

**BACKGROUND NOTE:** Each year WHO and UNICEF jointly review reports submitted by Member States regarding national immunization coverage, finalized survey reports as well as data from the published and grey literature. Based on these data, with due consideration to potential biases and the views of local experts, WHO and UNICEF attempt to distinguish between situations where the available empirical data accurately reflect immunization system performance and those where the data are likely to be compromised and present a misleading view of immunization coverage while jointly estimating the most likely coverage levels for each country.

WHO and UNICEF estimates are country-specific; that is to say, each country's data are reviewed individually, and data are not borrowed from other countries in the absence of data. Estimates are not based on ad hoc adjustments to reported data; in some instances empirical data are available from a single source, usually the nationally reported coverage data. In cases where no data are available for a given country/vaccine/year combination, data are considered from earlier and later years and interpolated to estimate coverage for the missing year(s). In cases where data sources are mixed and show large variation, an attempt is made to identify the most likely estimate with consideration of the possible biases in available data. For methods see:

\*Burton et al. 2009. WHO and UNICEF estimates of national infant immunization coverage: methods and processes.

\*Burton et al. 2012. A formal representation of the WHO and UNICEF estimates of national immunization coverage: a computational logic approach.

\*Brown et al. 2013. An introduction to the grade of confidence used to characterize uncertainty around the WHO and UNICEF estimates of national immunization coverage.

## DATA SOURCES.

**ADMINISTRATIVE coverage:** Reported by national authorities and based on aggregated administrative reports from health service providers on the number of vaccinations administered during a given period (numerator data) and reported target population data (denominator data). May be biased by inaccurate numerator and/or denominator data.

**OFFICIAL coverage:** Estimated coverage reported by national authorities that reflects their assessment of the most likely coverage based on any combination of administrative coverage, survey-based estimates or other data sources or adjustments. Approaches to determine OFFICIAL coverage may differ across countries.

**SURVEY coverage:** Based on estimated coverage from population-based household surveys among children aged 12-23 months or 24-35 months following a review of survey methods and results. Information is based on the combination of vaccination history from documented evidence or caregiver recall. Survey results are considered for the appropriate birth cohort based on the period of data collection.

## ABBREVIATIONS

**BCG:** percentage of births who received one dose of Bacillus Calmette Guerin vaccine.

**DTP1 / DTP3:** percentage of surviving infants who received the 1st / 3rd dose, respectively, of diphtheria and tetanus toxoid with pertussis containing vaccine.

**Pol3:** percentage of surviving infants who received the 3rd dose of polio containing vaccine. May be either oral or inactivated polio vaccine.

**IPV1:** percentage of surviving infants who received at least one dose of inactivated polio vaccine. In countries utilizing an immunization schedule recommending either (i) a primary series of three doses of oral polio vaccine (OPV) plus at least one dose of IPV where OPV is included in routine

immunization and/or campaign or (ii) a sequential schedule of IPV followed by OPV, WHO and UNICEF estimates for IPV1 reflect coverage with at least one routine dose of IPV among infants <1 year of age among countries. For countries utilizing IPV containing vaccine use only, i.e., no recommended dose of OPV, the WHO and UNICEF estimate for IPV1 corresponds to coverage for the 1st dose of IPV.

Production of IPV coverage estimates, which begins in 2015, results in no change of the estimated coverage levels for the 3rd dose of polio (Pol3). For countries recommending routine immunization with a primary series of three doses of IPV alone, WHO and UNICEF estimated Pol3 coverage is equivalent to estimated coverage with three doses of IPV. For countries with a sequential schedule, estimated Pol3 coverage is based on that for the 3rd dose of polio vaccine regardless of vaccine type.

**MCV1:** percentage of surviving infants who received the 1st dose of measles containing vaccine. In countries where the national schedule recommends the 1st dose of MCV at 12 months or later based on the epidemiology of disease in the country, coverage estimates reflect the percentage of children who received the 1st dose of MCV as recommended.

**MCV2:** percentage of children who received the 2nd dose of measles containing vaccine according to the nationally recommended schedule.

**RCV1:** percentage of surviving infants who received the 1st dose of rubella containing vaccine. Coverage estimates are based on WHO and UNICEF estimates of coverage for the dose of measles containing vaccine that corresponds to the first measles-rubella combination vaccine. Nationally reported coverage of RCV is not taken into consideration nor are the data represented in the accompanying graph and data table.

**HepBB:** percentage of births which received a dose of hepatitis B vaccine within 24 hours of delivery. Estimates of hepatitis B birth dose coverage are produced only for countries with a universal birth dose policy. Estimates are not produced for countries that recommend a birth dose to infants born to HepB virus-infected mothers only or where there is insufficient information to determine whether vaccination is within 24 hours of birth.

**HepB3:** percentage of surviving infants who received the 3rd dose of hepatitis B containing vaccine following the birth dose.

**Hib3:** percentage of surviving infants who received the 3rd dose of Haemophilus influenzae type b containing vaccine.

**RotaC:** percentage of surviving infants who received the final recommended dose of rotavirus vaccine, which can be either the 2nd or the 3rd dose depending on the vaccine.

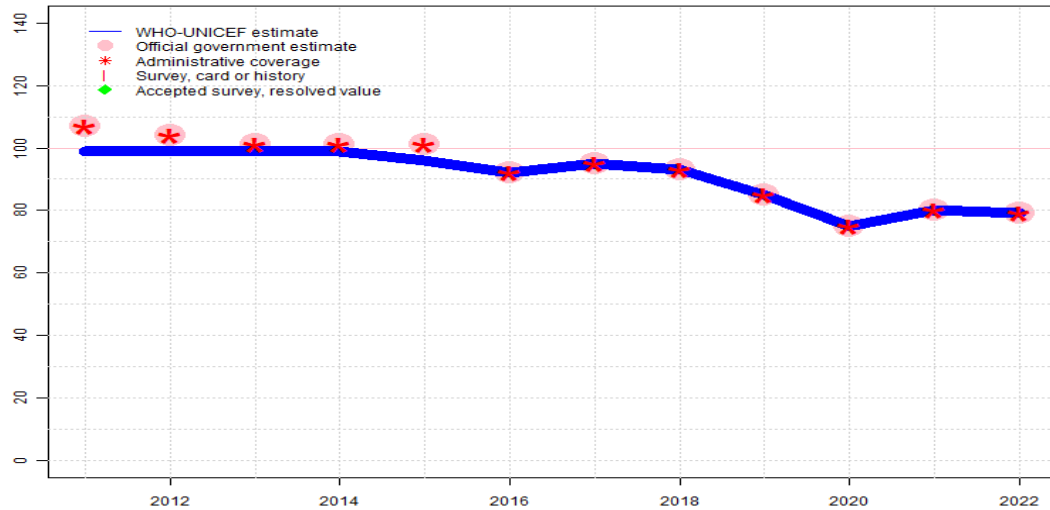
**PcV3:** percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect the percentage of surviving infants who received two doses of PcV prior to the 1st birthday.

**YFV:** percentage of surviving infants who received one dose of yellow fever vaccine in countries where YFV is part of the national immunization schedule for children or is recommended in at risk areas; coverage estimates are annualized for the entire cohort of surviving infants.

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# Argentina - BCG

ARG - BCG



## Description:

- 2022: Estimate informed by reported data. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Estimate of 80 percent changed from previous revision value of 81 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Reported data for 2017 are incomplete. GoC=R+ D+
- 2016: Estimate based on reported data. GoC=R+ D+
- 2015: Reported data calibrated to 1997 and 2016 levels. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: R-
- 2014: Reported data calibrated to 1997 and 2016 levels. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: R-
- 2013: Reported data calibrated to 1997 and 2016 levels. Consistent with other antigens, estimate follows official government estimate. Estimate challenged by: R-
- 2012: Reported data calibrated to 1997 and 2016 levels. Reported data excluded because 104 percent greater than 100 percent. Estimate challenged by: R-
- 2011: Reported data calibrated to 1997 and 2016 levels. Reported data excluded because 107 percent greater than 100 percent. Estimate challenged by: R-

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	99	99	99	99	96	92	95	93	85	75	80	79
Estimate GoC	•	•	•	•	•	••	••	••	••	••	•	•
Official	107	104	101	101	101	92	95	93	85	75	80	79
Administrative	107	104	101	101	101	92	95	93	85	75	80	79
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

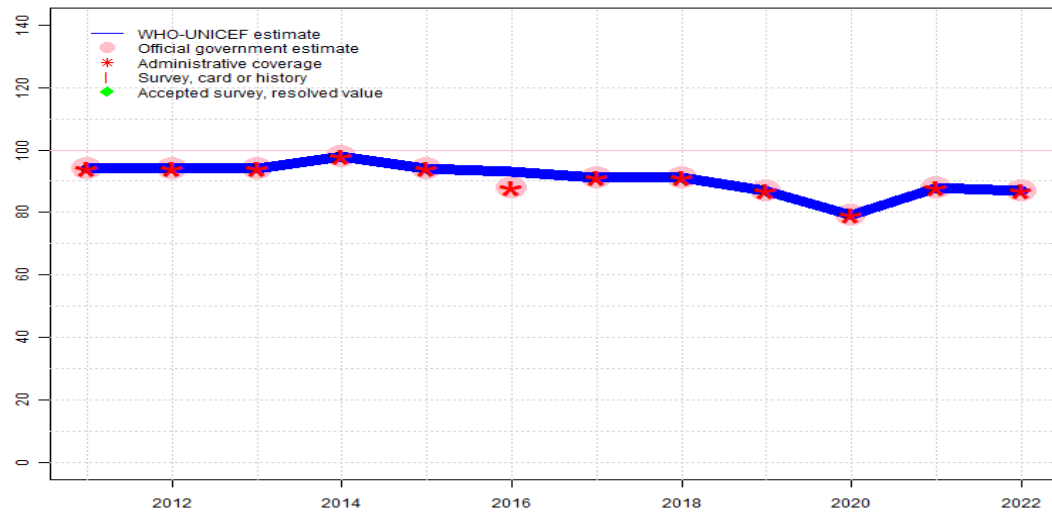
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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

# Argentina - DTP1

ARG - DTP1



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	94	94	94	98	94	93	91	91	87	79	88	87
Estimate GoC	••	••	••	••	••	•	••	••	••	••	•	•
Official	94	94	94	98	94	88	91	91	87	79	88	87
Administrative	94	94	94	98	94	88	91	91	87	79	88	87
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

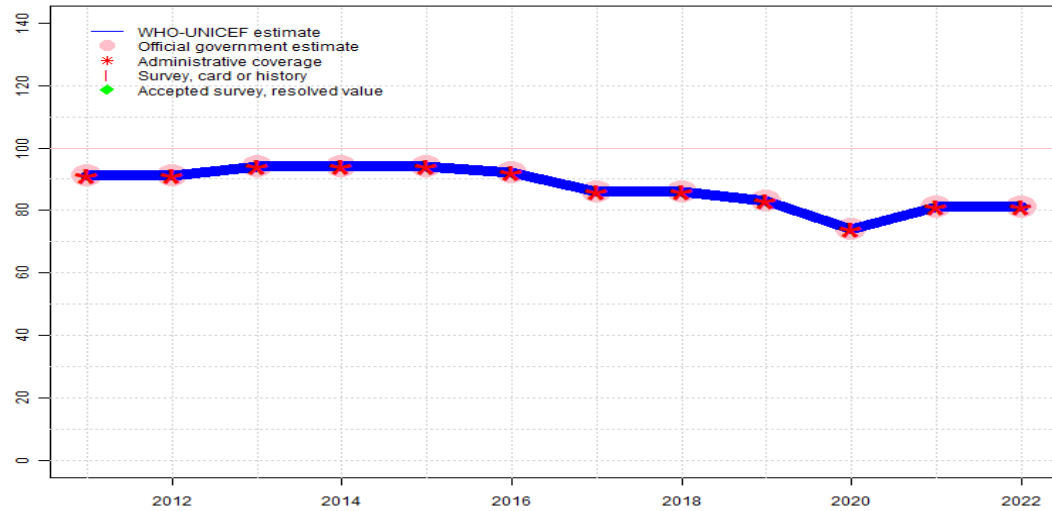
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2022: Estimate informed by reported data. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Estimate of 88 percent changed from previous revision value of 82 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Reported data for 2017 are incomplete. GoC=R+ D+
- 2016: Estimate is based on interpolation between 2015 and 2017 estimated coverage levels. Estimate challenged by: R-
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ D+
- 2012: Estimate informed by reported data. GoC=R+ D+
- 2011: Estimate informed by reported data. GoC=R+ D+

# Argentina - DTP3

ARG - DTP3



## Description:

- 2022: Estimate informed by reported data. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Estimate of 81 percent changed from previous revision value of 76 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Reported data for 2017 are incomplete. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ D+
- 2012: Estimate informed by reported data. GoC=R+ D+
- 2011: Estimate informed by reported data. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	91	91	94	94	94	92	86	86	83	74	81	81
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●	●
Official	91	91	94	94	94	92	86	86	83	74	81	81
Administrative	91	91	94	94	94	92	86	86	83	74	81	81
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

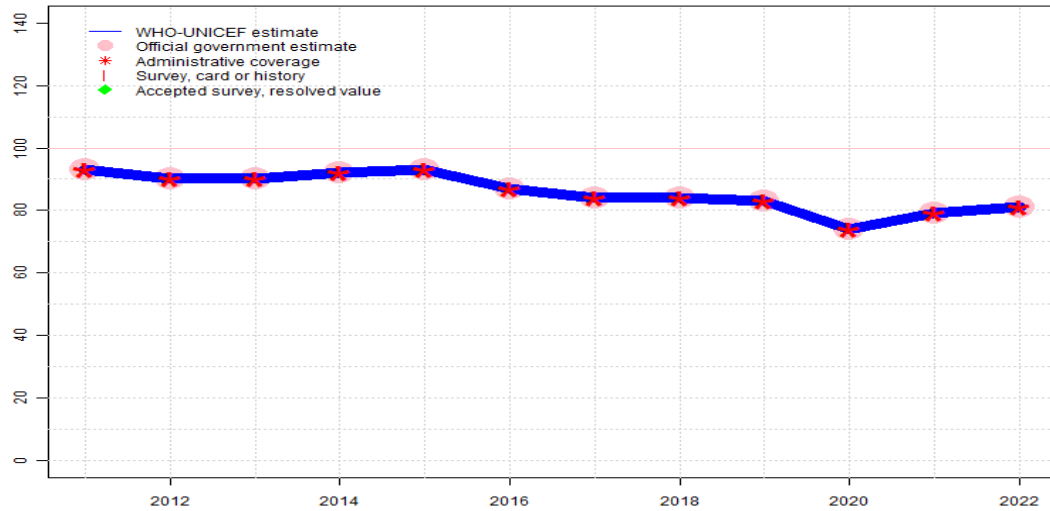
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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# Argentina - Pol3

ARG - Pol3



## Description:

- 2022: Estimate informed by reported data. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Estimate of 79 percent changed from previous revision value of 74 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Reported data for 2017 are incomplete. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ D+
- 2012: Estimate informed by reported data. GoC=R+ D+
- 2011: Estimate informed by reported data. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	93	90	90	92	93	87	84	84	83	74	79	81
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●	●
Official	93	90	90	92	93	87	84	84	83	74	79	81
Administrative	93	90	90	92	93	87	84	84	83	74	79	81
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

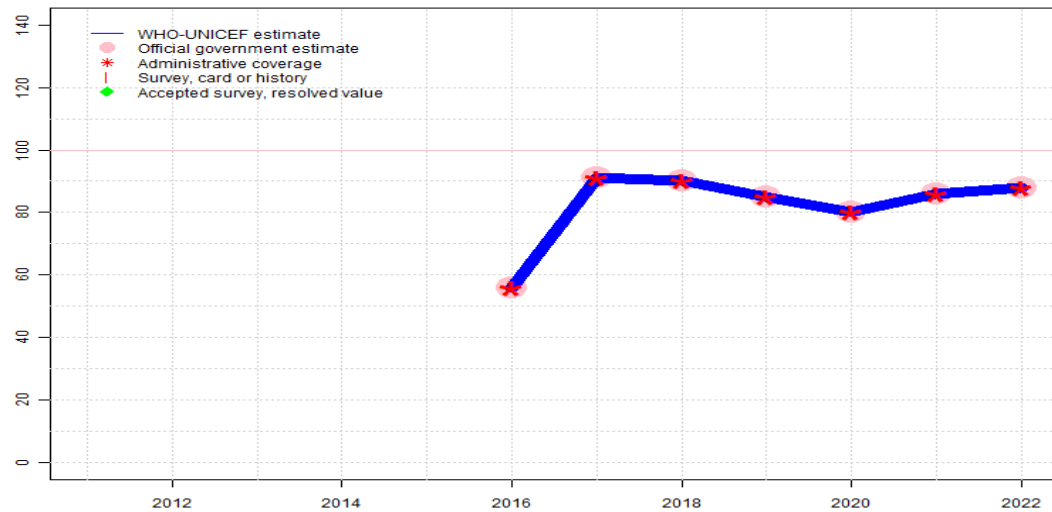
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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# Argentina - IPV1

ARG - IPV1



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	NA	56	91	90	85	80	86	88
Estimate GoC	NA	NA	NA	NA	NA	••	••	••	••	••	•	•
Official	NA	NA	NA	NA	NA	56	91	90	85	80	86	88
Administrative	NA	NA	NA	NA	NA	56	91	90	85	80	86	88
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

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

## Description:

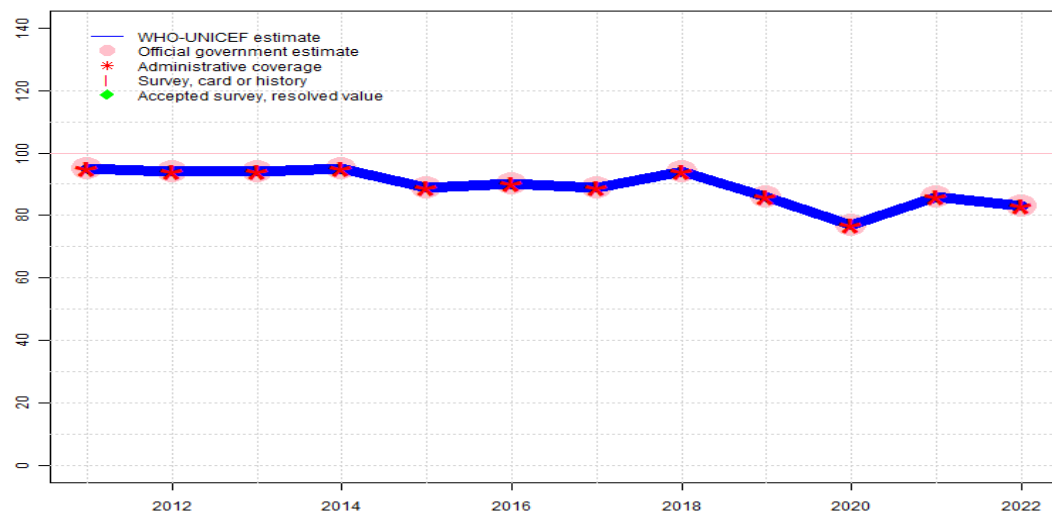
Estimates for a dose of inactivated polio vaccine (IPV) begin in 2015 following the Global Polio Eradication Initiative's Polio Eradication and Endgame Strategic Plan: 2013-2018 which recommended at least one full dose or two fractional doses of IPV into routine immunization schedules as a strategy to 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 reported data. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Estimate of 86 percent changed from previous revision value of 81 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Reported data for 2017 are incomplete.. GoC=R+ D+
- 2016: Estimate informed by reported data. Inactivated polio vaccine introduced in 2016 and recommended as a single dose antigen at two months. GoC=R+ D+



# Argentina - MCV1

ARG - MCV1



## Description:

- 2022: Estimate informed by reported data. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. GoC=R+ D+
- 2021: Estimate informed by reported data. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Estimate of 86 percent changed from previous revision value of 81 percent. GoC=R+ D+
- 2020: Estimate informed by reported data. Programme reports a two months vaccine stockout at national and subnational levels. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Reported data for 2017 are incomplete. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ D+
- 2012: Estimate informed by reported data. GoC=R+ D+
- 2011: Estimate informed by reported data. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	95	94	94	95	89	90	89	94	86	77	86	83
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Official	95	94	94	95	89	90	89	94	86	77	86	83
Administrative	95	94	94	95	89	90	89	94	86	77	86	83
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

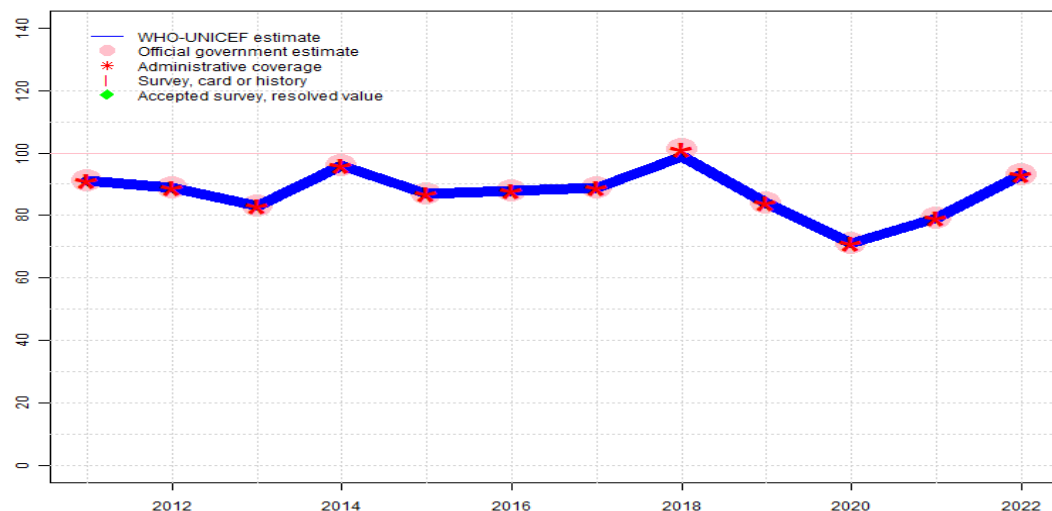
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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



# Argentina - MCV2

ARG - MCV2



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	91	89	83	96	87	88	89	99	84	71	79	93
Estimate GoC	••	••	••	••	••	••	••	•	•	•	•	•
Official	91	89	83	96	87	88	89	101	84	71	79	93
Administrative	91	89	83	96	87	88	89	101	84	71	79	93
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 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.

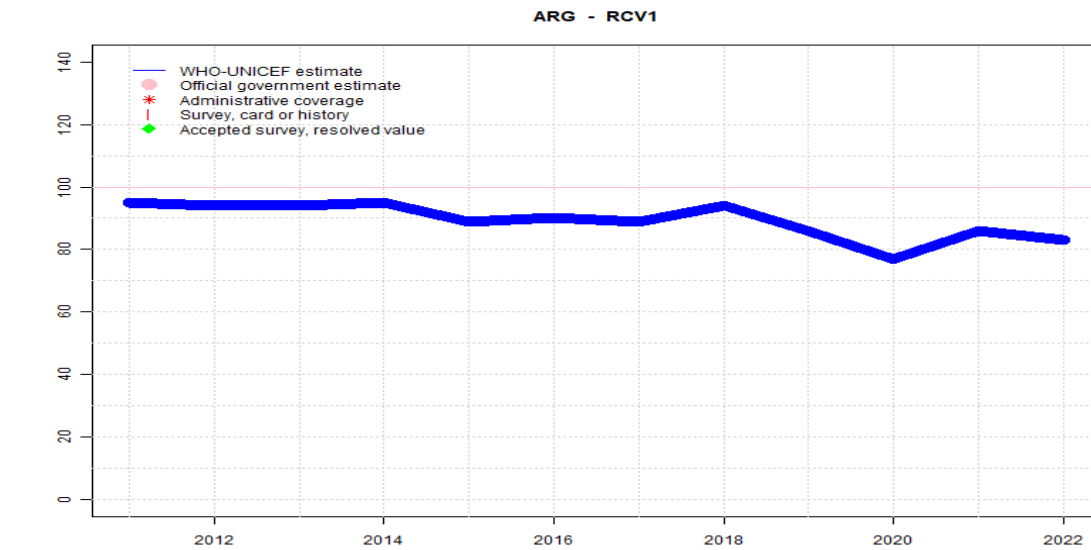
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

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

- 2022: Estimate informed by reported data. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. Reported number of doses increased 16 percent from reported levels in 2021. Programme reports nationwide measles vaccination intensification activities (among children aged 13 month to 4 years) from October 2022. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Programme reports a two months vaccine stockout at national and subnational levels. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. Estimate challenged by: D-
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate reflects trend in reported data pending documentation on the results of the measles campaign that included recording of doses administered. Reported data excluded because 101 percent greater than 100 percent. Reported data excluded due to an increase from 89 percent to 101 percent with decrease 84 percent. Estimate challenged by: D-R-
- 2017: Estimate informed by reported data. Reported data for 2017 are incomplete. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. Consistent with other antigens, estimate follows official government estimate. GoC=R+ D+
- 2012: Estimate informed by reported data. GoC=R+ D+
- 2011: Estimate informed by reported data. GoC=R+ D+

# Argentina - RCV1



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	95	94	94	95	89	90	89	94	86	77	86	83
Estimate GoC	••	••	••	••	••	••	••	••	••	••	••	••
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

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

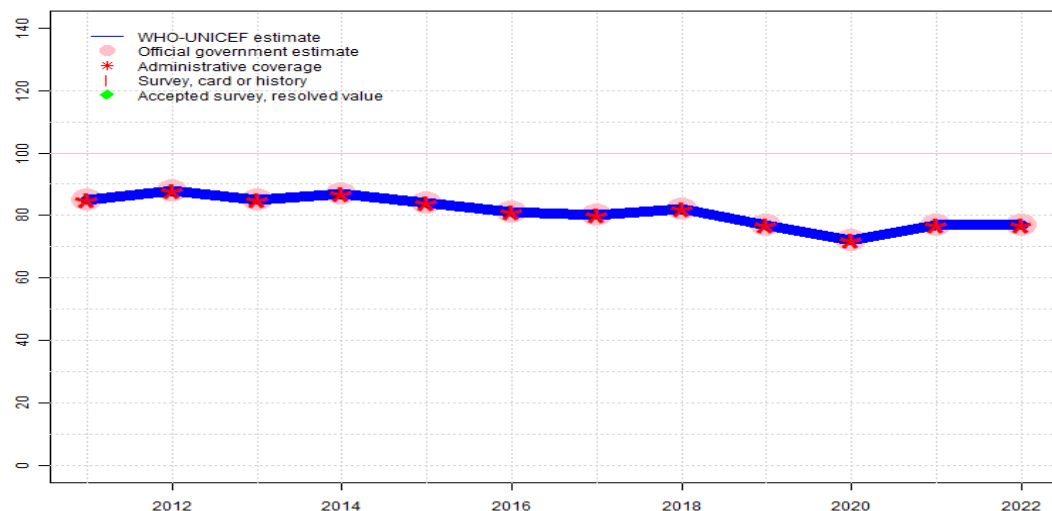
## Description:

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. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. GoC=R+ D+
- 2021: Estimate based on estimated MCV1. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Estimate of 86 percent changed from previous revision value of 81 percent. GoC=R+ D+
- 2020: Estimate based on estimated MCV1. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate based on estimated MCV1. GoC=R+ D+
- 2018: Estimate based on estimated MCV1. GoC=R+ D+
- 2017: Estimate based on estimated MCV1. Reported data for 2017 are incomplete. GoC=R+ D+
- 2016: Estimate based on estimated MCV1. GoC=R+ D+
- 2015: Estimate based on estimated MCV1. GoC=R+ D+
- 2014: Estimate based on estimated MCV1. GoC=R+ D+
- 2013: Estimate based on estimated MCV1. GoC=R+ D+
- 2012: Estimate based on estimated MCV1. GoC=R+ D+
- 2011: Estimate based on estimated MCV1. GoC=R+ D+

# Argentina - HepBB

ARG - HepBB



## Description:

- 2022: Estimate informed by reported data. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Estimate of 77 percent changed from previous revision value of 73 percent. Estimate challenged by: D-
- 2020: Estimate exceptionally based on reported data for HepB birth dose given at any time. Programme reports a two months vaccine stockout at national and subnational levels. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. Estimate challenged by: R-
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Reported data for 2017 are incomplete. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported data. Estimate challenged by: D-
- 2013: Estimate informed by reported data. Consistent with other antigens, estimate follows official government estimate. Estimate challenged by: D-
- 2012: Estimate informed by reported data. GoC=R+ D+
- 2011: Estimate informed by reported data. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	85	88	85	87	84	81	80	82	77	72	77	77
Estimate GoC	●●	●●	●	●	●●	●●	●●	●●	●●	●	●	●
Official	85	88	85	87	84	81	80	82	77	72	77	77
Administrative	85	88	85	87	84	81	80	82	77	72	77	77
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

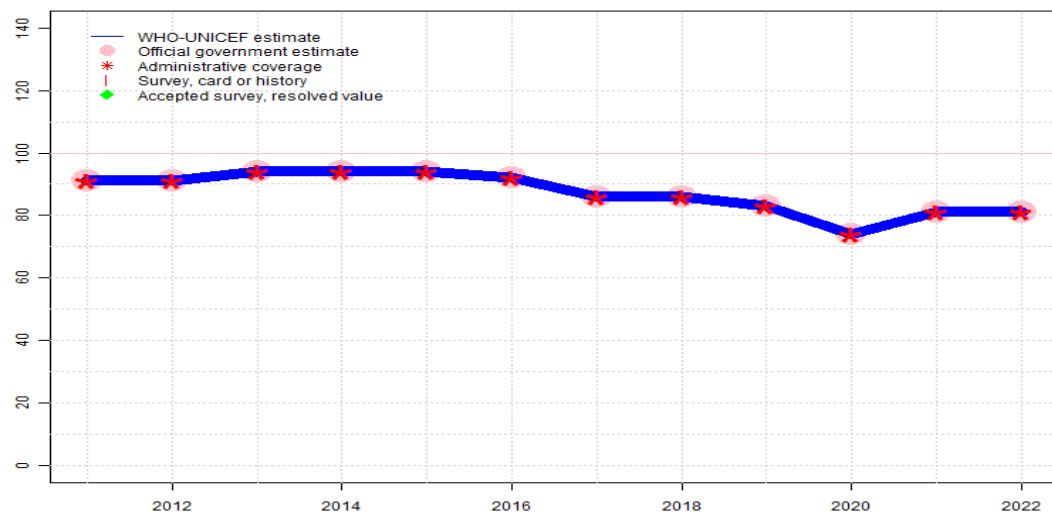
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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

# Argentina - HepB3

ARG - HepB3



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	91	91	94	94	94	92	86	86	83	74	81	81
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●	●
Official	91	91	94	94	94	92	86	86	83	74	81	81
Administrative	91	91	94	94	94	92	86	86	83	74	81	81
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

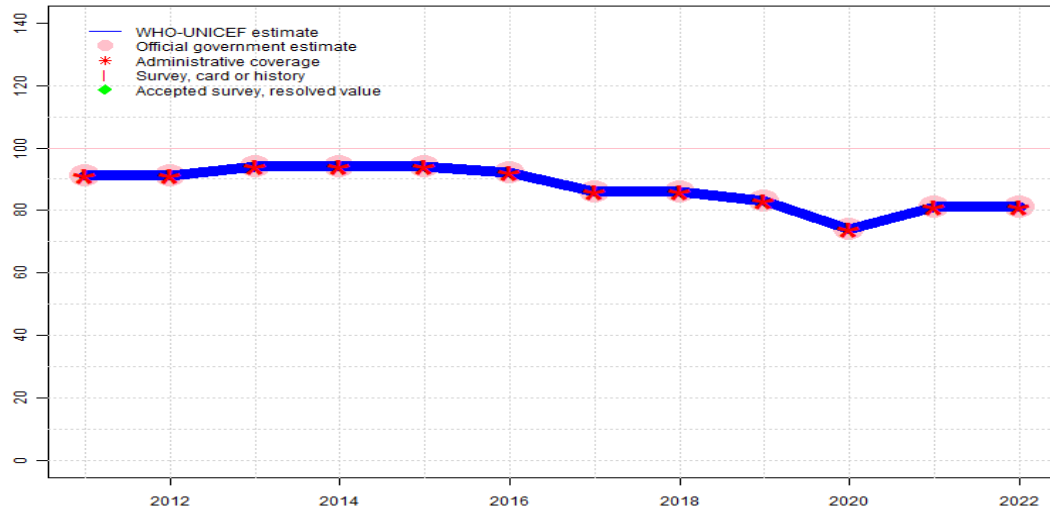
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2022: Estimate informed by reported data. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Estimate of 81 percent changed from previous revision value of 76 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Reported data for 2017 are incomplete. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ D+
- 2012: Estimate informed by reported data. GoC=R+ D+
- 2011: Estimate informed by reported data. GoC=R+ D+

# Argentina - Hib3

ARG - Hib3



## Description:

- 2022: Estimate informed by reported data. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Estimate of 81 percent changed from previous revision value of 76 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Reported data for 2017 are incomplete. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ D+
- 2012: Estimate informed by reported data. GoC=R+ D+
- 2011: Estimate informed by reported data. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	91	91	94	94	94	92	86	86	83	74	81	81
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●	●
Official	91	91	94	94	94	92	86	86	83	74	81	81
Administrative	91	91	94	94	94	92	86	86	83	74	81	81
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

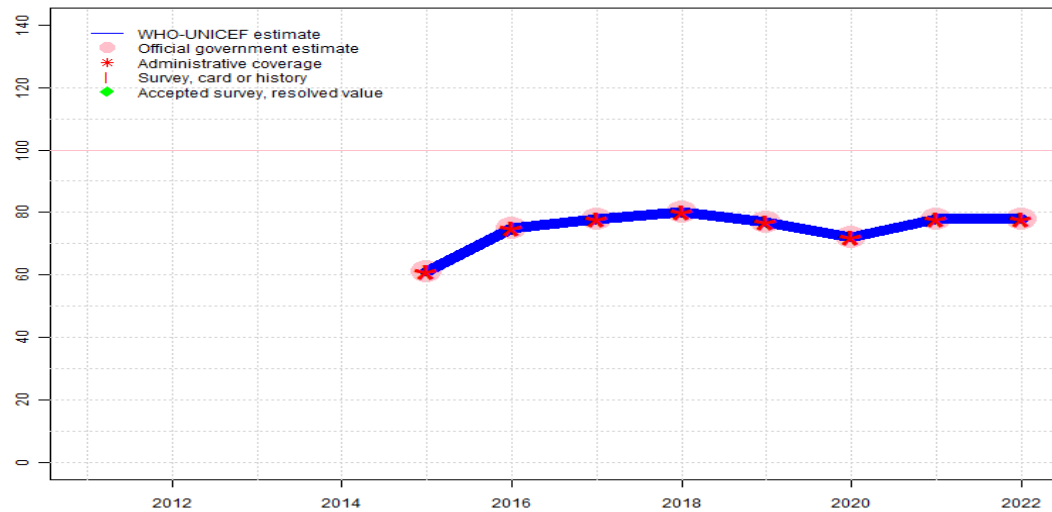
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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

# Argentina - RotaC

ARG - RotaC



## Description:

- 2022: Estimate informed by reported data. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Estimate of 78 percent changed from previous revision value of 74 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. Programme reports a two months national and district level vaccine stockout. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Reported data for 2017 are incomplete. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. Rotavirus vaccine introduced in 2015. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	61	75	78	80	77	72	78	78
Estimate GoC	NA	NA	NA	NA	●●	●●	●●	●●	●●	●●	●	●
Official	NA	NA	NA	NA	61	75	78	80	77	72	78	78
Administrative	NA	NA	NA	NA	61	75	78	80	77	72	78	78
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

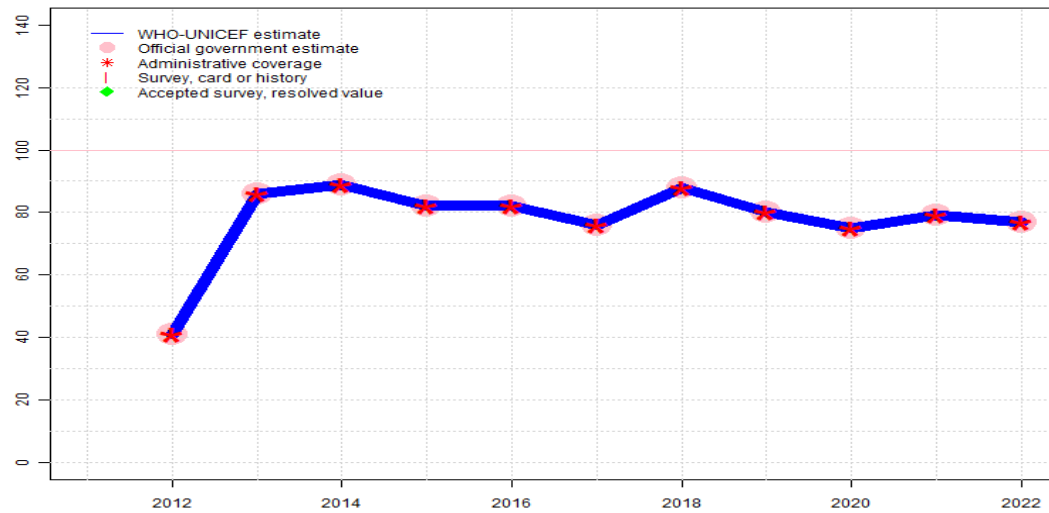
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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

# Argentina - PcV3

ARG - PcV3



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	41	86	89	82	82	76	88	80	75	79	77
Estimate GoC	NA	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Official	NA	41	86	89	82	82	76	88	80	75	79	77
Administrative	NA	41	86	89	82	82	76	88	80	75	79	77
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

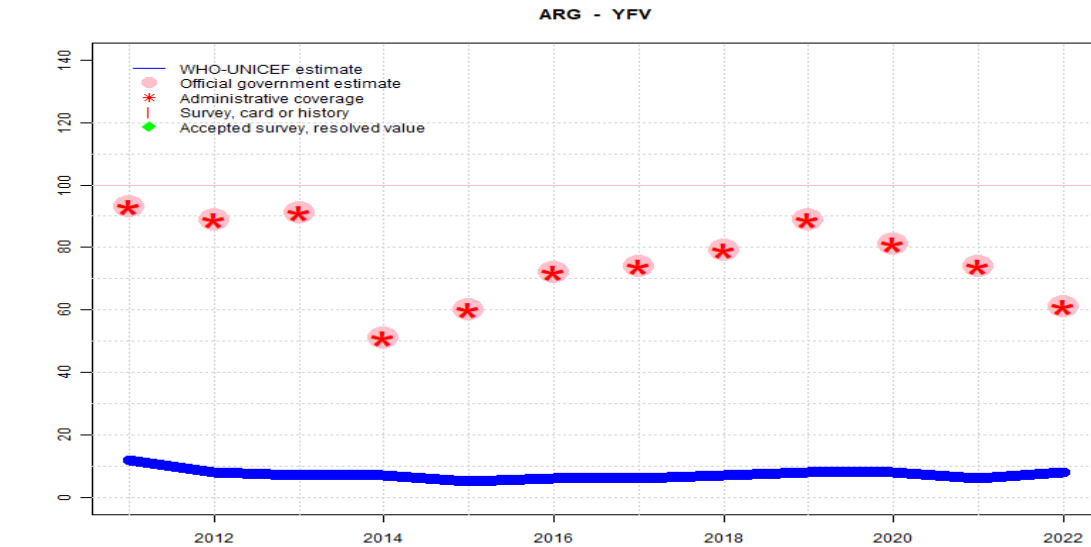
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2022: Estimate informed by reported data. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. GoC=R+ D+
- 2021: Estimate informed by reported data. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Programme reports a six month vaccine stockout at national and subnational levels. Estimate of 79 percent changed from previous revision value of 74 percent. GoC=R+ D+
- 2020: Estimate informed by reported data. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate informed by reported data. . GoC=R+ D+
- 2018: Estimate informed by reported data. . GoC=R+ D+
- 2017: Estimate informed by reported data. Reported data for 2017 are incomplete. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ D+
- 2012: Estimate informed by reported data. Pneumococcal conjugate vaccine was introduced in May 2012. GoC=R+ D+



# Argentina - YFV



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	12	8	7	7	5	6	6	7	8	8	6	8
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	93	89	91	51	60	72	74	79	89	81	74	61
Administrative	93	89	91	51	60	72	74	79	89	81	74	61
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

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

## Description:

- 2022: Programme reports 61 percent coverage achieved in 12 percent of the national target population. Estimated coverage reflects that achieved in the annual national target population. Reported data excluded due to sudden change in coverage from 74 level to 61 percent. No vaccination coverage survey in the last 5 years. WHO and UNICEF recommend an independent assessment of the reported vaccination coverage. Estimate challenged by: R-
- 2021: Programme reports 35 percent coverage achieved in 17 percent of the national target population. Estimated coverage reflects that achieved in the annual national target population. Unexplained decline in the infant target population of 15.7 percent between 2020 and 2021. Country advancing in the use of an Electronic Immunization Registry. Estimate challenged by: R-
- 2020: Programme reports 81 percent coverage achieved in ten percent of target population that resides in yellow fever endemic areas. Estimate is based on annual coverage achieved in the national target population. Data are preliminary and subject to modifications. Decline in reported coverage is unexplained by country but aligns with COVID-19 pandemic service disruptions. Estimate challenged by: R-
- 2019: Programme reports 89 percent coverage achieved in nine percent of target population that resides in yellow fever endemic areas. Estimate is based on annual coverage achieved in the national target population. Estimate challenged by: R-
- 2018: Programme reports 79 percent coverage achieved in nine percent of target population that resides in yellow fever endemic areas. Estimate is based on annual coverage achieved in the national target population. Estimate challenged by: R-
- 2017: Eight percent of surviving infants live in yellow fever endemic areas. Reported coverage of 74 percent was achieved in these areas. Estimate is based on coverage achieved in annualized national target population. Reported data for 2017 are incomplete. Estimate challenged by: R-
- 2016: Eight percent of surviving infants live in yellow fever endemic areas. Reported coverage of 72 percent was achieved in these areas. Estimate is based on coverage achieved in annualized national target population. Estimate challenged by: R-
- 2015: Eight percent of surviving infants live in yellow fever endemic areas. Reported coverage of 60 percent coverage was achieved in these areas, no other areas were targeted. Estimate is based on coverage achieved in annual national target population. Estimate challenged by: R-
- 2014: Estimate is based on extrapolation from 2013 estimate. Estimate challenged by: R-
- 2013: Eight percent of surviving infants live in yellow fever endemic areas. 91 percent coverage was achieved in these areas, no other areas were targeted. Estimate challenged by: R-
- 2012: Nine percent of surviving infants live in yellow fever endemic areas. 88 percent coverage was achieved in these areas; no other areas were targeted. Estimate challenged by: R-
- 2011: Sixteen percent of surviving infants live in yellow fever endemic areas. 87 percent coverage was achieved in these areas; no other areas were targeted. Estimate challenged by: R-

Further information and estimates for previous years are available at:

<https://data.unicef.org/topic/child-health/immunization/>

<https://immunizationdata.who.int/listing.html>