

# Bosnia and Herzegovina: WHO and UNICEF estimates of immunization coverage: 2024 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 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 available empirical data accurately reflect immunization system performance and those where the data are likely compromised and present a misleading view of coverage.

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. Bull World Health Organ. \* Burton et al. 2012. PLoS One.  
\* Brown et al. 2013. Open Pub Health Journal. \* Danovaro-Holliday et al. 2021. Gates Open Res.

## 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 6-11, 12-23 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 data collection period.

## ABBREVIATIONS AND DEFINITIONS

**BCG:** percentage of births who received one dose of Bacillus Calmette Guérin 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. For countries utilizing IPV containing vaccine only, i.e., no recommended dose of OPV, 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.

**IPV2:** percentage of surviving infants who received a 2nd dose of inactivated polio vaccine. IPV2 coverage estimates produced for OPV using countries.

**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 in the production of the estimate.

**HEPB3:** 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 if coverage for the booster dose is not reported.

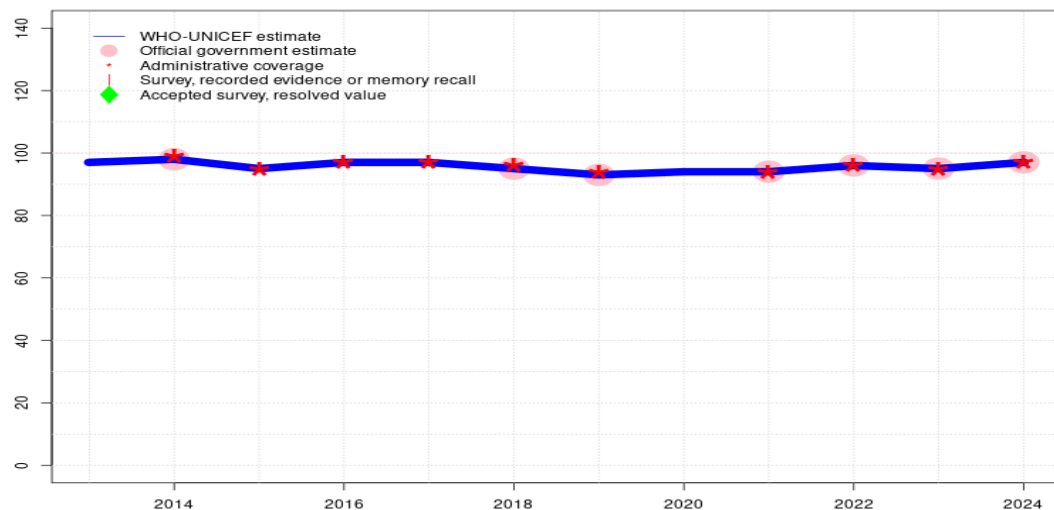
**YFV:** percentage of surviving infants who received one dose of yellow fever vaccine in countries where YFV is part of the national immunization schedule for children or is recommended in at risk areas; coverage estimates are annualized for the entire cohort of surviving infants.

**MENGA:** percentage of children who received one dose of meningococcal A conjugate vaccine. MENGA coverage estimates produced for countries in the meningitis belt of sub-Saharan Africa.

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# Bosnia and Herzegovina - BCG

BIH - BCG



## Description:

- 2024: Estimate informed by reported administrative data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate informed by reported data. GoC=R+ D+
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. GoC=R+ D+
- 2020: Estimate informed by interpolation between reported data. Estimate of 94 percent changed from previous revision value of 96 percent. GoC=No accepted empirical data
- 2019: Estimate informed by reported data. Estimate of 93 percent changed from previous revision value of 96 percent. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. Programme reports one month national stockout and disruption in services because of district level stockouts. Estimate challenged by: D-
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported administrative data. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by interpolation between reported data. GoC=No accepted empirical data

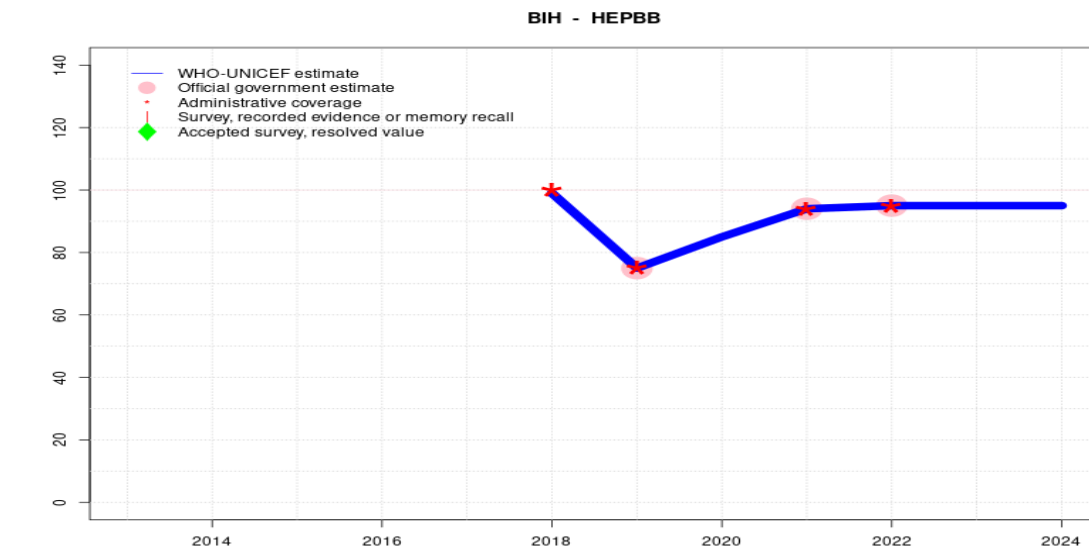
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	97	98	95	97	97	95	93	94	94	96	95	97
Estimate GoC	•	••	••	••	•	••	••	•	••	••	••	••
Official	-	98	-	-	-	95	93	-	94	96	95	97
Administrative	-	99	95	97	97	96	94	-	94	96	95	97
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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: 2024 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.

# Bosnia and Herzegovina - HEPBB



## Description:

2024: Estimate informed by extrapolation from reported data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. GoC=No accepted empirical data

2023: Estimate informed by extrapolation from reported data. GoC=No accepted empirical data

2022: Estimate informed by reported data. Estimate challenged by: D-

2021: Estimate informed by reported data. Estimate challenged by: D-

2020: Estimate informed by interpolation between reported data. GoC=No accepted empirical data

2019: Estimate informed by reported data. Estimate challenged by: D-

2018: Estimate informed by reported administrative data. Estimate challenged by: D-

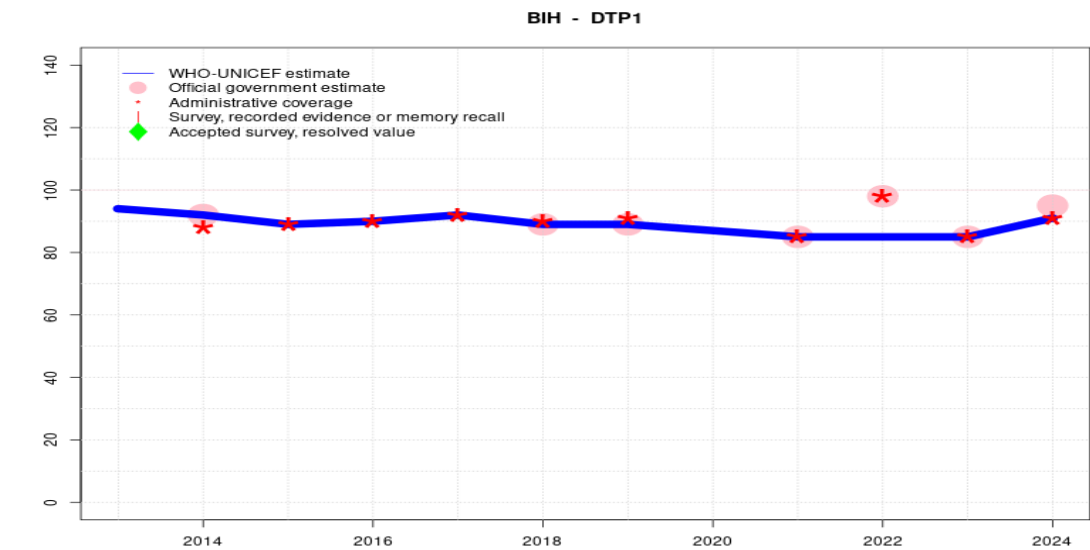
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	-	-	-	-	-	99	75	85	94	95	95	95
Estimate GoC	-	-	-	-	-	●	●	●	●	●	●	●
Official	-	-	-	-	-	-	75	-	94	95	-	-
Administrative	-	-	-	-	-	100	75	-	94	95	-	-
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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: 2024 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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# Bosnia and Herzegovina - DTP1



## Description:

- 2024: Estimate informed by reported administrative data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate informed by reported data. Estimate challenged by: D-
- 2022: Estimate informed by interpolation between reported data. Reported data excluded due to an increase from 85 percent to 98 percent with decrease to 85 percent. Programme reports two months vaccine stockout at national and subnational levels. Estimate challenged by: D-
- 2021: Estimate informed by reported data. GoC=R+ D+
- 2020: Estimate informed by interpolation between reported data. Estimate of 87 percent changed from previous revision value of 84 percent. GoC=No accepted empirical data
- 2019: Estimate informed by reported data. Estimate of 89 percent changed from previous revision value of 87 percent. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. Programme reports one month national stockout and disruption in services because of district level stockouts. Estimate challenged by: D-
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported administrative data. GoC=R+ D+
- 2014: Estimate informed by reported data. Programme reports a six month stockout of DTP containing vaccine. GoC=R+ D+
- 2013: Estimate informed by interpolation between reported data. GoC=No accepted empirical data

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	94	92	89	90	92	89	89	87	85	85	85	91
Estimate GoC	•	••	••	••	•	••	••	•	••	•	•	••
Official	-	92	-	-	-	89	89	-	85	98	85	95
Administrative	-	88	89	90	92	90	91	-	85	98	85	91
Survey	-	-	-	-	-	-	-	-	-	-	-	-

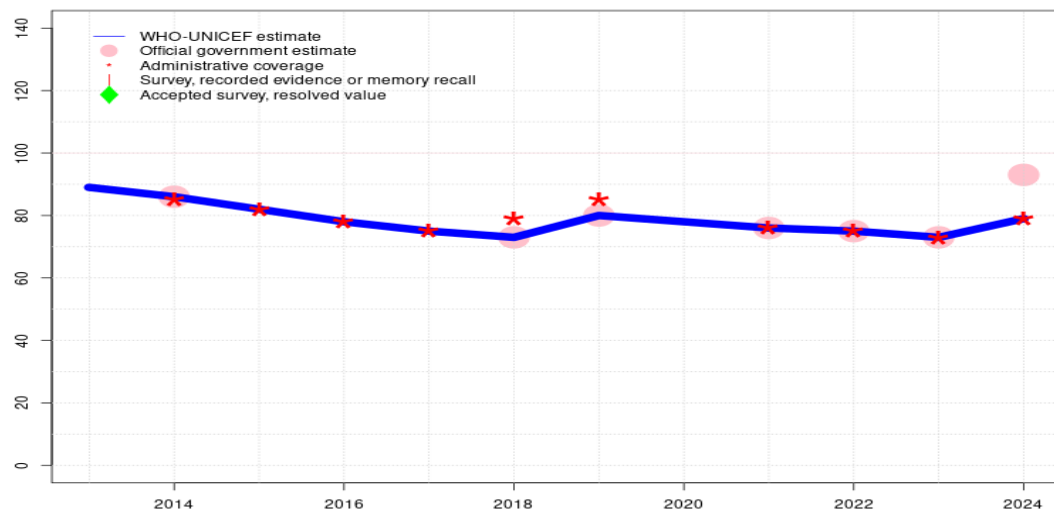
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2024 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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# Bosnia and Herzegovina - DTP3

BIH - DTP3



## Description:

- 2024: Estimate informed by reported administrative data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate informed by reported data. GoC=R+ D+
- 2022: Estimate informed by reported data. Programme reports two months vaccine stockout at national and subnational levels. GoC=R+ D+
- 2021: Estimate informed by reported data. GoC=R+ D+
- 2020: Estimate informed by interpolation between reported data. Estimate of 78 percent changed from previous revision value of 72 percent. GoC=No accepted empirical data
- 2019: Estimate informed by reported data. Estimate of 80 percent changed from previous revision value of 73 percent. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. Programme reports one month national stockout and disruption in services because of district level stockouts. Estimate challenged by: D-
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported administrative data. GoC=R+ D+
- 2014: Estimate informed by reported data. Programme reports a six month stockout of DTP containing vaccine. GoC=R+ D+
- 2013: Estimate informed by interpolation between reported data. GoC=No accepted empirical data

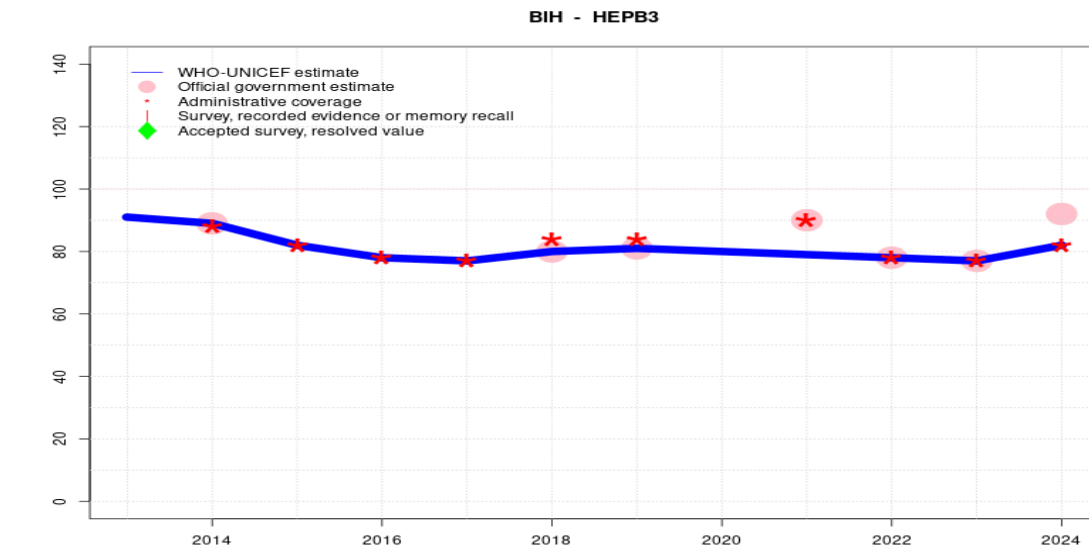
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	89	86	82	78	75	73	80	78	76	75	73	79
Estimate GoC	•	••	••	••	•	••	••	•	••	••	••	••
Official	-	86	-	-	-	73	80	-	76	75	73	93
Administrative	-	85	82	78	75	79	85	-	76	75	73	79
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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: 2024 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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# Bosnia and Herzegovina - HEPB3



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	91	89	82	78	77	80	81	80	79	78	77	82
Estimate GoC	●	●●	●●	●●	●	●●	●●	●	●	●●	●●	●●
Official	-	89	-	-	-	80	81	-	90	78	77	92
Administrative	-	88	82	78	77	84	84	-	90	78	77	82
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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: 2024 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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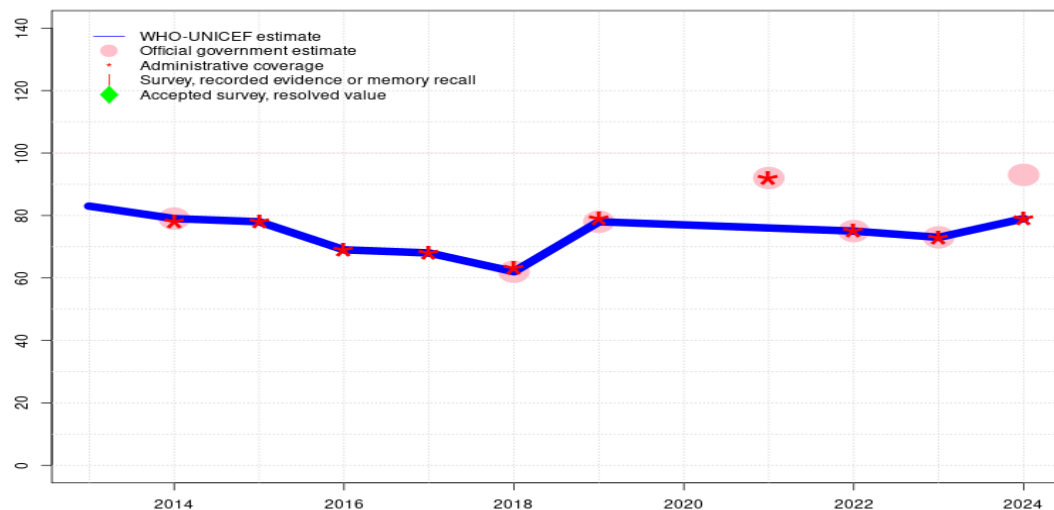
## Description:

- 2024: Estimate informed by reported administrative data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate informed by reported data. GoC=R+ D+
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by interpolation between reported data. Reported data excluded. Unexplained differences in reported coverage for antigens recommended at the same age. Estimate challenged by: D-
- 2020: Estimate informed by interpolation between reported data. Estimate of 80 percent changed from previous revision value of 79 percent. GoC=No accepted empirical data
- 2019: Estimate informed by reported data. Estimate of 81 percent changed from previous revision value of 80 percent. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. Estimate challenged by: D-
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported administrative data. GoC=R+ D+
- 2014: Estimate informed by reported data. Programme reports a two months stockout of HepB containing vaccine. GoC=R+ D+
- 2013: Estimate informed by interpolation between reported data. GoC=No accepted empirical data



# Bosnia and Herzegovina - Hib3

BIH - Hib3



## Description:

- 2024: Estimate informed by reported administrative data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate informed by reported data. GoC=R+ D+
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by interpolation between reported data. Reported data excluded. Unexplained differences in reported coverage for antigens recommended at the same age and indicated in the schedule as a combination vaccine DTP-Hib-IPV. Estimate of 76 percent changed from previous revision value of 72 percent. Estimate challenged by: D-
- 2020: Estimate informed by interpolation between reported data. Estimate of 77 percent changed from previous revision value of 69 percent. GoC=No accepted empirical data
- 2019: Estimate informed by reported data. Estimate of 78 percent changed from previous revision value of 65 percent. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Estimate challenged by: D-
- 2017: Estimate informed by reported administrative data. Programme reports one month national stockout and disruption in services because of district level stockouts. GoC=R+ D+
- 2016: Estimate informed by reported administrative data. Estimate challenged by: D-
- 2015: Estimate informed by reported administrative data. GoC=R+ D+
- 2014: Estimate informed by reported data. Programme reports a six month stockout of Hib containing vaccine. GoC=R+ D+
- 2013: Estimate informed by interpolation between reported data. GoC=No accepted empirical data

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	83	79	78	69	68	62	78	77	76	75	73	79
Estimate GoC	●	●●	●●	●	●●	●	●	●	●	●●	●●	●●
Official	-	79	-	-	-	62	78	-	92	75	73	93
Administrative	-	78	78	69	68	63	79	-	92	75	73	79
Survey	-	-	-	-	-	-	-	-	-	-	-	-

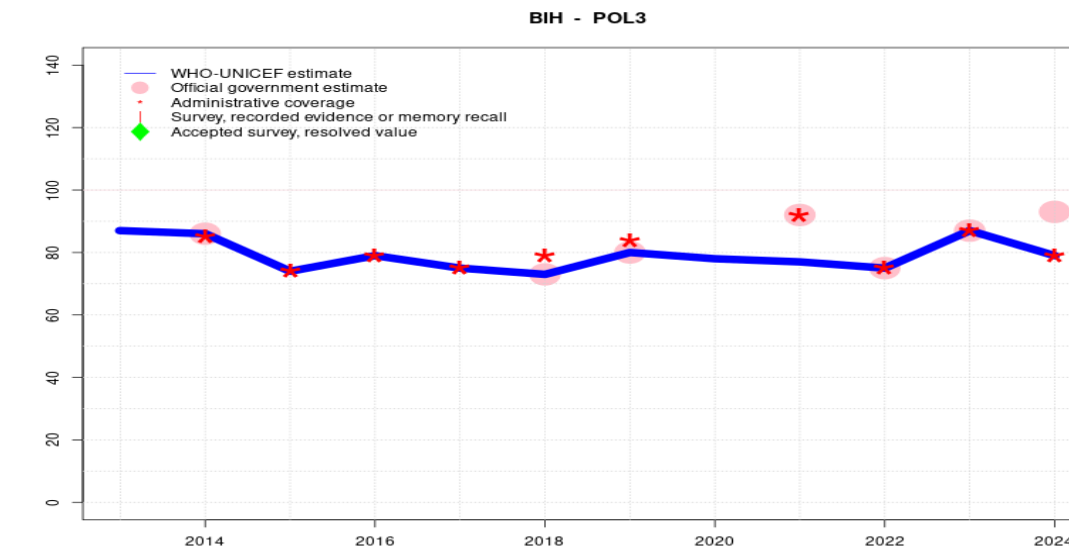
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- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2024 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While 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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# Bosnia and Herzegovina - POL3



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	87	86	74	79	75	73	80	78	77	75	87	79
Estimate GoC	●	●●	●	●●	●	●●	●●	●	●	●●	●	●●
Official	-	86	-	-	-	73	80	-	92	75	87	93
Administrative	-	85	74	79	75	79	84	-	92	75	87	79
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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.

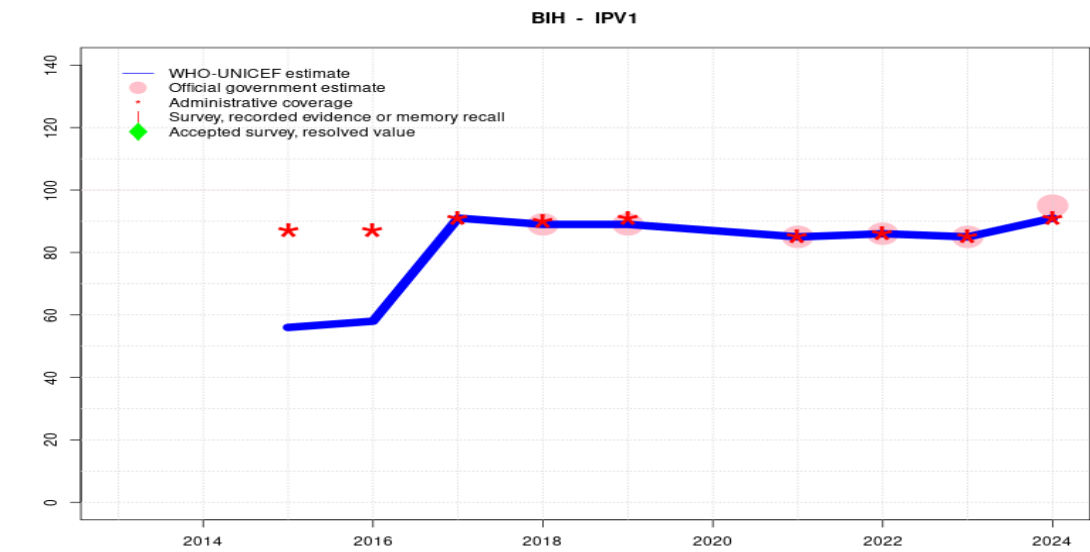
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2024 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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:

- 2024: Estimate informed by reported administrative data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate informed by reported data. Unexplained decline of 63 percent in target population between 2022 and 2023, suggesting incomplete reporting. Estimate of 87 percent changed from previous revision value of 75 percent. Estimate challenged by: D-
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by interpolation between reported data. Reported data excluded. Unexplained differences in reported coverage for antigens recommended at the same age and indicated in the schedule as a combination vaccine DTP-Hib-IPV. Estimate of 77 percent changed from previous revision value of 75 percent. Estimate challenged by: D-
- 2020: Estimate informed by interpolation between reported data. Estimate of 78 percent changed from previous revision value of 74 percent. GoC=No accepted empirical data
- 2019: Estimate informed by reported data. Estimate of 80 percent changed from previous revision value of 74 percent. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. Programme reports one month national stockout and disruption in services because of district level stockouts. Estimate challenged by: D-
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported administrative data. Programme reports a 5-month stockout of OPV at national level. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Programme reports a six month stockout of IPV and two months stockout of OPV. GoC=R+ D+
- 2013: Estimate informed by interpolation between reported data. GoC=No accepted empirical data

# Bosnia and Herzegovina - IPV1



## Description:

- 2024: Estimate informed by reported administrative data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate informed by reported data. GoC=R+ D+
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. GoC=R+ D+
- 2020: Estimate informed by interpolation between reported data. Estimate of 87 percent changed from previous revision value of 92 percent. GoC=No accepted empirical data
- 2019: Estimate informed by reported data. Estimate of 89 percent changed from previous revision value of 91 percent. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. Programme reports one month national stockout and disruption in services because of district level stockouts. Inactivated polio vaccine is now recommended in entire country. Estimate challenged by: D-
- 2016: Programme reports 87 percent coverage in 67 percent of the target population. Estimate informed by annualized coverage achieved in the national target population. Estimate challenged by: R-
- 2015: Programme reports 87 percent coverage achieved in 65 percent of the national target population. Estimate informed by coverage achieved in the total annual infant population. Inactivated polio vaccine introduced subnationally since 2008. Estimate challenged by: R-

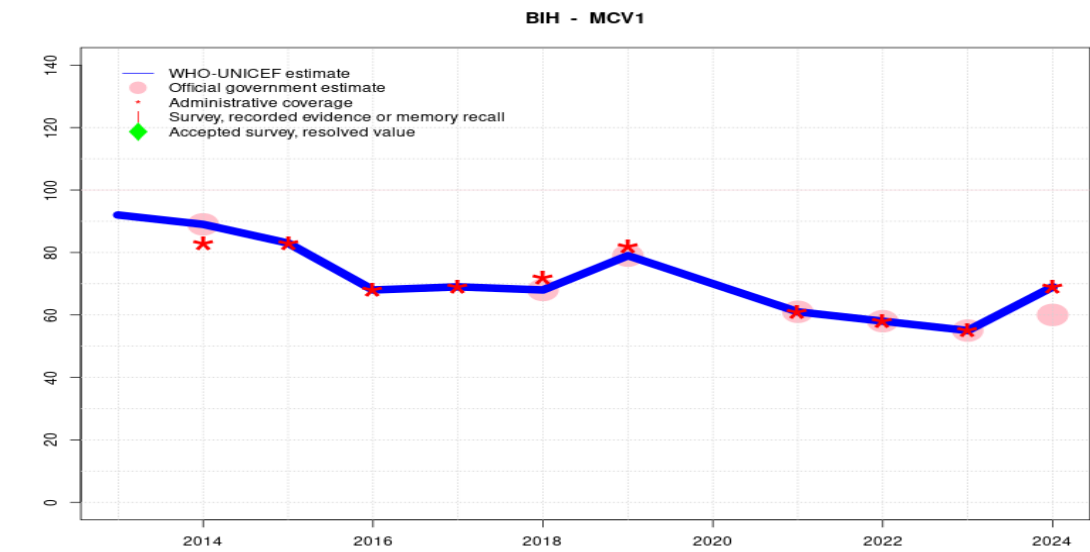
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	-	-	56	58	91	89	89	87	85	86	85	91
Estimate GoC	-	-	•	•	•	••	••	•	••	••	••	••
Official	-	-	-	-	-	89	89	-	85	86	85	95
Administrative	-	-	87	87	91	90	91	-	85	86	85	91
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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: 2024 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.

# Bosnia and Herzegovina - MCV1



## Description:

- 2024: Estimate informed by reported administrative data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate informed by reported data. GoC=R+ D+
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. GoC=R+ D+
- 2020: Estimate informed by interpolation between reported data. Estimate of 70 percent changed from previous revision value of 61 percent. GoC=No accepted empirical data
- 2019: Estimate informed by reported data. Estimate of 79 percent changed from previous revision value of 65 percent. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. Estimate challenged by: D-
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported administrative data. GoC=R+ D+
- 2014: Estimate informed by reported data. Estimate challenged by: D-
- 2013: Estimate informed by interpolation between reported data. GoC=No accepted empirical data

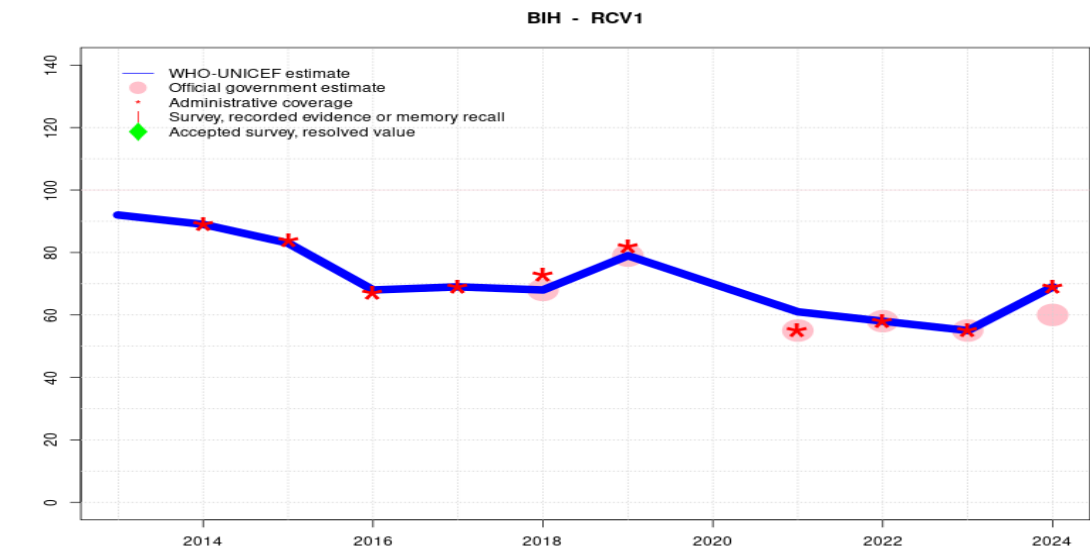
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	92	89	83	68	69	68	79	70	61	58	55	69
Estimate GoC	●	●	●●	●●	●	●●	●●	●	●●	●●	●●	●●
Official	-	89	-	-	-	68	79	-	61	58	55	60
Administrative	-	83	83	68	69	72	82	-	61	58	55	69
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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: 2024 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.

# Bosnia and Herzegovina - RCV1



## Description:

- 2024: Estimate based on estimated MCV1. Reported data excluded due to sudden change in coverage from 55 to 69 percent. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate based on estimated MCV1. GoC=R+ D+
- 2022: Estimate based on estimated MCV1. GoC=R+ D+
- 2021: Estimate based on estimated MCV1. GoC=R+ D+
- 2020: Estimate based on estimated MCV1. Estimate of 70 percent changed from previous revision value of 61 percent. GoC=No accepted empirical data
- 2019: Estimate based on estimated MCV1. Estimate of 79 percent changed from previous revision value of 65 percent. GoC=R+ D+
- 2018: Estimate based on estimated MCV1. GoC=R+ D+
- 2017: Estimate based on estimated MCV1. Estimate challenged by: 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. Estimate challenged by: D-
- 2013: Estimate based on estimated MCV1. GoC=No accepted empirical data

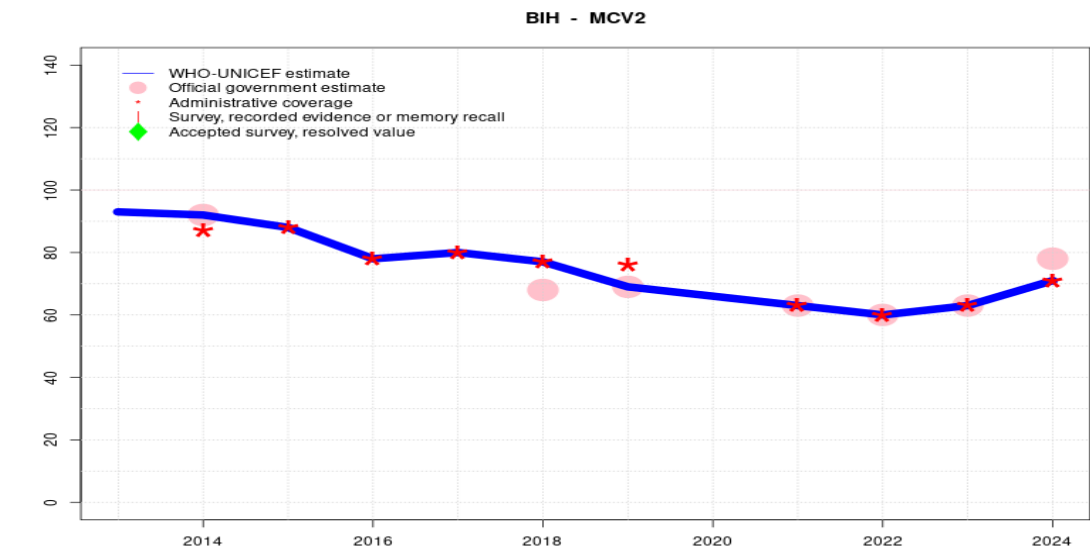
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	92	89	83	68	69	68	79	70	61	58	55	69
Estimate GoC	●	●	●●	●●	●	●●	●●	●	●●	●●	●●	●●
Official	-	-	-	-	-	68	79	-	55	58	55	60
Administrative	-	89	84	67	69	73	82	-	55	58	55	69
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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: 2024 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.

# Bosnia and Herzegovina - MCV2



## Description:

- 2024: Estimate informed by reported administrative data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate informed by reported data. GoC=R+ D+
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. GoC=R+ D+
- 2020: Estimate informed by interpolation between reported data. Estimate of 66 percent changed from previous revision value of 60 percent. GoC=No accepted empirical data
- 2019: Estimate informed by reported data. Estimate of 69 percent changed from previous revision value of 68 percent. GoC=R+ D+
- 2018: Estimate informed by reported administrative data. Estimate based on administrative reported coverage. Inconsistent adjustment from administrative coverage to official. Estimate of 77 percent changed from previous revision value of 76 percent. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. Estimate challenged by: D-
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported administrative data. GoC=R+ D+
- 2014: Estimate informed by reported data. Estimate challenged by: D-
- 2013: Estimate informed by interpolation between reported data. GoC=No accepted empirical data

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	93	92	88	78	80	77	69	66	63	60	63	71
Estimate GoC	•	•	••	••	•	••	••	•	••	••	••	••
Official	-	92	-	-	-	68	69	-	63	60	63	78
Administrative	-	87	88	78	80	77	76	-	63	60	63	71
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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: 2024 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.

# Bosnia and Herzegovina - Survey Details

**NOTE** A survey to measure vaccination coverage for infants (i.e., children aged 0-11 months) will sample children aged 12-23 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 12-23 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 one or two years prior to the survey field work.

The survey results below present vaccination coverage estimates by antigen, confirmation method, and child's age at the time of the survey. Coverage based on **Recall** reflects information based upon a mother's or caregiver's memory. Coverage based on **Record** reflects information drawn from documented vaccination history in home- and/or facility-based records. **Evidence seen** reflects the percentage of children in the sample with documented evidence of vaccination history seen by the survey team.

## 2010 The Bosnia and Herzegovina Multiple Indicator Cluster Survey 2011–2012

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Recall	10	18-29 m	-	91
BCG	Record	89.3	18-29 m	-	91
BCG	Record or Recall	99.3	18-29 m	463	91
BCG	Record or Recall<12m	97.8	18-29 m	-	91
DTP1	Recall	8.6	18-29 m	-	91
DTP1	Record	88.9	18-29 m	-	91
DTP1	Record or Recall	97.5	18-29 m	463	91
DTP1	Record or Recall<12m	95.2	18-29 m	-	91
DTP3	Recall	7.4	18-29 m	-	91
DTP3	Record	84.8	18-29 m	-	91
DTP3	Record or Recall	92.2	18-29 m	463	91
DTP3	Record or Recall<12m	85.5	18-29 m	-	91
HEPBB	Recall	6	18-29 m	-	91
HEPBB	Record	90.8	18-29 m	-	91
HEPBB	Record or Recall	96.8	18-29 m	463	91
HEPBB	Record or Recall<12m	95.4	18-29 m	-	91
MCV1	Recall	7.6	18-29 m	-	91
MCV1	Record	80.2	18-29 m	-	91

MCV1	Record or Recall	87.8	18-29 m	463	91
MCV1	Record or Recall<18m	79.9	18-29 m	-	91
POL1	Recall	8.2	18-29 m	-	91
POL1	Record	87.9	18-29 m	-	91
POL1	Record or Recall	96	18-29 m	463	91
POL1	Record or Recall<12m	95.1	18-29 m	-	91
POL3	Recall	7.5	18-29 m	-	91
POL3	Record	83.7	18-29 m	-	91
POL3	Record or Recall	91.2	18-29 m	463	91
POL3	Record or Recall<12m	85.1	18-29 m	-	91

## 2004 Bosnia and Herzegovina Multiple Indicator Cluster Survey 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Recall	22.6	18-29 m	636	-
BCG	Record	73.9	18-29 m	636	-
BCG	Record or Recall	96.5	18-29 m	636	-
BCG	Record or Recall<12m	95.8	18-29 m	636	-
DTP1	Recall	18	18-29 m	636	-
DTP1	Record	76	18-29 m	636	-
DTP1	Record or Recall	94	18-29 m	636	-
DTP1	Record or Recall<12m	93.4	18-29 m	636	-
DTP3	Recall	14.1	18-29 m	636	-
DTP3	Record	72	18-29 m	636	-
DTP3	Record or Recall	86.2	18-29 m	636	-
DTP3	Record or Recall<12m	78	18-29 m	636	-
MCV1	Recall	12.6	18-29 m	636	-
MCV1	Record	65.4	18-29 m	636	-
MCV1	Record or Recall	78	18-29 m	636	-
MCV1	Record or Recall<12m	75	18-29 m	636	-
POL1	Recall	18.8	18-29 m	636	-
POL1	Record	75.7	18-29 m	636	-
POL1	Record or Recall	94.5	18-29 m	636	-
POL1	Record or Recall<12m	93.7	18-29 m	636	-
POL3	Recall	14.1	18-29 m	636	-
POL3	Record	72.2	18-29 m	636	-
POL3	Record or Recall	86.4	18-29 m	636	-
POL3	Record or Recall<12m	79	18-29 m	636	-

1999 Household Survey of Women and Children, Bosnia and Herzegovina  
 2000 (MICS), 2001, Draft

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Recall	16.9	12-23 m	480	79
BCG	Record	78.3	12-23 m	480	79
BCG	Record or Recall	95.2	12-23 m	480	79
BCG	Record or Recall<12m	95.2	12-23 m	480	79
DTP1	Recall	14.6	12-23 m	480	79
DTP1	Record	77.9	12-23 m	480	79
DTP1	Record or Recall	92.5	12-23 m	480	79
DTP1	Record or Recall<12m	91.3	12-23 m	480	79
DTP3	Recall	12.5	12-23 m	480	79
DTP3	Record	75.2	12-23 m	480	79

DTP3	Record or Recall	87.7	12-23 m	480	79
DTP3	Record or Recall<12m	84.8	12-23 m	480	79
MCV1	Recall	10.8	12-23 m	480	79
MCV1	Record	53.5	12-23 m	480	79
MCV1	Record or Recall	64.4	12-23 m	480	79
MCV1	Record or Recall<12m	24.6	12-23 m	480	79
POL1	Recall	15.6	12-23 m	480	79
POL1	Record	78.1	12-23 m	480	79
POL1	Record or Recall	93.8	12-23 m	480	79
POL1	Record or Recall<12m	92.7	12-23 m	480	79
POL3	Recall	9.6	12-23 m	480	79
POL3	Record	75.6	12-23 m	480	79
POL3	Record or Recall	85.2	12-23 m	480	79
POL3	Record or Recall<12m	82.1	12-23 m	-	79

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