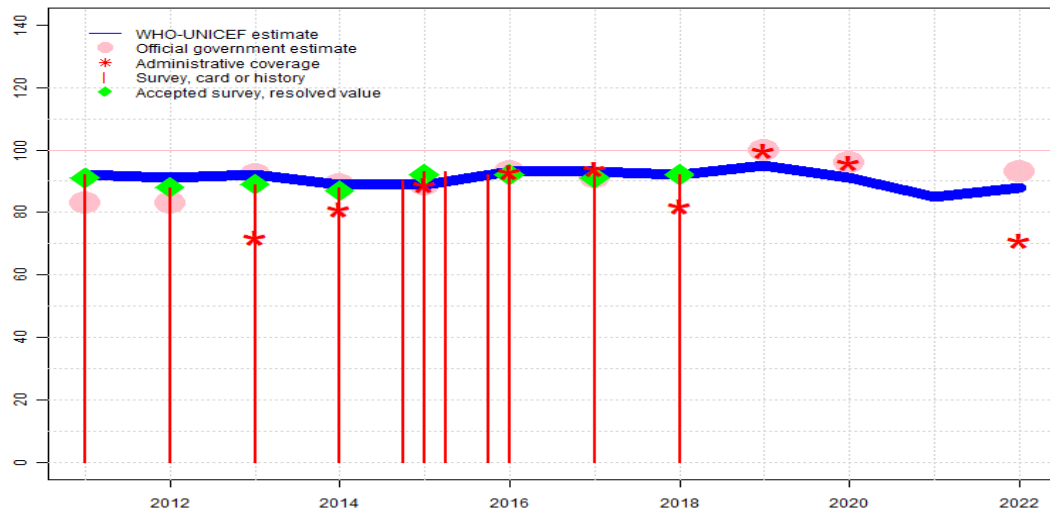
2018: Estimate of 81 percent assigned by working group. Estimate based on survey results. Reported data excluded. Programme reports health worker strikes that significantly affected vaccination service delivery. Strikes were conducted from May 2018 to January 2019 reducing service delivery to three days per week. Estimate challenged by: D-R-

2017: Reported data calibrated to 2018 levels. Senegal Demographic and Health Survey (Continuous) 2018 results ignored by working group. Survey results reflect documented evidence only. Increase following introduction year. Estimate challenged by: R-

2016: Reported data calibrated to 2018 levels. Senegal Demographic and Health Survey 2017 results ignored by working group. Survey results reflect documented evidence only.Senegal Demographic and Health Survey (Continuous) 2018 results ignored by working group. Survey results reflect documented evidence only. 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. Estimate challenged by: R-S-

Senegal - HepB3

SEN - HepB3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	92	91	92	89	89	93	93	92	95	91	85	88
Estimate GoC	●	●●	●	●●●	●●●	●●●	●	●	●	●	●	●
Official	83	83	92	89	89	93	91	NA	100	96	NA	93
Administrative	NA	NA	72	81	89	93	94	82	100	96	NA	71
Survey	92	88	89	88	*	*	93	92	NA	NA	NA	NA

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

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator
from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at
least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk
of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or
[S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

2022: Estimate informed by estimated DTP3 coverage. Programme notes healthcare worker strikes with resultant impacts on data completeness. Estimate challenged by: D-R-

2021: Estimate informed by estimated DTP3 coverage. Estimate of 85 percent changed from previous revision value of 86 percent. GoC=No accepted empirical data

2020: Estimate informed by estimated DTP3 coverage. Estimate of 91 percent changed from previous revision value of 92 percent. Estimate challenged by: D-R-

2019: Estimate informed by estimated DTP3 coverage. Reported data may include catch-up doses following healthcare worker strikes in 2018. Estimate of 95 percent changed from previous revision value of 96 percent. Estimate challenged by: D-R-

2018: Estimate of 92 percent assigned by working group. Estimate based on survey results. Reported data excluded. Programme reports health worker strikes that significantly affected vaccination service delivery. Strikes were conducted from May 2018 to January 2019 reducing service delivery to three days per week. Estimate challenged by: R-

2017: Estimate of 93 percent assigned by working group. Estimate is based on estimated DTP3 level. Senegal Demographic and Health Survey (Continuous) 2018 card or history results of 93 percent modifed for recall bias to 91 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 80 percent and 3rd dose card only coverage of 76 percent. Estimate challenged by: R-

2016: Estimate informed by reported data supported by survey. Survey evidence of 92 percent based on 2 survey(s). Senegal Demographic and Health Survey 2017 card or history results of 92 percent modifed for recall bias to 91 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 79 percent and 3rd dose card only coverage of 75 percent. 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 informed by reported data supported by survey. Survey evidence of 92 percent based on 3 survey(s). GoC=R+ S+ D+

2014: Estimate informed by reported data 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 modifed 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 3rd dose card only coverage of 66 percent. GoC=R+ S+ D+

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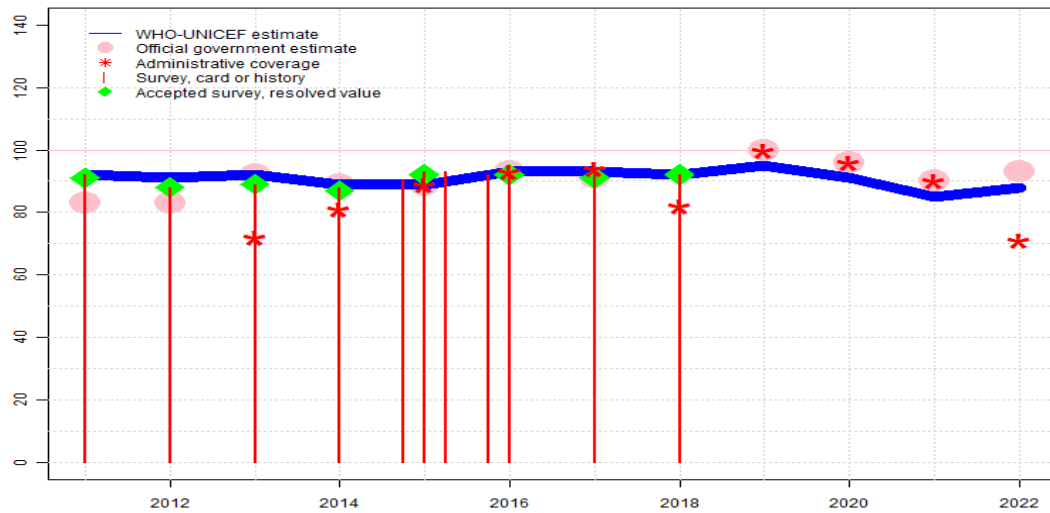
reported data based on preliminary 2011 DHS results. Between 2009 and 2012 health facilities did not report service statistics. In 2013 reporting recommenced and reached seventy-six percent completeness. GoC=R+ S+

2011: Estimate of 92 percent assigned by working group. Estimates are based on final 2011 DHS results. Senegal National EPI Coverage Survey, 2013 card or history results of 92 percent modifed 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 3rd 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-

Senegal - Hib3

SEN - Hib3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	92	91	92	89	89	93	93	92	95	91	85	88
Estimate GoC	•	••	•	•••	•••	•••	•	•	•	•	•	•
Official	83	83	92	89	89	93	91	NA	100	96	90	93
Administrative	NA	NA	72	81	89	93	94	82	100	96	90	71
Survey	92	88	89	88	*	*	93	92	NA	NA	NA	NA

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

••• Estimate is supported by reported data [R+], coverage recalculated with an independent denominator
from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at
least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk
of being wrong.

•• Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or
[S-], challenges the estimate.

• There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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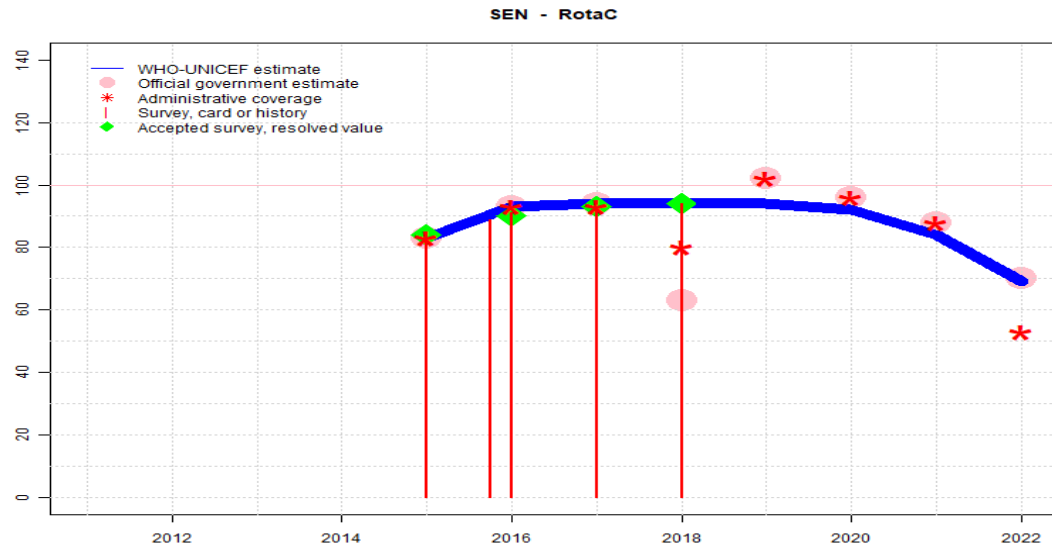of the objective for which they are being used.

Description:

2022: Estimate informed by DTP3. Programme notes healthcare worker strikes with resultant impacts on data completeness. Estimate challenged by: D-R-

2021: Estimate informed by DTP3. Estimate of 85 percent changed from previous revision value of 86 percent. Estimate challenged by: D-R-

2020: Estimate informed by DTP3. Estimate of 91 percent changed from previous revision value of 92 percent. Estimate challenged by: D-R-

2019: Estimate informed by DTP3. Reported data may include catch-up doses following healthcare worker strikes in 2018. Estimate of 95 percent changed from previous revision value of 96 percent. Estimate challenged by: D-R-

2018: Estimate of 92 percent assigned by working group. Estimate based on survey results. Reported data excluded. Programme reports health worker strikes that significantly affected vaccination service delivery. Strikes were conducted from May 2018 to January 2019 reducing service delivery to three days per week. Estimate challenged by: R-

2017: Estimate of 93 percent assigned by working group. Estimate is based on estimated DTP3 level. Senegal Demographic and Health Survey (Continuous) 2018 card or history results of 93 percent modifed for recall bias to 91 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 80 percent and 3rd dose card only coverage of 76 percent. Estimate challenged by: R-

2016: Estimate informed by reported data supported by survey. Survey evidence of 92 percent based on 2 survey(s). Senegal Demographic and Health Survey 2017 card or history results of 92 percent modifed for recall bias to 91 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 79 percent and 3rd dose card only coverage of 75 percent. 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 informed by reported data supported by survey. Survey evidence of 92 percent based on 3 survey(s). GoC=R+ S+ D+

2014: Estimate informed by reported data 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 modifed 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 3rd dose card only coverage of 66 percent. GoC=R+ S+ D+

2013: Estimate informed by reported data 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 informed by interpolation between reported data 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. Senegal National EPI Coverage Survey, 2013 card or history results of 92 percent modifed 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 3rd 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-

Senegal - RotaC

SEN - RotaC

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	83	93	94	94	94	92	84	69
Estimate GoC	NA	NA	NA	NA	●●●	●●●	●●●	●	●	●	●	●
Official	NA	NA	NA	NA	83	93	94	63	102	96	88	70
Administrative	NA	NA	NA	NA	83	93	93	80	102	96	88	53
Survey	NA	NA	NA	NA	84	*	93	94	NA	NA	NA	NA

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

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator
from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at
least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk
of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or
[S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.
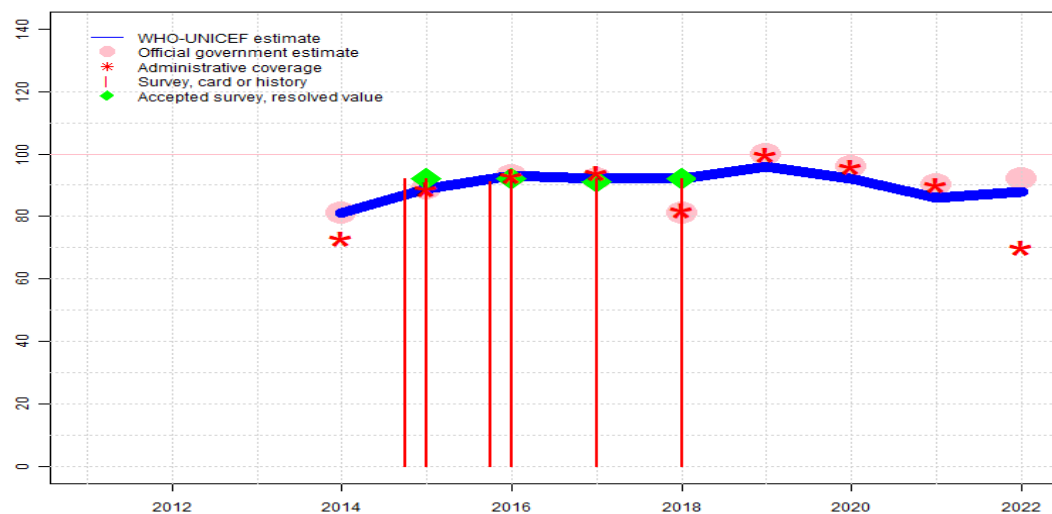
In all cases these estimates should be used with caution and should be assessed in light
of the objective for which they are being used.

Description:

2022: Reported data calibrated to 2018 levels. Programme notes healthcare worker strikes with resultant impacts on data completeness. Programme reports an eight month vaccine stockout at national and subnational levels. Estimate challenged by: D-R-

2021: Estimate is based on trend in reported coverage. Estimate challenged by: D-R-

2020: Estimate reflects decline trend in reported coverage 2019 to 2020 for most vaccine doses. Estimate challenged by: D-R-

2019: Reported data calibrated to 2018 levels. Reported data excluded because 102 percent greater than 100 percent. Reported data may include catch-up doses following health-care worker strikes in 2018. Estimate challenged by: D-R-

2018: Estimate of 94 percent assigned by working group. Estimate based on survey results. Reported data excluded. Programme reports health worker strikes that significantly affected vaccination service delivery. Strikes were conducted from May 2018 to January 2019 reducing service delivery to three days per week.Reported data excluded due to decline in reported coverage from 94 percent to 80 percent with increase to 102 percent. Programme reports a three months vaccine stockout at the national level. Reported adjustment of official reported coverage from administrative coverage is unexplained. Estimate challenged by: R-

2017: Estimate informed by reported data supported by survey. Survey evidence of 93 percent based on 1 survey(s). GoC=R+ S+ D+

2016: Estimate informed by reported data supported by survey. Survey evidence of 90 percent based on 2 survey(s). 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 informed by reported data supported by survey. Survey evidence of 84 percent based on 1 survey(s). Rotavirus vaccine introduced in November 2014. Reporting began in 2015. GoC=R+ S+ D+

Senegal - PcV3

SEN - PcV3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

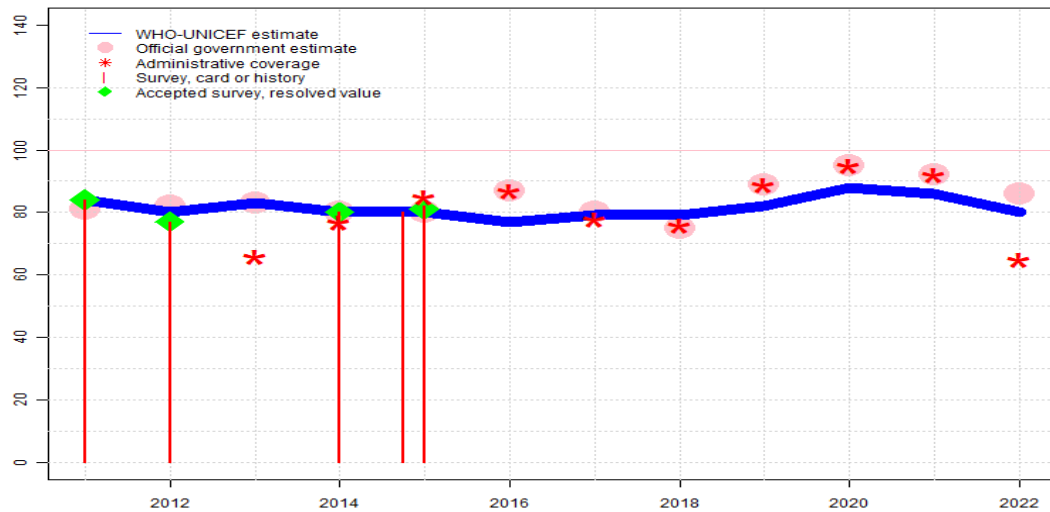|	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	81	89	93	92	92	96	92	86	88
Estimate GoC	NA	NA	NA	●	●●●	●●●	●●●	●	●	●	●	●
Official	NA	NA	NA	81	89	93	92	81	100	96	90	92
Administrative	NA	NA	NA	73	89	93	94	82	100	96	90	70
Survey	NA	NA	NA	NA	*	*	92	92	NA	NA	NA	NA

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

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

2022: Reported data calibrated to 2018 levels. Programme notes healthcare worker strikes with resultant impacts on data completeness. Estimate challenged by: D-R-

2021: Reported data calibrated to 2018 levels. Estimate challenged by: D-R-

2020: Reported data calibrated to 2018 levels. Estimate challenged by: D-R-

2019: Reported data calibrated to 2018 levels. Reported data may include catch-up doses following healthcare worker strikes in 2018. Estimate challenged by: D-R-

2018: Estimate of 92 percent assigned by working group. Estimate based on survey results. Reported data excluded. Programme reports health worker strikes that significantly affected vaccination service delivery. Strikes were conducted from May 2018 to January 2019 reducing service delivery to three days per week.Reported data excluded due to decline in reported coverage from 92 percent to 81 percent with increase to 100 percent. Estimate challenged by: R-

2017: Estimate informed by reported data supported by survey. Survey evidence of 91 percent based on 1 survey(s). Senegal Demographic and Health Survey (Continuous) 2018 card or history results of 92 percent modifed for recall bias to 91 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 80 percent and 3rd dose card only coverage of 76 percent. GoC=R+ S+ D+

2016: Estimate informed by reported data supported by survey. Survey evidence of 92 percent based on 2 survey(s). Senegal Demographic and Health Survey 2017 card or history results of 91 percent modifed for recall bias to 92 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 78 percent and 3rd dose card only coverage of 75 percent. 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 informed by reported data supported by survey. Survey evidence of 92 percent based on 2 survey(s). GoC=R+ S+ D+

2014: Estimate informed by reported data. Introduced in national schedule in November 2013, reporting started in 2014. GoC=Assigned by working group. Introduction period.

Senegal - YFV

SEN - YFV

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	84	80	83	80	80	77	79	79	82	88	86	80
Estimate GoC	●	●●	●	●●●	●	●	●	●	●	●	●	●
Official	81	82	83	80	80	87	80	75	89	95	92	86
Administrative	NA	NA	66	77	85	87	78	76	89	95	92	65
Survey	84	77	NA	80	*	NA	NA	NA	NA	NA	NA	NA

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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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●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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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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Description:

2022: Estimate informed by estimated MCV1 coverage. Programme notes healthcare worker strikes with resultant impacts on data completeness. Estimate challenged by: R-

2021: Estimate is based on difference between reported YFV and MCV1 coverage applied to estimated coverage for MCV1. Estimate challenged by: D-R-

2020: Estimate based on difference between MCV1 and YFV reported coverage applied to estimated coverage for MCV1. Estimate challenged by: D-R-

2019: Estimate based on difference between MCV1 and YFV reported coverage applied to estimated coverage for MCV1. Reported data may include catch-up doses following healthcare worker strikes in 2018. Estimate challenged by: D-R-

2018: Estimate based on difference between MCV1 and YFV reported coverage applied to estimated coverage for MCV1. Reported data excluded. Programme reports health worker strikes that significantly affected vaccination service delivery. Strikes were conducted from May 2018 to January 2019 reducing service delivery to three days per week. Estimate challenged by: R-

2017: Estimate based on difference between MCV1 and YFV reported coverage applied to estimated coverage for MCV1. Programme reports six month stockout at national level. Estimate challenged by: R-

2016: Estimate based on difference between MCV1 and YFV reported coverage applied to estimated coverage for 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. Programme reports three months vaccine stockout at national level. Estimate challenged by: D-R-

2015: Estimate informed by reported data supported by survey. Survey evidence of 81 percent based on 2 survey(s). Estimate challenged by: D-

2014: Estimate informed by reported data supported by survey. Survey evidence of 80 percent based on 1 survey(s). GoC=R+ S+ D+

2013: Estimate informed by reported data. 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 informed by interpolation between reported data 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-

NOTE: A survey to measure vaccination coverage for infants (i.e., children aged 0 to 11 months) will sample children aged 12 to 23 months at the time of survey to capture the youngest annual cohort of children who should have completed the vaccination schedule. Because WUENIC are for infant vaccinations, survey data in this report are presented to reflect the birth year of the youngest survey cohort. For example, results for a survey conducted during December 2020 among children aged 12 to 23 months at the time of the survey reflect the immunization experience of children born in 2019. Depending on the timing of survey field work, results may reflect the immunization experience of children born and vaccinated 1 or 2 years prior to the survey field work.

2018 Sénégal Enquête Démographique et de Santé Continue (EDS-Continue) 2019

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	94.5	12-23 m	1129	-
DTP1	Card or History	96.2	12-23 m	1129	-
DTP3	Card or History	92.1	12-23 m	1129	-
HepB1	Card or History	96.2	12-23 m	1129	-
HepB3	Card or History	92.1	12-23 m	1129	-
HepBB	Card or History	81.3	12-23 m	1129	-
Hib1	Card or History	96.2	12-23 m	1129	-
Hib3	Card or History	92.1	12-23 m	1129	-
MCV1	Card or History	85.7	12-23 m	1129	-
MCV2	Card or History	61.5	24-35 m	1147	-
PCV1	Card or History	95.6	12-23 m	1129	-
PCV3	Card or History	91.6	12-23 m	1129	-
Pol1	Card or History	95.5	12-23 m	1129	-
Pol3	Card or History	85.1	12-23 m	1129	-
RotaC	Card or History	93.6	12-23 m	1129	-

2017 Sénégal Enquête Démographique et de Santé Continue (EDS-Continue) 2018

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	95.1	12-23 m	1227	80
BCG	Card	78.1	12-23 m	980	80
BCG	Card or History	95.3	12-23 m	1227	80
BCG	History	17.2	12-23 m	247	80
DTP1	C or H <12 months	96.3	12-23 m	1227	80
DTP1	Card	79.6	12-23 m	980	80
DTP1	Card or History	96.4	12-23 m	1227	80
DTP1	History	16.8	12-23 m	247	80
DTP3	C or H <12 months	91.6	12-23 m	1227	80
DTP3	Card	76.4	12-23 m	980	80
DTP3	Card or History	92.6	12-23 m	1227	80
DTP3	History	16.2	12-23 m	247	80
HepB1	C or H <12 months	96.3	12-23 m	1227	80
HepB1	Card	79.6	12-23 m	980	80
HepB1	Card or History	96.4	12-23 m	1227	80
HepB1	History	16.8	12-23 m	247	80
HepB3	C or H <12 months	91.6	12-23 m	1227	80
HepB3	Card	76.4	12-23 m	980	80
HepB3	Card or History	92.6	12-23 m	1227	80
HepB3	History	16.2	12-23 m	247	80
HepBB	C or H <12 months	73.4	12-23 m	1227	80
HepBB	Card	59.9	12-23 m	980	80
HepBB	Card or History	73.8	12-23 m	1227	80
HepBB	History	13.9	12-23 m	247	80
Hib1	C or H <12 months	96.3	12-23 m	1227	80
Hib1	Card	79.6	12-23 m	980	80
Hib1	Card or History	96.4	12-23 m	1227	80
Hib1	History	16.8	12-23 m	247	80
Hib3	C or H <12 months	91.6	12-23 m	1227	80
Hib3	Card	76.4	12-23 m	980	80
Hib3	Card or History	92.6	12-23 m	1227	80
Hib3	History	16.2	12-23 m	247	80
MCV1	C or H <12 months	78.2	12-23 m	1227	80
MCV1	Card	70.3	12-23 m	980	80
MCV1	Card or History	85.5	12-23 m	1227	80
MCV1	History	15.1	12-23 m	247	80
MCV2	C or H <12 months	59.7	24-35 m	1092	80
MCV2	Card	41.8	24-35 m	684	80
MCV2	Card or History	60.9	24-35 m	1092	80
MCV2	History	19.1	24-35 m	408	80
PCV1	C or H <12 months	96	12-23 m	1227	80

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
PCV1	Card	79.6	12-23 m	980	80
PCV1	Card or History	96.1	12-23 m	1227	80
PCV1	History	16.5	12-23 m	247	80
PCV3	C or H <12 months	90.9	12-23 m	1227	80
PCV3	Card	76.4	12-23 m	980	80
PCV3	Card or History	92.3	12-23 m	1227	80
PCV3	History	15.9	12-23 m	247	80
Pol1	C or H <12 months	95.6	12-23 m	1227	80
Pol1	Card	79.7	12-23 m	980	80
Pol1	Card or History	95.7	12-23 m	1227	80
Pol1	History	16	12-23 m	247	80
Pol3	C or H <12 months	83.3	12-23 m	1227	80
Pol3	Card	76.5	12-23 m	980	80
Pol3	Card or History	85	12-23 m	1227	80
Pol3	History	8.5	12-23 m	247	80
RotaC	C or H <12 months	92.7	12-23 m	1227	80
RotaC	Card	77.3	12-23 m	980	80
RotaC	Card or History	93.3	12-23 m	1227	80
RotaC	History	15.9	12-23 m	247	80

2016 Sénégal Enquête Démographique et de Santé Continue (EDS-Continue) 2017

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	94.7	12-23 m	2221	80
BCG	Card	77.4	12-23 m	1767	80
BCG	Card or History	95.3	12-23 m	2221	80
BCG	History	17.9	12-23 m	454	80
DTP1	C or H <12 months	96.2	12-23 m	2221	80
DTP1	Card	78.7	12-23 m	1767	80
DTP1	Card or History	96.5	12-23 m	2221	80
DTP1	History	17.8	12-23 m	454	80
DTP3	C or H <12 months	90.3	12-23 m	2221	80
DTP3	Card	75.3	12-23 m	1767	80
DTP3	Card or History	92	12-23 m	2221	80
DTP3	History	16.6	12-23 m	454	80
HepB1	C or H <12 months	96.2	12-23 m	2221	80
HepB1	Card	78.7	12-23 m	1767	80
HepB1	Card or History	96.5	12-23 m	2221	80
HepB1	History	17.8	12-23 m	454	80
HepB3	C or H <12 months	90.3	12-23 m	2221	80
HepB3	Card	75.3	12-23 m	1767	80
HepB3	Card or History	92	12-23 m	2221	80
HepB3	History	16.6	12-23 m	454	80
HepBB	C or H <12 months	52.5	12-23 m	2221	80
HepBB	Card	42.5	12-23 m	1767	80
HepBB	Card or History	53.5	12-23 m	2221	80
HepBB	History	11	12-23 m	454	80
Hib1	C or H <12 months	96.2	12-23 m	2221	80
Hib1	Card	78.7	12-23 m	1767	80
Hib1	Card or History	96.5	12-23 m	2221	80
Hib1	History	17.8	12-23 m	454	80
Hib3	C or H <12 months	90.3	12-23 m	2221	80
Hib3	Card	75.3	12-23 m	1767	80
Hib3	Card or History	92	12-23 m	2221	80
Hib3	History	16.6	12-23 m	454	80
MCV1	C or H <12 months	80.8	12-23 m	2221	80
MCV1	Card	72	12-23 m	1767	80
MCV1	Card or History	88.1	12-23 m	2221	80
MCV1	History	16.1	12-23 m	454	80
MCV2	C or H <24 months	48.8	24-35 m	2102	80
MCV2	Card	38.7	24-35 m	1310	80
MCV2	Card or History	51	24-35 m	2102	80
MCV2	History	12.3	24-35 m	793	80
PcV1	C or H <12 months	95.7	12-23 m	2221	80
PcV1	Card	78.4	12-23 m	1767	80
PcV1	Card or History	96.1	12-23 m	2221	80
PcV1	History	17.7	12-23 m	454	80
PcV3	C or H <12 months	89.5	12-23 m	2221	80
PcV3	Card	75	12-23 m	1767	80
PcV3	Card or History	91.4	12-23 m	2221	80
PcV3	History	16.4	12-23 m	454	80
Pol1	C or H <12 months	94.5	12-23 m	2221	80
Pol1	Card	78.7	12-23 m	1767	80
Pol1	Card or History	94.8	12-23 m	2221	80
Pol1	History	16.1	12-23 m	454	80
Pol3	C or H <12 months	79.9	12-23 m	2221	80
Pol3	Card	75.1	12-23 m	1767	80
Pol3	Card or History	81.4	12-23 m	2221	80

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
Pol3	History	6.3	12-23 m	454	80
RotaC	C or H <12 months	87.5	12-23 m	2221	80
RotaC	Card	73.6	12-23 m	1767	80
RotaC	Card or History	88.6	12-23 m	2221	80
RotaC	History	15	12-23 m	454	80

2016 Sénégal Enquête Démographique et de Santé Continue (EDS-Continue) 2018

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	94.2	24-35 m	1092	80
BCG	Card	60.8	24-35 m	684	80
BCG	Card or History	94.8	24-35 m	1092	80
BCG	History	34	24-35 m	408	80
DTP1	C or H <12 months	95.1	24-35 m	1092	80
DTP1	Card	61.7	24-35 m	684	80
DTP1	Card or History	95.8	24-35 m	1092	80
DTP1	History	34.1	24-35 m	408	80
DTP3	C or H <12 months	89	24-35 m	1092	80
DTP3	Card	60.1	24-35 m	684	80
DTP3	Card or History	92.8	24-35 m	1092	80
DTP3	History	32.7	24-35 m	408	80
HepB1	C or H <12 months	95.1	24-35 m	1092	80
HepB1	Card	61.7	24-35 m	684	80
HepB1	Card or History	95.8	24-35 m	1092	80
HepB1	History	34.1	24-35 m	408	80
HepB3	C or H <12 months	89	24-35 m	1092	80
HepB3	Card	60.1	24-35 m	684	80
HepB3	Card or History	92.8	24-35 m	1092	80
HepB3	History	32.7	24-35 m	408	80
HepBB	C or H <12 months	56.5	24-35 m	1092	80
HepBB	Card	30.9	24-35 m	684	80
HepBB	Card or History	57.2	24-35 m	1092	80
HepBB	History	26.3	24-35 m	408	80
Hib1	C or H <12 months	95.1	24-35 m	1092	80
Hib1	Card	61.7	24-35 m	684	80
Hib1	Card or History	95.8	24-35 m	1092	80
Hib1	History	34.1	24-35 m	408	80
Hib3	C or H <12 months	89	24-35 m	1092	80
Hib3	Card	60.1	24-35 m	684	80
Hib3	Card or History	92.8	24-35 m	1092	80
Hib3	History	32.7	24-35 m	408	80
MCV1	C or H <12 months	78.7	24-35 m	1092	80
MCV1	Card	58.8	24-35 m	684	80
MCV1	Card or History	90.8	24-35 m	1092	80
MCV1	History	32	24-35 m	408	80
PCV1	C or H <12 months	94.6	24-35 m	1092	80
PCV1	Card	61.7	24-35 m	684	80
PCV1	Card or History	95.3	24-35 m	1092	80
PCV1	History	33.6	24-35 m	408	80
PCV3	C or H <12 months	88.4	24-35 m	1092	80
PCV3	Card	59.8	24-35 m	684	80
PCV3	Card or History	92	24-35 m	1092	80
PCV3	History	32.2	24-35 m	408	80
Pol1	C or H <12 months	93.6	24-35 m	1092	80
Pol1	Card	61.7	24-35 m	684	80
Pol1	Card or History	94.5	24-35 m	1092	80
Pol1	History	32.7	24-35 m	408	80
Pol3	C or H <12 months	73.2	24-35 m	1092	80
Pol3	Card	60.2	24-35 m	684	80
Pol3	Card or History	76.9	24-35 m	1092	80
Pol3	History	16.7	24-35 m	408	80
RotaC	C or H <12 months	89	24-35 m	1092	80
RotaC	Card	59.1	24-35 m	684	80
RotaC	Card or History	90.9	24-35 m	1092	80
RotaC	History	31.8	24-35 m	408	80

2015 Enquête Nationale de Couvertures Vaccinales du PEV, Sénégal, 2017

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	87.9	12-23 m	5993	89
BCG	Card or History	98.9	12-23 m	5993	89
DTP1	Card or History	97.2	12-23 m	5993	89
DTP3	Card	80.9	12-23 m	5993	89
DTP3	Card or History	92.9	12-23 m	5993	89
HepB1	Card or History	97.2	12-23 m	5993	89
HepB3	Card	80.9	12-23 m	5993	89
HepB3	Card or History	92.9	12-23 m	5993	89

Hib1	Card or History	97.2	12-23 m	5993	89
Hib3	Card	80.9	12-23 m	5993	89
Hib3	Card or History	92.9	12-23 m	5993	89
MCV1	Card	79.5	12-23 m	5993	89
MCV1	Card or History	89.9	12-23 m	5993	89
MCV2	Card	47.4	12-23 m	5993	89
MCV2	Card or History	55.1	12-23 m	5993	89
PcV1	Card or History	97.2	12-23 m	5993	89
PcV3	Card	78.8	12-23 m	5993	89
PcV3	Card or History	92	12-23 m	5993	89
Pol1	Card or History	96.5	12-23 m	5993	89
Pol3	Card	75.4	12-23 m	5993	89
Pol3	Card or History	90.8	12-23 m	5993	89
YFV	Card	71.4	12-23 m	5993	89
YFV	Card or History	80.2	12-23 m	5993	89

2015 Senegal Demographic and Health Survey 2016

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	94.1	12-23 m	1143	75
DTP1	Card or History	94.9	12-23 m	1143	75
DTP3	Card or History	89.5	12-23 m	1143	75
HepB1	Card or History	94.9	12-23 m	1143	75
HepB3	Card or History	89.5	12-23 m	1143	75
Hib1	Card or History	94.9	12-23 m	1143	75
Hib3	Card or History	89.5	12-23 m	1143	75
MCV1	Card or History	80.6	12-23 m	1143	75
Pol1	Card or History	94.6	12-23 m	1143	75
Pol3	Card or History	80.7	12-23 m	1143	75
YFV	Card or History	82	12-23 m	1143	75

2015 Sénégal Enquête Démographique et de Santé Continue (EDS-Continue) 2017

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	94.3	24-35 m	2102	80
BCG	Card	61.1	24-35 m	1310	80

BCG	Card or History	95.3	24-35 m	2102	80
BCG	History	34.2	24-35 m	793	80
DTP1	C or H <12 months	95.4	24-35 m	2102	80
DTP1	Card	61.9	24-35 m	1310	80
DTP1	Card or History	96.2	24-35 m	2102	80
DTP1	History	34.4	24-35 m	793	80
DTP3	C or H <12 months	90	24-35 m	2102	80
DTP3	Card	59.9	24-35 m	1310	80
DTP3	Card or History	93	24-35 m	2102	80
DTP3	History	33.1	24-35 m	793	80
HepB1	C or H <12 months	95.4	24-35 m	2102	80
HepB1	Card	61.9	24-35 m	1310	80
HepB1	Card or History	96.2	24-35 m	2102	80
HepB1	History	34.4	24-35 m	793	80
HepB3	C or H <12 months	90	24-35 m	2102	80
HepB3	Card	59.9	24-35 m	1310	80
HepB3	Card or History	93	24-35 m	2102	80
HepB3	History	33.1	24-35 m	793	80
HepBB	C or H <12 months	35.2	24-35 m	2102	80
HepBB	Card	17.7	24-35 m	1310	80
HepBB	Card or History	35.9	24-35 m	2102	80
HepBB	History	18.3	24-35 m	793	80
Hib1	C or H <12 months	95.4	24-35 m	2102	80
Hib1	Card	61.9	24-35 m	1310	80
Hib1	Card or History	96.2	24-35 m	2102	80
Hib1	History	34.4	24-35 m	793	80
Hib3	C or H <12 months	90	24-35 m	2102	80
Hib3	Card	59.9	24-35 m	1310	80
Hib3	Card or History	93	24-35 m	2102	80
Hib3	History	33.1	24-35 m	793	80
MCV1	C or H <12 months	77.7	24-35 m	2102	80
MCV1	Card	58.5	24-35 m	1310	80
MCV1	Card or History	90.3	24-35 m	2102	80
MCV1	History	31.8	24-35 m	793	80
PcV1	C or H <12 months	94.4	24-35 m	2102	80
PcV1	Card	61.6	24-35 m	1310	80
PcV1	Card or History	95.2	24-35 m	2102	80
PcV1	History	33.7	24-35 m	793	80
PcV3	C or H <12 months	89.1	24-35 m	2102	80
PcV3	Card	59.5	24-35 m	1310	80

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
PcV3	Card or History	91.9	24-35 m	2102	80
PcV3	History	32.5	24-35 m	793	80
Pol1	C or H <12 months	93.3	24-35 m	2102	80
Pol1	Card	61.8	24-35 m	1310	80
Pol1	Card or History	94.4	24-35 m	2102	80
Pol1	History	32.6	24-35 m	793	80
Pol3	C or H <12 months	70.1	24-35 m	2102	80
Pol3	Card	59.5	24-35 m	1310	80
Pol3	Card or History	72.2	24-35 m	2102	80
Pol3	History	12.6	24-35 m	793	80
RotaC	C or H <12 months	81.9	24-35 m	2102	80
RotaC	Card	56.3	24-35 m	1310	80
RotaC	Card or History	84.3	24-35 m	2102	80
RotaC	History	28	24-35 m	793	80

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	71.6	12-23 m	853	73
BCG	Card or History	95.7	12-23 m	1165	73
DTP1	C or H <12 months	95.6	12-23 m	1165	73
DTP1	Card	72.7	12-23 m	853	73
DTP1	Card or History	96.3	12-23 m	1165	73
DTP3	C or H <12 months	85.5	12-23 m	1165	73
DTP3	Card	66.5	12-23 m	853	73
DTP3	Card or History	88.3	12-23 m	1165	73
HepB1	C or H <12 months	95.6	12-23 m	1165	73
HepB1	Card	72.7	12-23 m	853	73
HepB1	Card or History	96.3	12-23 m	1165	73
HepB3	C or H <12 months	85.5	12-23 m	1165	73
HepB3	Card	66.5	12-23 m	853	73
HepB3	Card or History	88.3	12-23 m	1165	73
Hib1	C or H <12 months	95.6	12-23 m	1165	73
Hib1	Card	72.7	12-23 m	853	73
Hib1	Card or History	96.3	12-23 m	1165	73
Hib3	C or H <12 months	85.5	12-23 m	1165	73
Hib3	Card	66.5	12-23 m	853	73
Hib3	Card or History	88.3	12-23 m	1165	73

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
MCV1	C or H <12 months	70	12-23 m	1165	73
MCV1	Card	59.6	12-23 m	853	73
MCV1	Card or History	79.1	12-23 m	1165	73
Pol1	C or H <12 months	96.3	12-23 m	1165	73
Pol1	Card	72.9	12-23 m	853	73
Pol1	Card or History	97.1	12-23 m	1165	73
Pol3	C or H <12 months	78.6	12-23 m	1165	73
Pol3	Card	66.8	12-23 m	853	73
Pol3	Card or History	80.6	12-23 m	1165	73
YFV	C or H <12 months	69.8	12-23 m	1165	73
YFV	Card	60	12-23 m	853	73
YFV	Card or History	79.6	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	95.3	12-23 m	1211	69
DTP1	Card or History	95.6	12-23 m	1211	69
DTP3	Card or History	89.3	12-23 m	1211	69
HepB1	Card or History	95.6	12-23 m	1211	69
HepB3	Card or History	89.3	12-23 m	1211	69
Hib1	Card or History	95.6	12-23 m	1211	69
Hib3	Card or History	89.3	12-23 m	1211	69
MCV1	Card or History	80.2	12-23 m	1211	69
Pol1	Card or History	96	12-23 m	1211	69
Pol3	Card or History	84.4	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	96.3	12-23 m	1230	71
DTP1	Card or History	95.8	12-23 m	1230	71
DTP3	Card or History	88.5	12-23 m	1230	71
HepB1	Card or History	95.8	12-23 m	1230	71
HepB3	Card or History	88.5	12-23 m	1230	71
Hib1	Card or History	95.8	12-23 m	1230	71
Hib3	Card or History	88.5	12-23 m	1230	71

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
MCV1	Card or History	77.8	12-23 m	1230	71
Pol1	Card or History	95.7	12-23 m	1230	71
Pol3	Card or History	83	12-23 m	1230	71
YFV	Card or History	77.1	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	77.7	12-23 m	-	81
BCG	Card or History	97.1	12-23 m	16755	81
BCG	Card or History or Scar	93.3	12-23 m	-	81
DTP1	Card	78.4	12-23 m	-	81
DTP1	Card or History	96.7	12-23 m	16755	81
DTP3	Card	72.6	12-23 m	-	81
DTP3	Card or History	91.6	12-23 m	16755	81
HepB1	Card	78.4	12-23 m	-	81
HepB1	Card or History	96.7	12-23 m	16755	81
HepB3	Card	72.6	12-23 m	-	81
HepB3	Card or History	91.6	12-23 m	16755	81
Hib1	Card	78.4	12-23 m	-	81
Hib1	Card or History	96.7	12-23 m	16755	81
Hib3	Card	72.6	12-23 m	-	81
Hib3	Card or History	91.6	12-23 m	16755	81
MCV1	Card	65.7	12-23 m	-	81
MCV1	Card or History	84.3	12-23 m	16755	81
Pol1	Card	65.2	12-23 m	-	81
Pol1	Card or History	93.9	12-23 m	16755	81
Pol3	Card	59.7	12-23 m	-	81
Pol3	Card or History	89.3	12-23 m	16755	81
YFV	Card	65.8	12-23 m	-	81
YFV	Card or History	84.2	12-23 m	16755	81

2009 Revue externe du Programme Elargi de Vaccination du Senegal 2010

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	91.7	12-23 m	13650	76
BCG	Card or History	95	12-23 m	13650	76
DTP1	Card	72.5	12-23 m	13650	76
DTP1	Card or History	93.7	12-23 m	13650	76
DTP3	Card	50.9	12-23 m	13650	76
DTP3	Card or History	74.1	12-23 m	13650	76
HepB1	Card	72.5	12-23 m	13650	76
HepB1	Card or History	93.7	12-23 m	13650	76
HepB3	Card	50.9	12-23 m	13650	76
HepB3	Card or History	74.1	12-23 m	13650	76
Hib1	Card	72.5	12-23 m	13650	76
Hib1	Card or History	93.7	12-23 m	13650	76
Hib3	Card	50.9	12-23 m	13650	76
Hib3	Card or History	74.1	12-23 m	13650	76
MCV1	Card	47.3	12-23 m	13650	76
MCV1	Card or History	78.9	12-23 m	13650	76

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	93.3	12-23 m	2199	66
BCG	Card	64.4	12-23 m	1460	66
BCG	Card or History	94.7	12-23 m	2199	66
BCG	History	30.3	12-23 m	738	66
DTP1	C or H <12 months	93	12-23 m	2199	66
DTP1	Card	64.5	12-23 m	1460	66
DTP1	Card or History	93.9	12-23 m	2199	66
DTP1	History	29.4	12-23 m	738	66
DTP3	C or H <12 months	80.3	12-23 m	2199	66
DTP3	Card	60.1	12-23 m	1460	66
DTP3	Card or History	82.6	12-23 m	2199	66
DTP3	History	22.5	12-23 m	738	66
HepB1	C or H <12 months	93	12-23 m	2199	66
HepB1	Card	64.5	12-23 m	1460	66
HepB1	Card or History	93.9	12-23 m	2199	66
HepB1	History	29.4	12-23 m	738	66
HepB3	C or H <12 months	80.3	12-23 m	2199	66
HepB3	Card	60.1	12-23 m	1460	66
HepB3	Card or History	82.6	12-23 m	2199	66
HepB3	History	22.5	12-23 m	738	66

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
Hib1	C or H <12 months	93	12-23 m	2199	66
Hib1	Card	64.5	12-23 m	1460	66
Hib1	Card or History	93.9	12-23 m	2199	66
Hib1	History	29.4	12-23 m	738	66
Hib3	C or H <12 months	80.3	12-23 m	2199	66
Hib3	Card	60.1	12-23 m	1460	66
Hib3	Card or History	82.6	12-23 m	2199	66
Hib3	History	22.5	12-23 m	738	66
MCV1	C or H <12 months	71.1	12-23 m	2199	66
MCV1	Card	56.1	12-23 m	1460	66
MCV1	Card or History	82.1	12-23 m	2199	66
MCV1	History	26	12-23 m	738	66
Pol1	C or H <12 months	93.7	12-23 m	2199	66
Pol1	Card	64.7	12-23 m	1460	66
Pol1	Card or History	94.6	12-23 m	2199	66
Pol1	History	29.9	12-23 m	738	66
Pol3	C or H <12 months	70.4	12-23 m	2199	66
Pol3	Card	60.4	12-23 m	1460	66
Pol3	Card or History	72.7	12-23 m	2199	66
Pol3	History	12.3	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	90.8	12-23 m	2040	70
BCG	Card	66.3	12-23 m	2040	70
BCG	Card or History	91.7	12-23 m	2040	70
BCG	History	25.4	12-23 m	2040	70
DTP1	C or H <12 months	92.5	12-23 m	2040	70
DTP1	Card	68.5	12-23 m	2040	70
DTP1	Card or History	93.2	12-23 m	2040	70
DTP1	History	24.7	12-23 m	2040	70
DTP3	C or H <12 months	74.1	12-23 m	2040	70
DTP3	Card	61.3	12-23 m	2040	70
DTP3	Card or History	78.3	12-23 m	2040	70
DTP3	History	17	12-23 m	2040	70
MCV1	C or H <12 months	61.2	12-23 m	2040	70
MCV1	Card	53.4	12-23 m	2040	70
MCV1	Card or History	73.5	12-23 m	2040	70

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
MCV1	History	20.1	12-23 m	2040	70
Pol1	C or H <12 months	93.1	12-23 m	2040	70
Pol1	Card	69.2	12-23 m	2040	70
Pol1	Card or History	93.9	12-23 m	2040	70
Pol1	History	24.7	12-23 m	2040	70
Pol3	C or H <12 months	68.9	12-23 m	2040	70
Pol3	Card	61.4	12-23 m	2040	70
Pol3	Card or History	72.9	12-23 m	2040	70
Pol3	History	11.5	12-23 m	2040	70
YFV	C or H <12 months	61.6	12-23 m	2040	70
YFV	Card	53.9	12-23 m	2040	70
YFV	Card or History	73.1	12-23 m	2040	70
YFV	History	19.2	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	88.8	12-23 m	2100	81
BCG	Card	87.6	12-23 m	2100	81
BCG	Card <12 months	86.6	12-23 m	2100	81
BCG	Card or History	89.9	12-23 m	2100	81
DTP1	C or H <12 months	78.8	12-23 m	2100	81
DTP1	Card	70.8	12-23 m	2100	81
DTP1	Card <12 months	68.2	12-23 m	2100	81
DTP1	Card or History	81.8	12-23 m	2100	81
DTP3	C or H <12 months	51.8	12-23 m	2100	81
DTP3	Card	52.1	12-23 m	2100	81
DTP3	Card <12 months	45.4	12-23 m	2100	81
DTP3	Card or History	59.6	12-23 m	2100	81
MCV1	C or H <12 months	47.9	12-23 m	2100	81
MCV1	Card	52.6	12-23 m	2100	81
MCV1	Card <12 months	42.4	12-23 m	2100	81
MCV1	Card or History	59.7	12-23 m	2100	81
Pol1	C or H <12 months	73.4	12-23 m	2100	81
Pol1	Card	66.5	12-23 m	2100	81
Pol1	Card <12 months	63.6	12-23 m	2100	81
Pol1	Card or History	76.4	12-23 m	2100	81
Pol3	C or H <12 months	48.8	12-23 m	2100	81
Pol3	Card	49.6	12-23 m	2100	81

Senegal - survey details

Pol3	Card <12 months	42.8	12-23 m	2100	81
Pol3	Card or History	56.5	12-23 m	2100	81
YFV	Card	43.1	12-23 m	2100	81
YFV	Card <12 months	33.9	12-23 m	2100	81
YFV	Card or History	50.1	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	82.2	12-23 m	2137	59
BCG	Card	58.9	12-23 m	2137	59
BCG	Card or History	87.9	12-23 m	2137	59
BCG	History	29	12-23 m	2137	59
DTP1	C or H <12 months	69.4	12-23 m	2137	59
DTP1	Card	55.3	12-23 m	2137	59
DTP1	Card or History	73.3	12-23 m	2137	59
DTP1	History	17.9	12-23 m	2137	59
DTP3	C or H <12 months	42.7	12-23 m	2137	59
DTP3	Card	42.4	12-23 m	2137	59
DTP3	Card or History	50	12-23 m	2137	59
DTP3	History	7.6	12-23 m	2137	59
MCV1	C or H <12 months	46.5	12-23 m	2137	59
MCV1	Card	41.6	12-23 m	2137	59
MCV1	Card or History	61.2	12-23 m	2137	59
MCV1	History	19.6	12-23 m	2137	59
Pol1	C or H <12 months	80.5	12-23 m	2137	59
Pol1	Card	57.3	12-23 m	2137	59
Pol1	Card or History	85.5	12-23 m	2137	59
Pol1	History	28.1	12-23 m	2137	59
Pol3	C or H <12 months	50	12-23 m	2137	59
Pol3	Card	43.2	12-23 m	2137	59
Pol3	Card or History	58.2	12-23 m	2137	59
Pol3	History	15.1	12-23 m	2137	59

WHO and UNICEF estimates of national immunization coverage - next revision available July 15, 2024   data received as of June 26, 2023

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