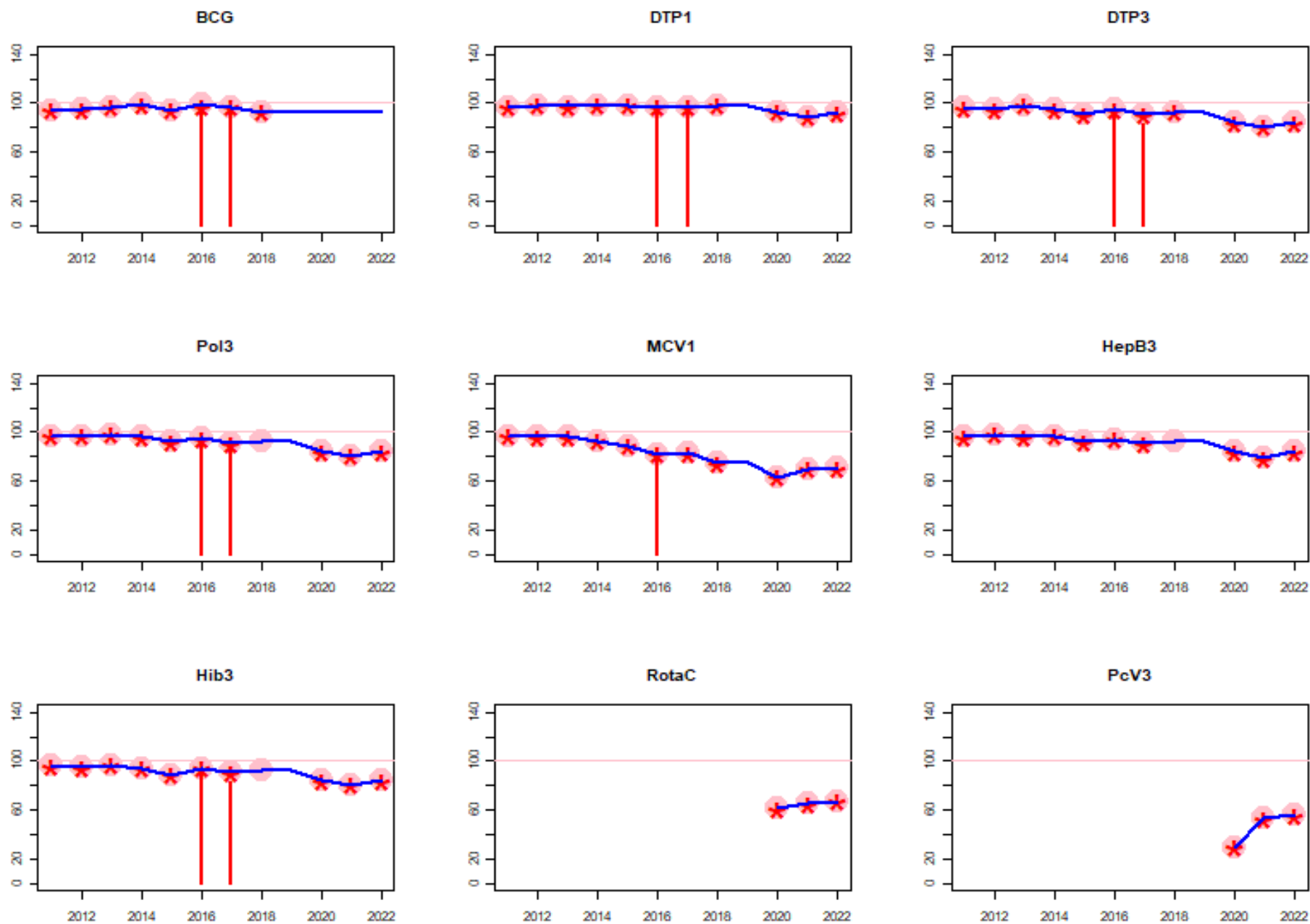


North Macedonia: WHO and UNICEF estimates of immunization coverage: 2022 revision



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

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

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

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

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

DATA SOURCES.

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

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

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

ABBREVIATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

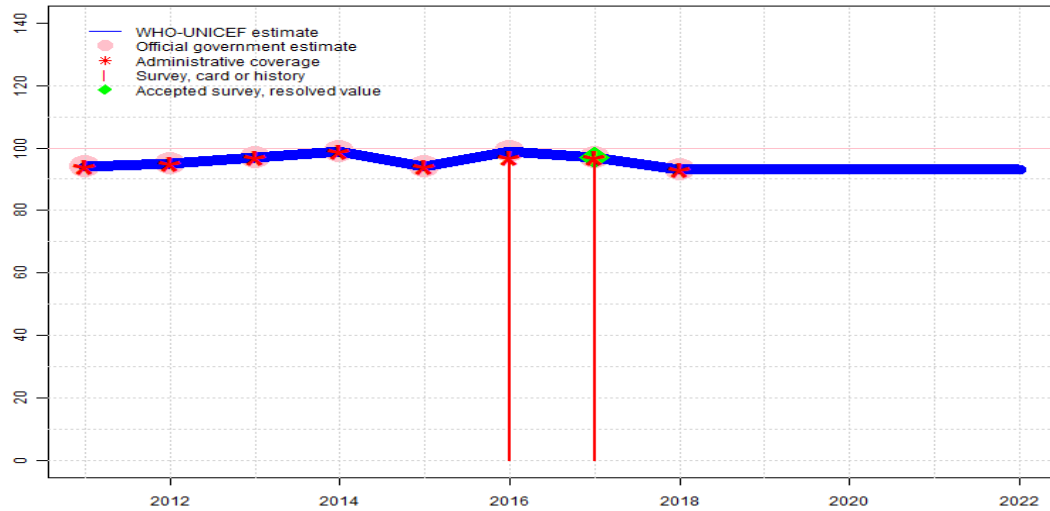
PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect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

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

Disclaimer: All reasonable precautions have been taken by the World Health Organization and United Nations Children's Fund to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization or United Nations Children's Fund be liable for damages arising from its use.

North Macedonia - BCG

MKD - BCG



Description:

- 2022: Estimate based on extrapolation from data reported by national government. GoC=No accepted empirical data
- 2021: Estimate based on extrapolation from data reported by national government. GoC=No accepted empirical data
- 2020: Estimate based on extrapolation from data reported by national government. Decline in reported coverage for most vaccine doses is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=No accepted empirical data
- 2019: Estimate is based on 2018 estimates as no reporting for 2019. GoC=Assigned by working group. No empirical data reported.
- 2018: Estimate informed by reported data. GoC=R+ S+ D+
- 2017: Estimate informed by reported data supported by survey. Survey evidence of 97 percent based on 1 survey(s). GoC=R+ S+ D+
- 2016: Estimate informed by reported data. Survey results ignored. Sample size 265 less than 300. Programme reports one month vaccine shortage. GoC=R+ S+ D+
- 2015: Estimate informed by reported data. GoC=R+ S+ 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	94	95	97	99	94	99	97	93	93	93	93	93
Estimate GoC	●●	●●	●●	●●	●●●	●●●	●●●	●●●	●	●	●	●
Official	94	95	97	99	94	99	97	93	NA	NA	NA	NA
Administrative	94	95	97	99	94	97	97	93	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	96.4	96.8	NA	NA	NA	NA	NA

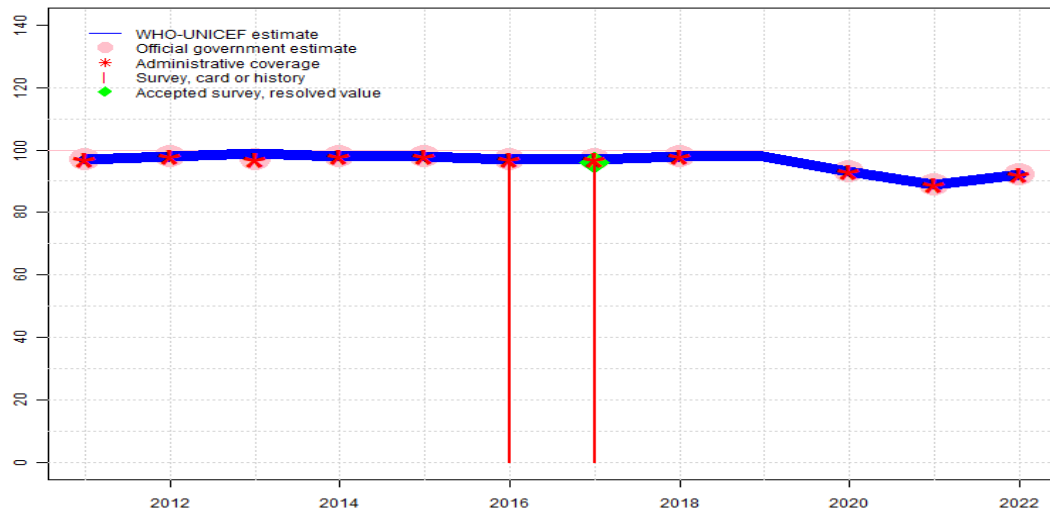
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

North Macedonia - DTP1

MKD - DTP1



Description:

- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. GoC=R+ D+
- 2020: Estimate informed by reported data. Decline in reported coverage for most vaccine doses is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate is based on 2018 estimates as no reporting for 2019. GoC=Assigned by working group. No empirical data reported.
- 2018: Estimate informed by reported data. GoC=R+ S+ D+
- 2017: Estimate informed by reported data supported by survey. Survey evidence of 96 percent based on 1 survey(s). GoC=R+ S+ D+
- 2016: Estimate informed by reported data. Survey results ignored. Sample size 265 less than 300. GoC=R+ S+ D+
- 2015: Estimate informed by reported data. GoC=R+ S+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: DTP1 coverage estimated based on DTP3 coverage of 98. Estimate challenged by: R-
- 2012: Estimate informed by reported data. GoC=R+
- 2011: Estimate informed by reported data. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	97	98	99	98	98	97	97	98	98	93	89	92
Estimate GoC	●●	●●	●	●●	●●●	●●●	●●●	●●●	●	●●	●●	●●
Official	97	98	97	98	98	97	97	98	NA	93	89	92
Administrative	97	98	97	98	98	97	97	98	NA	93	89	92
Survey	NA	NA	NA	NA	NA	98.3	95.6	NA	NA	NA	NA	NA

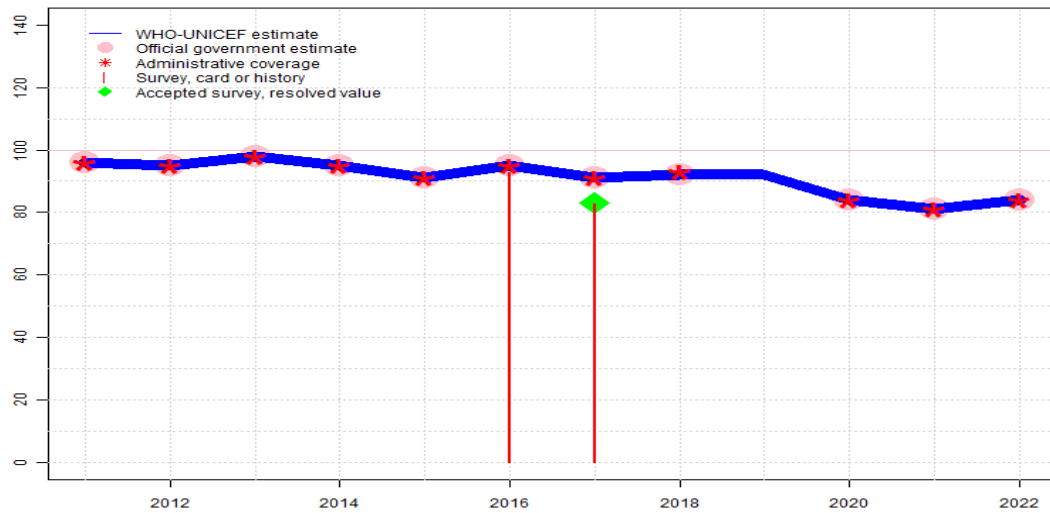
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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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North Macedonia - DTP3

MKD - DTP3



Description:

- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. GoC=R+ D+
- 2020: Estimate informed by reported data. Decline in reported coverage for most vaccine doses is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate is based on 2018 estimates as no reporting for 2019. GoC=Assigned by working group. No empirical data reported.
- 2018: Estimate informed by reported data. GoC=R+ S+ D+
- 2017: Estimate informed by reported data supported by survey. Survey evidence of 83 percent based on 1 survey(s). North Macedonia Multiple Indicator Cluster Survey 2018-2019 card or history results of 83 percent modified for recall bias to 83 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 96 percent and 3rd dose card only coverage of 83 percent. GoC=R+ S+ D+
- 2016: Estimate informed by reported data. Survey results ignored. Sample size 265 less than 300. North Macedonia Multiple Indicator Cluster Survey 2018-2019 card or history results of 93 percent modified for recall bias to 93 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 98 percent and 3rd dose card only coverage of 93 percent. Estimate challenged by: S-
- 2015: Estimate informed by reported data. GoC=R+ S+ 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+
- 2011: Estimate informed by reported data. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	96	95	98	95	91	95	91	92		84	81	84
Estimate GoC	●●	●●	●●	●●	●●●	●	●●●	●●●	●	●●	●●	●●
Official	96	95	98	95	91	95	91	92	NA	84	81	84
Administrative	96	95	98	95	91	95	91	93	NA	84	81	84
Survey	NA	NA	NA	NA	NA	92.7	82.7	NA	NA	NA	NA	NA

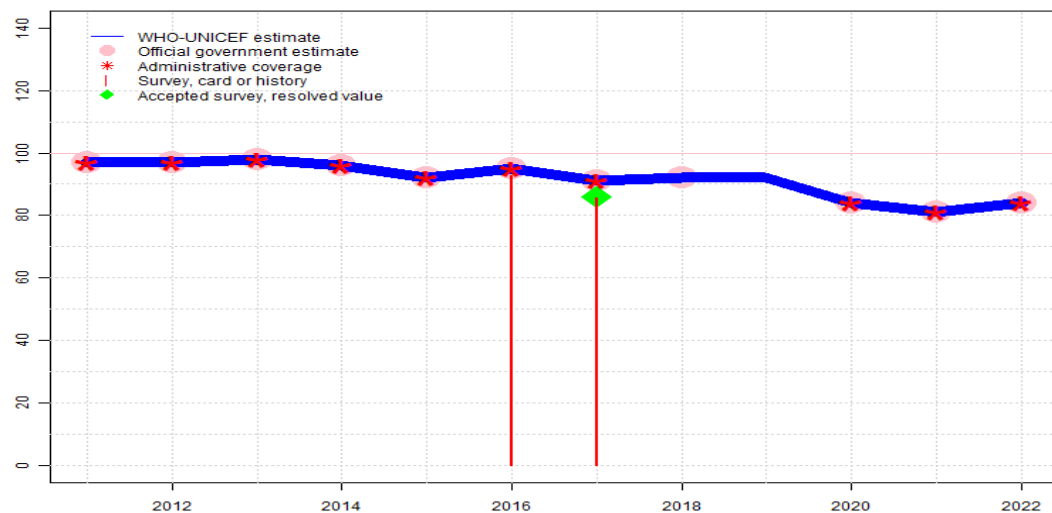
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

North Macedonia - Pol3

MKD - Pol3



Description:

- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. GoC=R+ D+
- 2020: Estimate informed by reported data. Decline in reported coverage for most vaccine doses is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate is based on 2018 estimates as no reporting for 2019. GoC=Assigned by working group. No empirical data reported.
- 2018: Estimate informed by reported data. GoC=R+ S+
- 2017: Estimate informed by reported data supported by survey. Survey evidence of 86 percent based on 1 survey(s). North Macedonia Multiple Indicator Cluster Survey 2018-2019 card or history results of 86 percent modified for recall bias to 86 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 96 percent and 3rd dose card only coverage of 86 percent. Country reports one month stockout of OPV. GoC=R+ S+ D+
- 2016: Estimate informed by reported data. Survey results ignored. Sample size 265 less than 300. North Macedonia Multiple Indicator Cluster Survey 2018-2019 card or history results of 93 percent modified for recall bias to 93 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 98 percent and 3rd dose card only coverage of 93 percent. GoC=R+ S+ D+
- 2015: Estimate informed by reported data. GoC=R+ S+ 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+
- 2011: Estimate informed by reported data. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	97	97	98	96	92	95	91	92	NA	84	81	84
Estimate GoC	●●	●●	●●	●●	●●●	●●●	●●●	●●	●	●●	●●	●●
Official	97	97	98	96	92	95	91	92	NA	84	81	84
Administrative	97	97	98	96	92	95	91	NA	NA	84	81	84
Survey	NA	NA	NA	NA	NA	92.7	85.7	NA	NA	NA	NA	NA

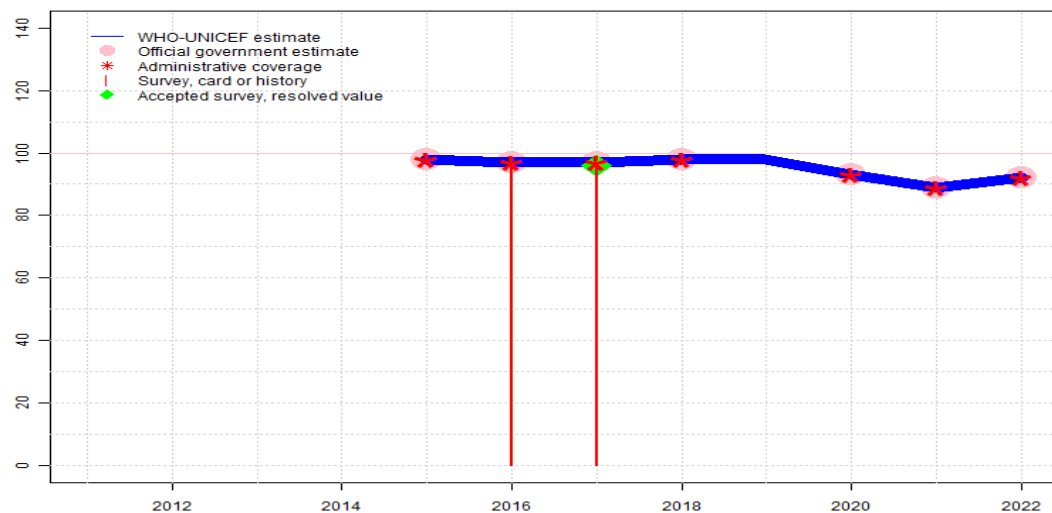
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

North Macedonia - IPV1

MKD - IPV1



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	98	97	97	98	98	93	89	92
Estimate GoC	NA	NA	NA	NA	●●●	●●●	●●●	●●●	●	●●	●●	●●
Official	NA	NA	NA	NA	98	97	97	98	NA	93	89	92
Administrative	NA	NA	NA	NA	98	97	97	98	NA	93	89	92
Survey	NA	NA	NA	NA	NA	98.3	95.9	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. GoC=R+ D+

2021: Estimate informed by reported data. GoC=R+ D+

2020: Estimate informed by reported data. Decline in reported coverage for most vaccine doses is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+

2019: Estimate is based on 2018 estimates as no reporting for 2019. GoC=Assigned by working group. No empirical data reported.

2018: Estimate informed by reported data. GoC=R+ S+ D+

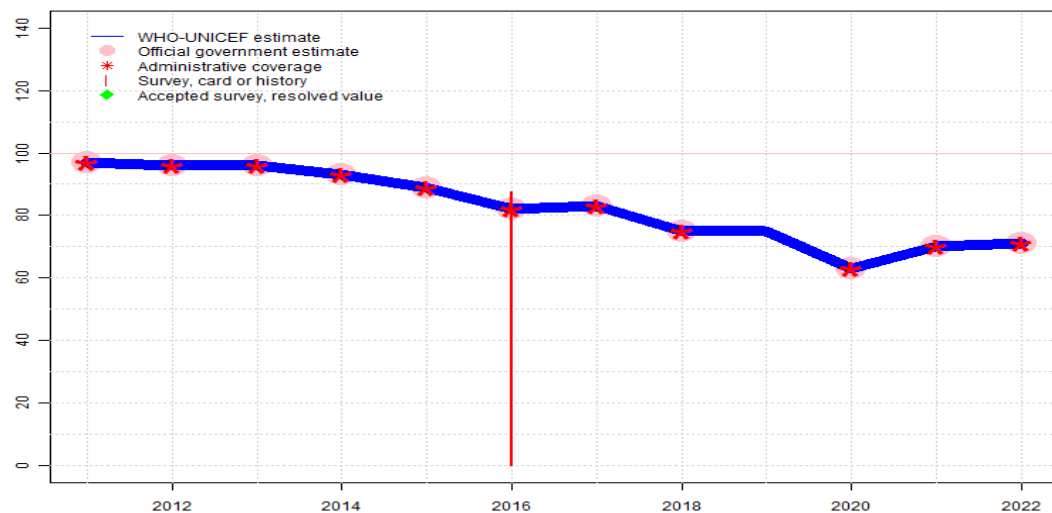
2017: Estimate informed by reported data supported by survey. Survey evidence of 96 percent based on 1 survey(s). GoC=R+ S+ D+

2016: Estimate informed by reported data. Survey results ignored. Sample size 265 less than 300. GoC=R+ S+ D+

2015: Estimate informed by reported data. Inactivated polio vaccine introduced as DTaP-Hib-IPV and DTaP-Hib-IPV-HepB in 2015 GoC=R+ S+ D+

North Macedonia - MCV1

MKD - MCV1



Description:

- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. GoC=R+ D+
- 2020: Estimate informed by reported data. Decline in reported coverage for most vaccine doses is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate is based on 2018 estimates as no reporting for 2019. GoC=Assigned by working group. No empirical data reported.
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Survey results ignored. Sample size 265 less than 300. 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+
- 2011: Estimate informed by reported data. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	97	96	96	93	89	82	83	75	75	63	70	71
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●	●●	●●	●●
Official	97	96	96	93	89	82	83	75	NA	63	70	71
Administrative	97	96	96	93	89	82	83	75	NA	63	70	71
Survey	NA	NA	NA	NA	NA	87.5	NA	NA	NA	NA	NA	NA

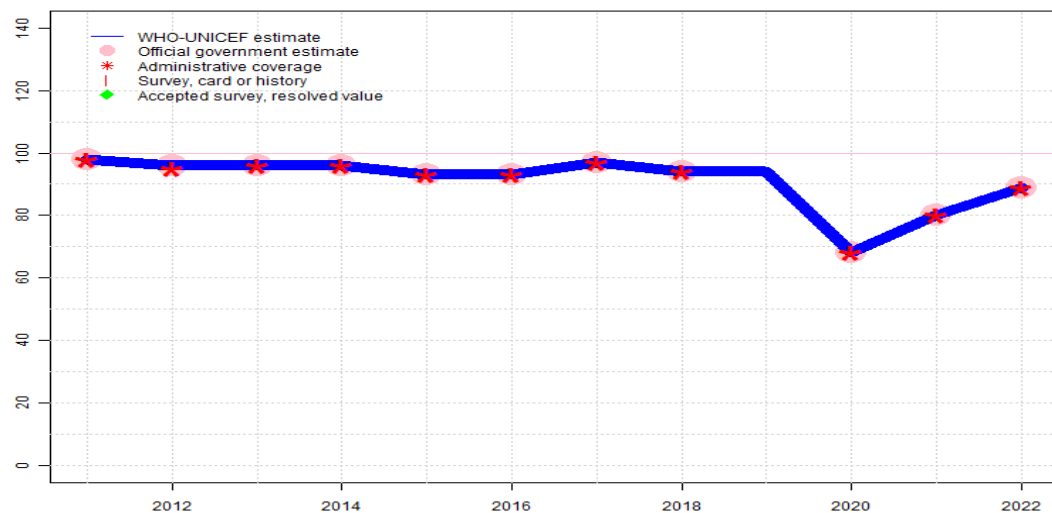
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- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While 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.

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.

North Macedonia - MCV2

MKD - MCV2



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. Estimate challenged by: D-
- 2021: Estimate informed by reported data. . Estimate challenged by: D-
- 2020: Estimate informed by reported data. Decline in reported coverage for most vaccine doses is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate is based on 2018 estimates as no reporting for 2019. GoC=Assigned by working group. No empirical data reported.
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. 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	98	96	96	96	93	93	97	94	94	68	80	89
Estimate GoC	••	••	••	••	••	••	••	••	•	••	•	•
Official	98	96	96	96	93	93	97	94	NA	68	80	89
Administrative	98	95	96	96	93	93	97	94	NA	68	80	89
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

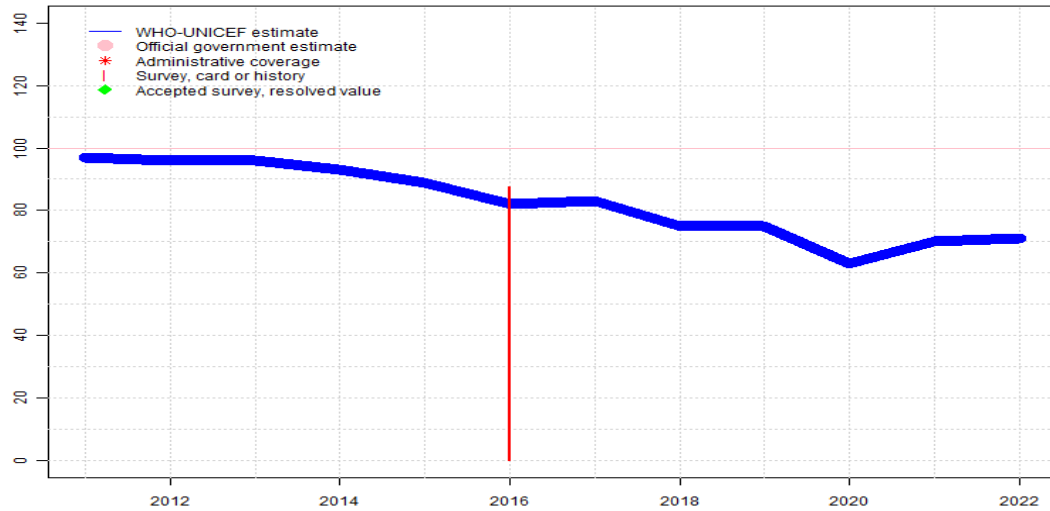
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

North Macedonia - RCV1

MKD - RCV1



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	97	96	96	93	89	82	83	75	75	63	70	71
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	87.5	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. GoC=R+ D+

2021: Estimate based on estimated MCV1. GoC=R+ D+

2020: Estimate based on estimated MCV1. Decline in reported coverage for most vaccine doses is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+

2019: Estimate is based on 2018 estimates as no reporting for 2019. GoC=Assigned by working group. No empirical data reported.

2018: Estimate based on estimated MCV1. GoC=R+ D+

2017: Estimate based on estimated MCV1. GoC=R+ D+

2016: Estimate based on estimated MCV1. Survey results ignored. Sample size 265 less than 300. GoC=R+ D+

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

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

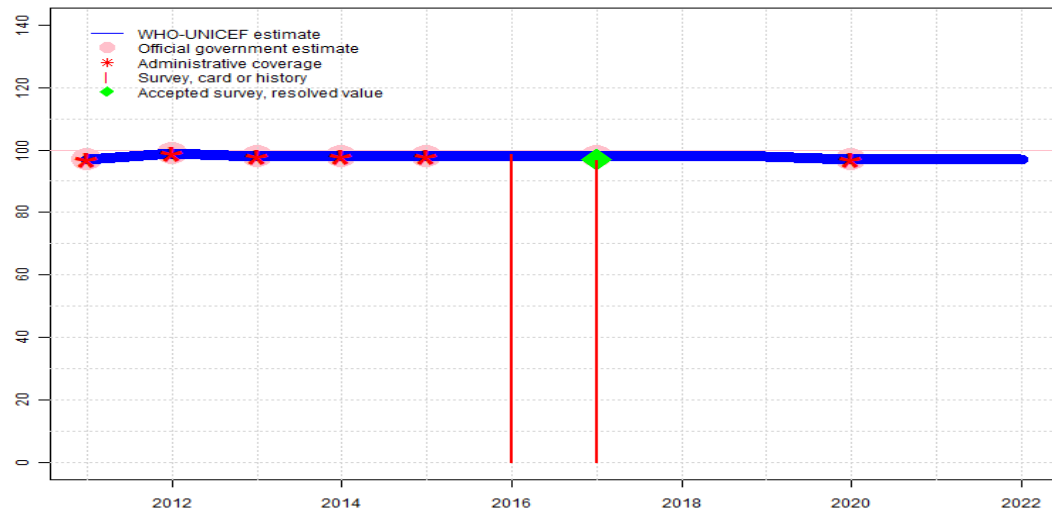
2013: Estimate based on estimated MCV1. GoC=R+ D+

2012: Estimate based on estimated MCV1. GoC=R+

2011: Estimate based on estimated MCV1. GoC=R+ D+

North Macedonia - HepBB

MKD - HepBB



Description:

- 2022: Estimate based on extrapolation from data reported by national government. GoC=No accepted empirical data
- 2021: Estimate based on extrapolation from data reported by national government. Programme reports six month vaccine stockout at national level. GoC=No accepted empirical data
- 2020: Estimate informed by reported data. Estimate challenged by: D-
- 2019: Estimate is based on 2018 estimates as no reporting for 2019. GoC=Assigned by working group. No empirical data reported.
- 2018: Estimate informed by interpolation between reported data. GoC=S+
- 2017: Estimate informed by reported data supported by survey. Survey evidence of 97 percent based on 1 survey(s). GoC=R+ S+
- 2016: Estimate informed by interpolation between reported data. Survey results ignored. Sample size 265 less than 300. GoC=S+
- 2015: Estimate informed by reported data. GoC=R+ S+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+
- 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	97	99	98	98	98	98	98	98	98	97	97	97
Estimate GoC	●●	●●	●●	●●	●●●	●●	●●	●●	●	●	●	●
Official	97	99	98	98	98	NA	98	NA	NA	97	NA	NA
Administrative	97	99	98	98	98	NA	NA	NA	NA	97	NA	NA
Survey	NA	NA	NA	NA	NA	98.6	96.6	NA	NA	NA	NA	NA

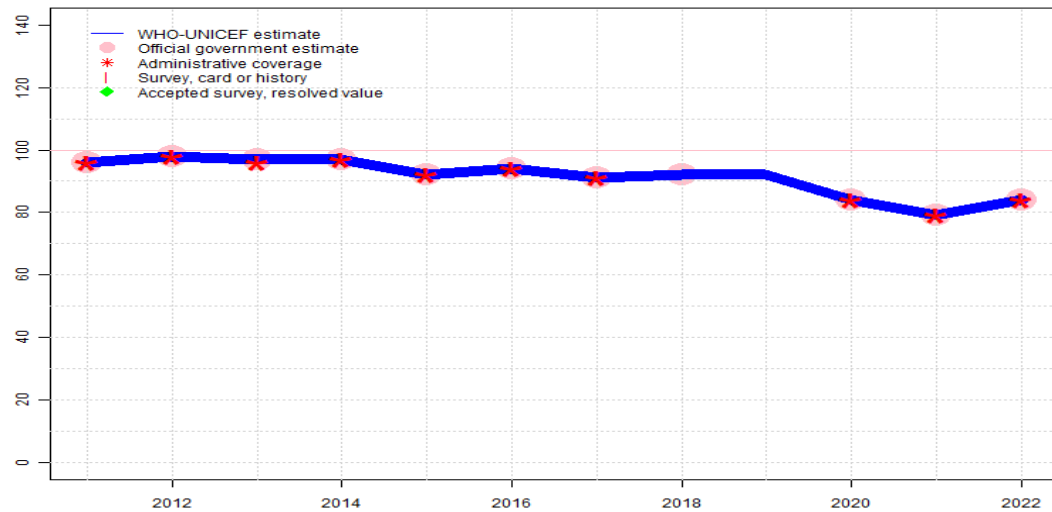
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

North Macedonia - HepB3

MKD - HepB3



Description:

- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. GoC=R+ D+
- 2020: Estimate informed by reported data. Decline in reported coverage for most vaccine doses is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate is based on 2018 estimates as no reporting for 2019. GoC=Assigned by working group. No empirical data reported.
- 2018: Estimate informed by reported data. GoC=R+
- 2017: Estimate informed by reported data. 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+
- 2011: Estimate informed by reported data. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	96	98	97	97	92	94	91	92	92	84	79	84
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●	●●	●●	●●
Official	96	98	97	97	92	94	91	92	NA	84	79	84
Administrative	96	98	96	97	92	94	91	NA	NA	84	79	84
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

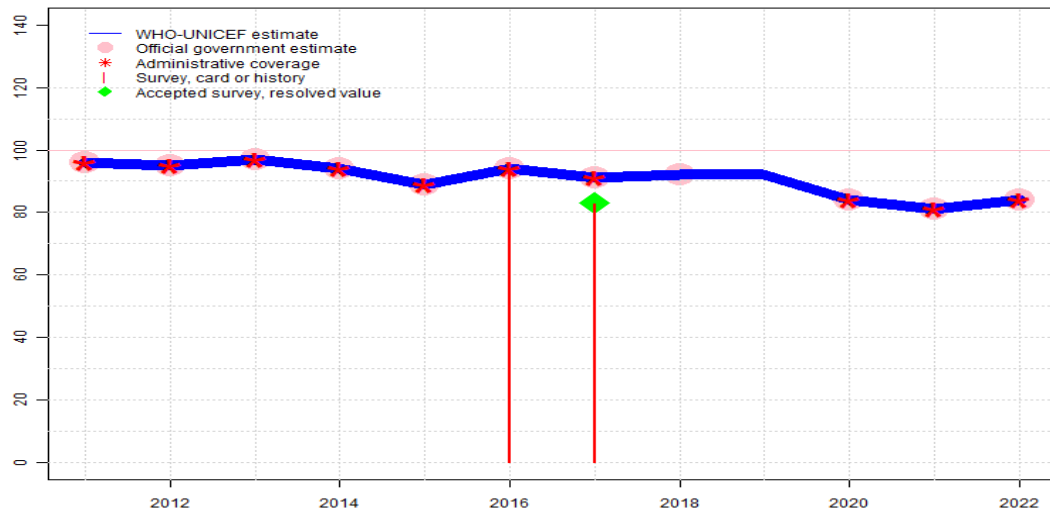
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

North Macedonia - Hib3

MKD - Hib3



Description:

- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. GoC=R+ D+
- 2020: Estimate informed by reported data. Decline in reported coverage for most vaccine doses is unexplained by country but aligns with COVID-19 pandemic service disruptions. GoC=R+ D+
- 2019: Estimate is based on 2018 estimates as no reporting for 2019. GoC=Assigned by working group. No empirical data reported.
- 2018: Estimate informed by reported data. GoC=R+ S+
- 2017: Estimate informed by reported data supported by survey. Survey evidence of 83 percent based on 1 survey(s). North Macedonia Multiple Indicator Cluster Survey 2018-2019 card or history results of 83 percent modified for recall bias to 83 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 95 percent and 3rd dose card only coverage of 83 percent. GoC=R+ S+ D+
- 2016: Estimate informed by reported data. Survey results ignored. Sample size 265 less than 300. North Macedonia Multiple Indicator Cluster Survey 2018-2019 card or history results of 93 percent modified for recall bias to 93 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 98 percent and 3rd dose card only coverage of 93 percent. Estimate challenged by: S-
- 2015: Estimate informed by reported data. Estimate challenged by: 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+
- 2011: Estimate informed by reported data. GoC=R+ D+

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	96	95	97	94	89	94	91	92	NA	84	81	84
Estimate GoC	●●	●●	●●	●●	●	●	●●●	●●	●	●●	●●	●●
Official	96	95	97	94	89	94	91	92	NA	84	81	84
Administrative	96	95	97	94	89	94	91	NA	NA	84	81	84
Survey	NA	NA	NA	NA	NA	92.7	82.7	NA	NA	NA	NA	NA

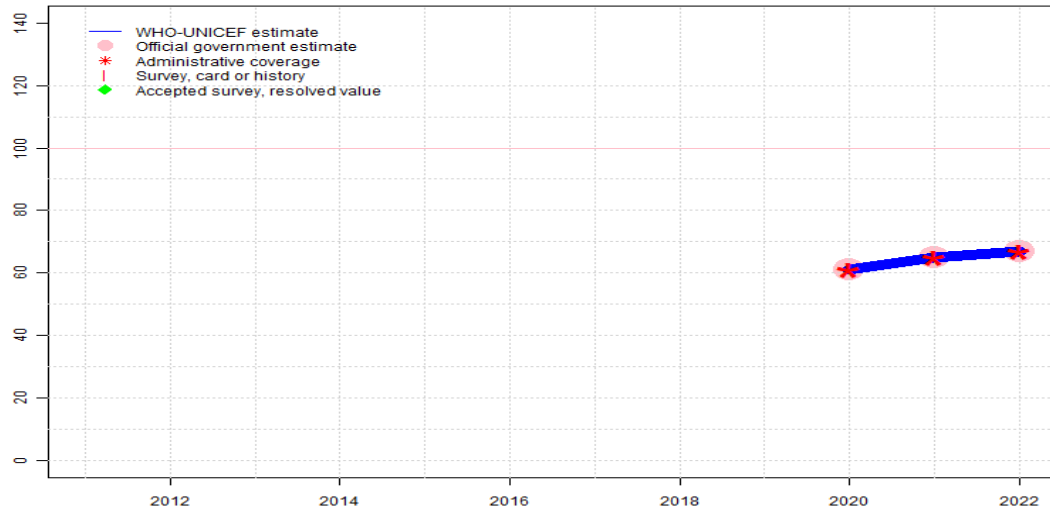
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

North Macedonia - RotaC

MKD - RotaC



Description:

2022: Estimate informed by reported data. Estimate challenged by: D-
 2021: Estimate informed by reported data. Estimate challenged by: D-
 2020: Estimate informed by reported data. Vaccine introduced in 2019. Reporting started for 2020. Vaccine is recommended for administration at 2m / 4m / 12m. Estimate challenged by: D-

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	61	65	67
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	●	●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	61	65	67
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	61	65	67
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

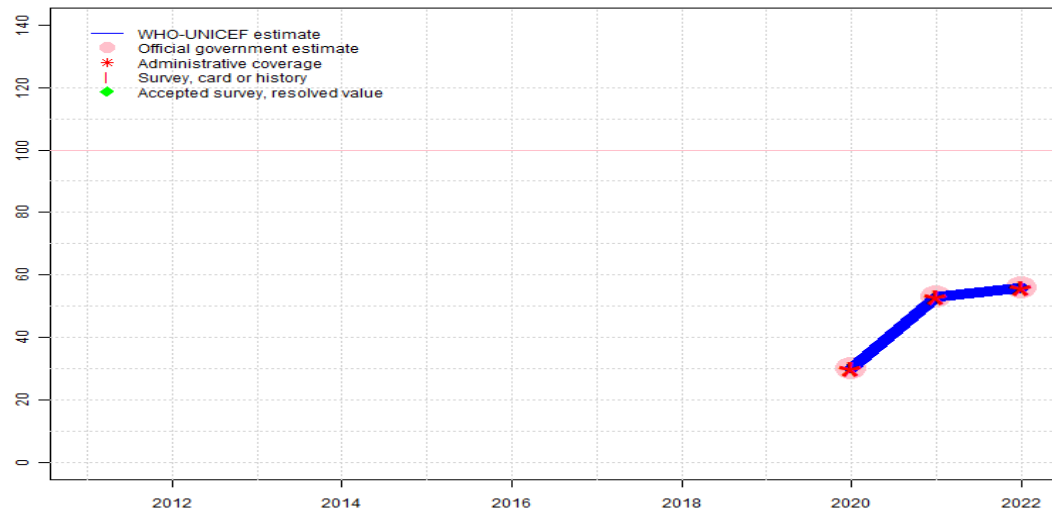
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

North Macedonia - PcV3

MKD - PcV3



Description:

2022: Estimate informed by reported data. Reported coverage reflects that for the 12 m dose. Reported coverage for the 2nd dose recommended at 4 m is 79 percent. GoC=R+ D+

2021: Estimate informed by reported data. Reported coverage reflects that for the 12 m dose. Reported coverage for the 2nd dose recommended at 4 m is 78 percent. Estimate challenged by: D-

2020: Estimate informed by reported data. Vaccine introduced in 2019. Reporting started for 2020. Reported coverage reflects that for the 12 m dose. Reported coverage for the 2nd dose recommended at 4 m is 75 percent. Estimate challenged by: D-

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	30	53	56
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	•	••
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	30	53	56
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	30	53	56
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.

North Macedonia - survey details

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.

2017 North Macedonia Multiple Indicator Cluster Survey 2018-2019

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	96.4	12-23 m	317	92
BCG	Card	96.8	12-23 m	317	92
BCG	Card or History	96.8	12-23 m	317	92
BCG	History	0	12-23 m	317	92
DTP1	C or H <12 months	94.6	12-23 m	317	92
DTP1	Card	95.6	12-23 m	317	92
DTP1	Card or History	95.6	12-23 m	317	92
DTP1	History	0	12-23 m	317	92
DTP3	C or H <12 months	75.3	12-23 m	317	92
DTP3	Card	82.7	12-23 m	317	92
DTP3	Card or History	82.7	12-23 m	317	92
DTP3	History	0	12-23 m	317	92
HepB1	C or H <12 months	91.4	12-23 m	317	92
HepB1	Card	92.7	12-23 m	317	92
HepB1	Card or History	92.7	12-23 m	317	92
HepB1	History	0	12-23 m	317	92
HepBB	C or H <12 months	96.6	12-23 m	317	92
HepBB	Card	96.6	12-23 m	317	92
HepBB	Card or History	96.6	12-23 m	317	92
HepBB	History	0	12-23 m	317	92
Hib1	C or H <12 months	94.6	12-23 m	317	92
Hib1	Card	95.3	12-23 m	317	92
Hib1	Card or History	95.3	12-23 m	317	92
Hib1	History	0	12-23 m	317	92

Hib3	C or H <12 months	75.4	12-23 m	317	92
Hib3	Card	82.7	12-23 m	317	92
Hib3	Card or History	82.7	12-23 m	317	92
Hib3	History	0	12-23 m	317	92
IPV1	C or H <12 months	94.9	12-23 m	317	92
IPV1	Card	95.6	12-23 m	317	92
IPV1	Card or History	95.9	12-23 m	317	92
IPV1	History	0.3	12-23 m	317	92
Pol1	C or H <12 months	94.9	12-23 m	317	92
Pol1	Card	95.6	12-23 m	317	92
Pol1	Card or History	95.9	12-23 m	317	92
Pol1	History	0.3	12-23 m	317	92
Pol3	C or H <12 months	77.5	12-23 m	317	92
Pol3	Card	85.5	12-23 m	317	92
Pol3	Card or History	85.7	12-23 m	317	92
Pol3	History	0.3	12-23 m	317	92

2016 North Macedonia Multiple Indicator Cluster Survey 2018-2019

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	95.8	24-35 m	265	92
BCG	Card	95.8	24-35 m	265	92
BCG	Card or History	96.4	24-35 m	265	92
BCG	History	0.6	24-35 m	265	92
DTP1	C or H <12 months	95.5	24-35 m	265	92
DTP1	Card	98.2	24-35 m	265	92
DTP1	Card or History	98.3	24-35 m	265	92
DTP1	History	0.1	24-35 m	265	92
DTP3	C or H <12 months	82.5	24-35 m	265	92
DTP3	Card	92.6	24-35 m	265	92
DTP3	Card or History	92.7	24-35 m	265	92
DTP3	History	0.1	24-35 m	265	92
HepB1	C or H <12 months	94.3	24-35 m	265	92
HepB1	Card	97.7	24-35 m	265	92
HepB1	Card or History	97.7	24-35 m	265	92
HepB1	History	0	24-35 m	265	92
HepBB	C or H <12 months	97.8	24-35 m	265	92
HepBB	Card	98	24-35 m	265	92
HepBB	Card or History	98.6	24-35 m	265	92

North Macedonia - survey details

HepBB	History	0.6	24-35 m	265	92	DTP3	Card or History	95.2	18-29 m	270	89
Hib1	C or H <12 months	95.4	24-35 m	265	92	DTP3	History	0.9	18-29 m	270	89
Hib1	Card	98.2	24-35 m	265	92	HepB1	C or H <18 months	96.5	18-29 m	270	89
Hib1	Card or History	98.3	24-35 m	265	92	HepB1	Card	92.1	18-29 m	270	89
Hib1	History	0.1	24-35 m	265	92	HepB1	Card or History	96.9	18-29 m	270	89
Hib3	C or H <12 months	81.9	24-35 m	265	92	HepB1	History	4.8	18-29 m	270	89
Hib3	Card	92.6	24-35 m	265	92	HepBB	C or H <18 months	97.4	18-29 m	270	89
Hib3	Card or History	92.7	24-35 m	265	92	HepBB	Card	96.1	18-29 m	270	89
Hib3	History	0.1	24-35 m	265	92	HepBB	Card or History	97.8	18-29 m	270	89
IPV1	C or H <12 months	95.5	24-35 m	265	92	HepBB	History	1.8	18-29 m	270	89
IPV1	Card	98.2	24-35 m	265	92	Hib1	C or H <18 months	97.9	18-29 m	270	89
IPV1	Card or History	98.3	24-35 m	265	92	Hib1	Card	97	18-29 m	270	89
IPV1	History	0.1	24-35 m	265	92	Hib1	Card or History	97.9	18-29 m	270	89
MCV1	C or H <12 months	67.6	24-35 m	265	92	Hib1	History	0.9	18-29 m	270	89
MCV1	Card	87.1	24-35 m	265	92	Hib3	C or H <18 months	93.5	18-29 m	270	89
MCV1	Card or History	87.5	24-35 m	265	92	Hib3	Card	94.4	18-29 m	270	89
MCV1	History	0.4	24-35 m	265	92	Hib3	Card or History	95.3	18-29 m	270	89
Pol1	C or H <12 months	95.5	24-35 m	265	92	Hib3	History	0.9	18-29 m	270	89
Pol1	Card	98.2	24-35 m	265	92	MCV1	C or H <18 months	91.6	18-29 m	270	89
Pol1	Card or History	98.3	24-35 m	265	92	MCV1	Card	94.3	18-29 m	270	89
Pol1	History	0.1	24-35 m	265	92	MCV1	Card or History	96	18-29 m	270	89
Pol3	C or H <12 months	82.7	24-35 m	265	92	MCV1	History	1.8	18-29 m	270	89
Pol3	Card	92.6	24-35 m	265	92	Pol1	C or H <18 months	97.9	18-29 m	270	89
Pol3	Card or History	92.7	24-35 m	265	92	Pol1	Card	96.2	18-29 m	270	89
Pol3	History	0.1	24-35 m	265	92	Pol1	Card or History	97.9	18-29 m	270	89

2009 Macedonia MICS 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <18 months	97	18-29 m	270	89
BCG	Card	95.9	18-29 m	270	89
BCG	Card or History	97.6	18-29 m	270	89
BCG	History	1.8	18-29 m	270	89
DTP1	C or H <18 months	97.9	18-29 m	270	89
DTP1	Card	96.2	18-29 m	270	89
DTP1	Card or History	97.9	18-29 m	270	89
DTP1	History	1.8	18-29 m	270	89
DTP3	C or H <18 months	91.9	18-29 m	270	89
DTP3	Card	94.3	18-29 m	270	89

2004 Republic of Macedonia Multiple Indicator Cluster Survey 2005-2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	97.2	15-26 m	884	75
BCG	Card	74.3	15-26 m	884	75
BCG	Card or History	98	15-26 m	884	75
BCG	History	19.1	15-26 m	884	75
DTP1	C or H <12 months	94	15-26 m	884	75

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DTP1	Card	74.6	15-26 m	884	75
DTP1	Card or History	96.6	15-26 m	884	75
DTP1	History	14.9	15-26 m	884	75
DTP3	C or H <12 months	82.1	15-26 m	884	75
DTP3	Card	71.6	15-26 m	884	75
DTP3	Card or History	88.3	15-26 m	884	75
DTP3	History	10.1	15-26 m	884	75
MCV1	C or H <12 months	80.4	15-26 m	884	75
MCV1	Card	67.6	15-26 m	884	75
MCV1	Card or History	88.4	15-26 m	884	75
MCV1	History	15.2	15-26 m	884	75
Pol1	C or H <12 months	94.6	15-26 m	884	75
Pol1	Card	73.8	15-26 m	884	75
Pol1	Card or History	97	15-26 m	884	75
Pol1	History	17.6	15-26 m	884	75
Pol3	C or H <12 months	80.8	15-26 m	884	75

Pol3	Card	72.1	15-26 m	884	75
Pol3	Card or History	86.4	15-26 m	884	75
Pol3	History	9.4	15-26 m	884	75

1998 Multiple Indicator Cluster Survey in FYR Macedonia with Micronutrient Component, 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	99.1	13-24 m	275	-
DTP3	Card or History	97.9	13-24 m	275	-
MCV1	Card or History	92	13-24 m	275	-
Pol3	Card or History	97.9	13-24 m	275	-

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Further information and estimates for previous years are available at:

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

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