

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.

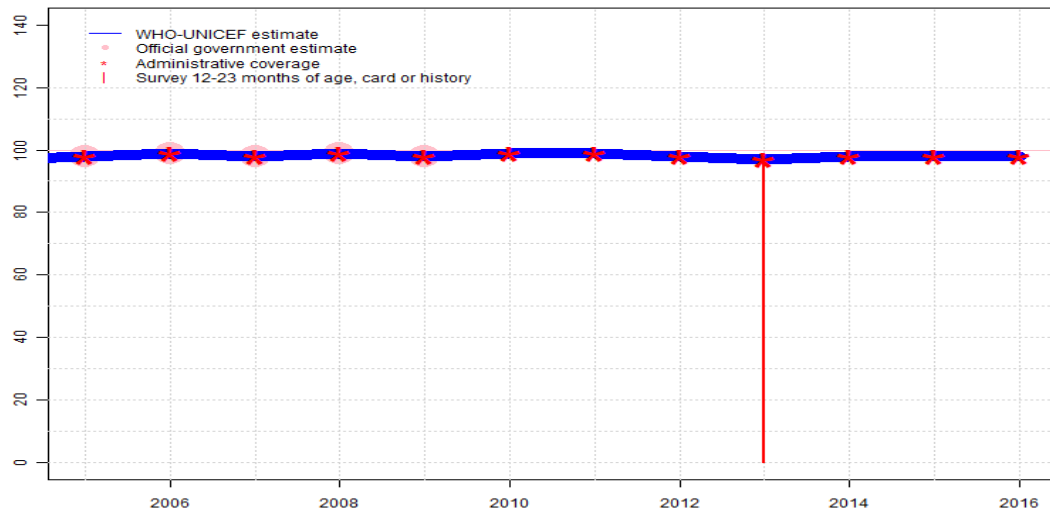
PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect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

Serbia - BCG

SRB - BCG



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	98	99	98	99	98	99	99	98	97	98	98	98
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	98	99	98	99	98	NA	NA	NA	NA	NA	NA	NA
Administrative	98	99	98	99	98	99	99	98	97	98	98	98
Survey	NA	NA	NA	NA	NA	NA	NA	NA	98	NA	NA	NA

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

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

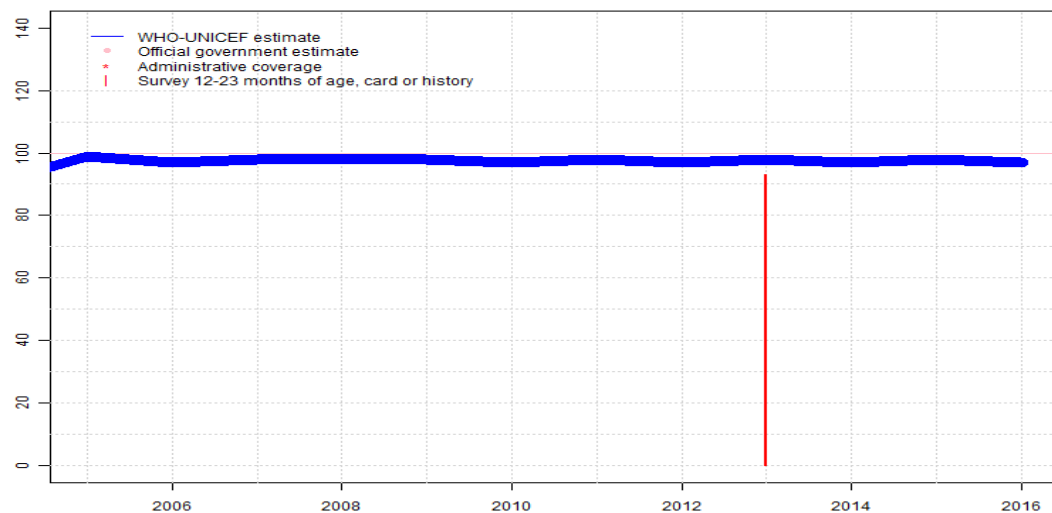
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2016: Estimate based on reported administrative data. Estimate challenged by: D-
- 2015: Estimate based on reported administrative data. Estimate challenged by: D-
- 2014: Estimate based on reported administrative data. Estimate challenged by: D-
- 2013: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). Estimate challenged by: D-
- 2012: Estimate based on reported administrative data. Estimate challenged by: D-
- 2011: Estimate based on reported administrative data. Estimates do not include Kosovo. Estimate challenged by: D-
- 2010: Estimate based on reported administrative data. Estimates do not include Kosovo. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimates do not include Montenegro and Kosovo. Estimate challenged by: D-

Serbia - DTP1

SRB - DTP1



Description:

- 2016: DTP1 coverage estimated based on DTP3 coverage of 92. GoC=No accepted empirical data
- 2015: DTP1 coverage estimated based on DTP3 coverage of 95. GoC=S+
- 2014: DTP1 coverage estimated based on DTP3 coverage of 93. GoC=S+
- 2013: DTP1 coverage estimated based on DTP3 coverage of 95. GoC=S+
- 2012: Estimate based on DTP3 coverage of 91. GoC=S+
- 2011: Estimate based on DTP3 coverage of 94. Estimates do not include Kosovo. GoC=S+
- 2010: Estimate based on DTP3 coverage of 91. Estimates do not include Kosovo. GoC=No accepted empirical data
- 2009: Estimate based on DTP3 coverage of 95. Estimates do not include Kosovo. GoC=No accepted empirical data
- 2008: Estimate based on DTP3 coverage of 95. Estimates do not include Kosovo. GoC=No accepted empirical data
- 2007: Estimate based on DTP3 coverage of 94. Estimates do not include Kosovo. GoC=No accepted empirical data
- 2006: Estimate based on DTP3 coverage of 92. Estimates do not include Kosovo. GoC=S+
- 2005: Estimate based on DTP3 coverage of 98. Estimates do not include Montenegro and Kosovo. GoC=S+

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	99	97	98	98	98	97	98	97	98	97	98	97
Estimate GoC	••	••	•	•	•	•	••	••	••	••	••	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	93	NA	NA	NA

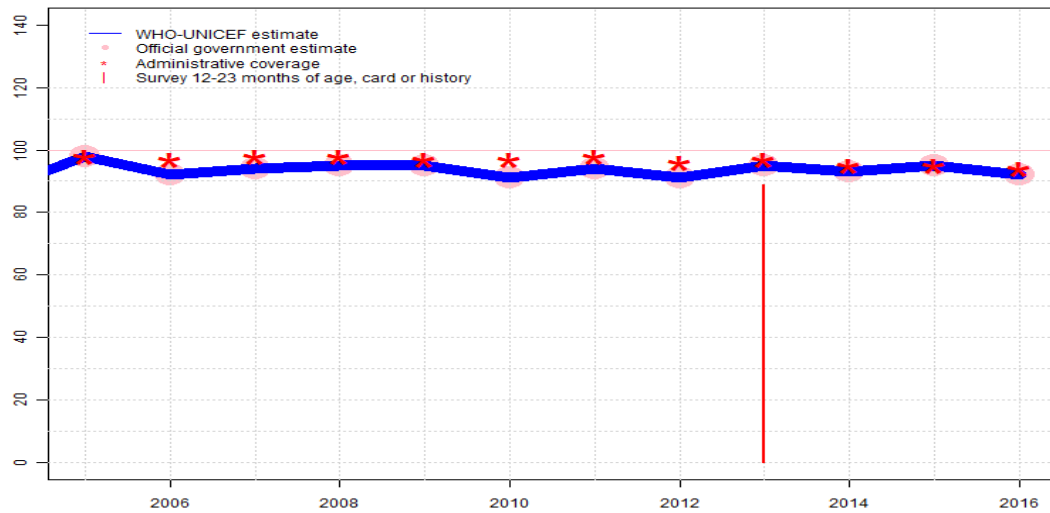
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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Serbia - DTP3

SRB - DTP3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	98	92	94	95	95	91	94	91	95	93	95	92
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	98	92	94	95	95	91	94	91	95	93	95	92
Administrative	98	97	98	98	97	97	98	96	97	95	95	94
Survey	NA	NA	NA	NA	NA	NA	NA	NA	89	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: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

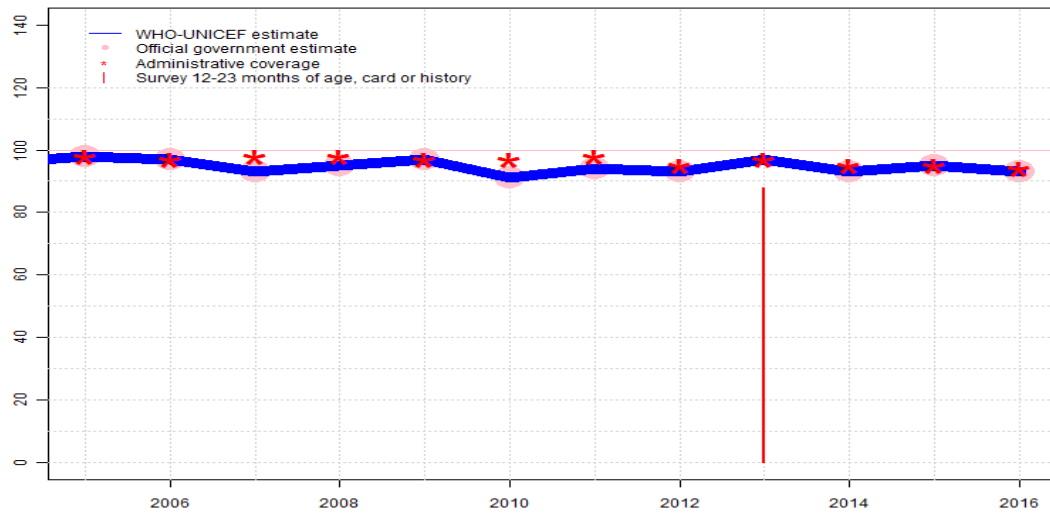
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2016: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 90 percent based on 1 survey(s). Serbia Multiple Indicator Cluster Survey 2014 card or history results of 89 percent modified for recall bias to 90 percent based on 1st dose card or history coverage of 93 percent, 1st dose card only coverage of 87 percent and 3d dose card only coverage of 84 percent. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimates do not include Montenegro and Kosovo. Estimate challenged by: D-

Serbia - Pol3

SRB - Pol3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	98	97	93	95	97	91	94	93	97	93	95	93
Estimate GoC	•	••	•	•	•	•	•	•	•	•	•	•
Official	98	97	93	95	97	91	94	93	NA	93	95	93
Administrative	98	97	98	98	97	97	98	95	97	95	95	94
Survey	NA	NA	NA	NA	NA	NA	NA	NA	88	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: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

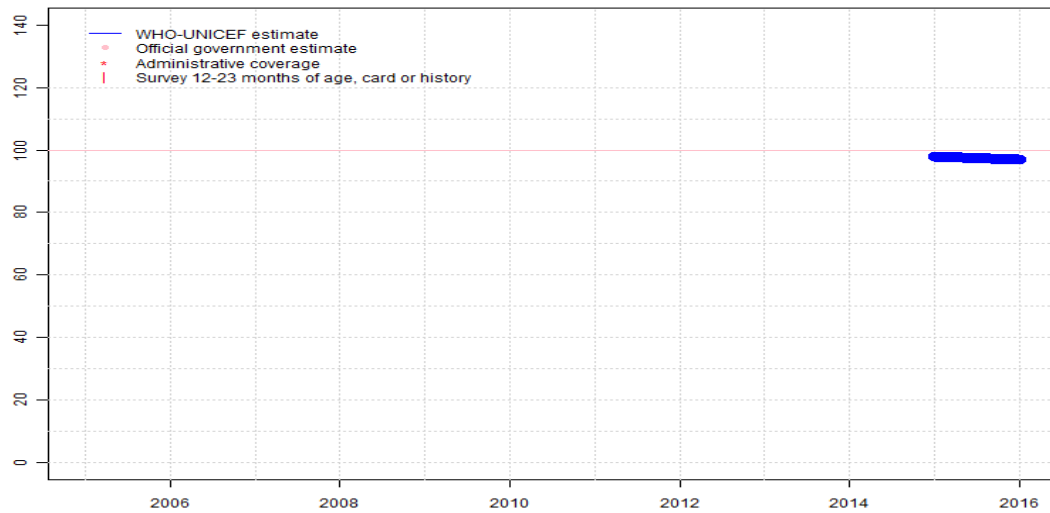
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2016: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 90 percent based on 1 survey(s). Serbia Multiple Indicator Cluster Survey 2014 card or history results of 88 percent modified for recall bias to 90 percent based on 1st dose card or history coverage of 93 percent, 1st dose card only coverage of 86 percent and 3d dose card only coverage of 83 percent. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government. Estimates do not include Kosovo. GoC=R+ S+
- 2005: Estimate based on coverage reported by national government. Estimates do not include Montenegro and Kosovo. Estimate challenged by: D-

Serbia - IPV1

SRB - IPV1



Description:

2016: Estimate is based on estimated DTP1 coverage level. GoC=No accepted empirical data

2015: Estimate is based on estimated DTP1 coverage level. GoC=No accepted empirical data

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	98	97
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

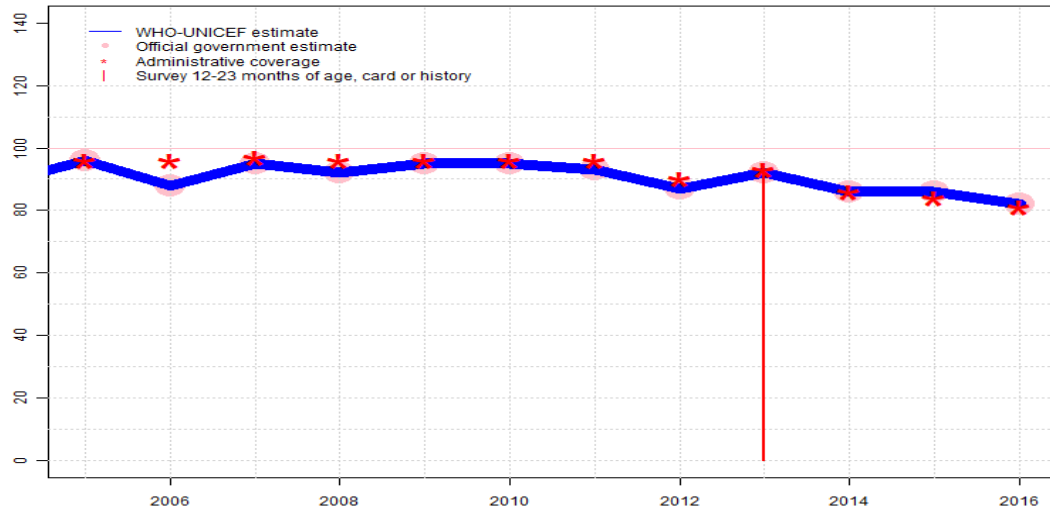
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- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While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

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Serbia - MCV1

SRB - MCV1



Description:

- 2016: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government. Estimates do not include Kosovo. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimates do not include Montenegro and Kosovo. Estimate challenged by: D-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	96	88	95	92	95	95	93	87	92	86	86	82
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	96	88	95	92	95	95	93	87	92	86	86	82
Administrative	96	96	97	96	96	96	96	90	93	86	84	81
Survey	NA	NA	NA	NA	NA	NA	NA	NA	94	NA	NA	NA

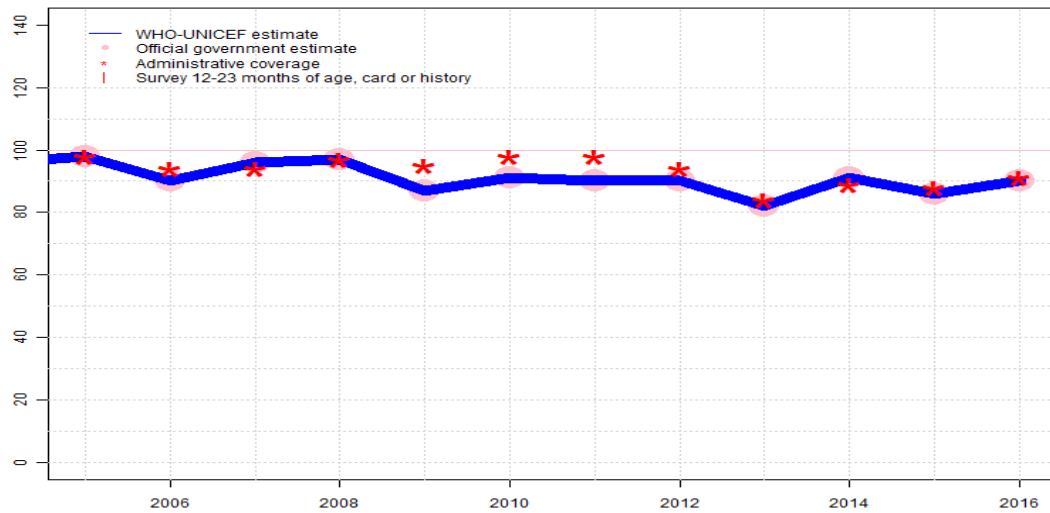
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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

Serbia - MCV2

SRB - MCV2



Description:

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

2016: Estimate based on coverage reported by national government. Estimate challenged by: D-
 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-
 2006: Estimate based on coverage reported by national government. Estimate challenged by: D-
 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	98	90	96	97	87	91	90	90	82	91	86	90
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	98	90	96	97	87	91	90	90	82	91	86	90
Administrative	98	94	94	97	95	98	98	94	84	89	88	91
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

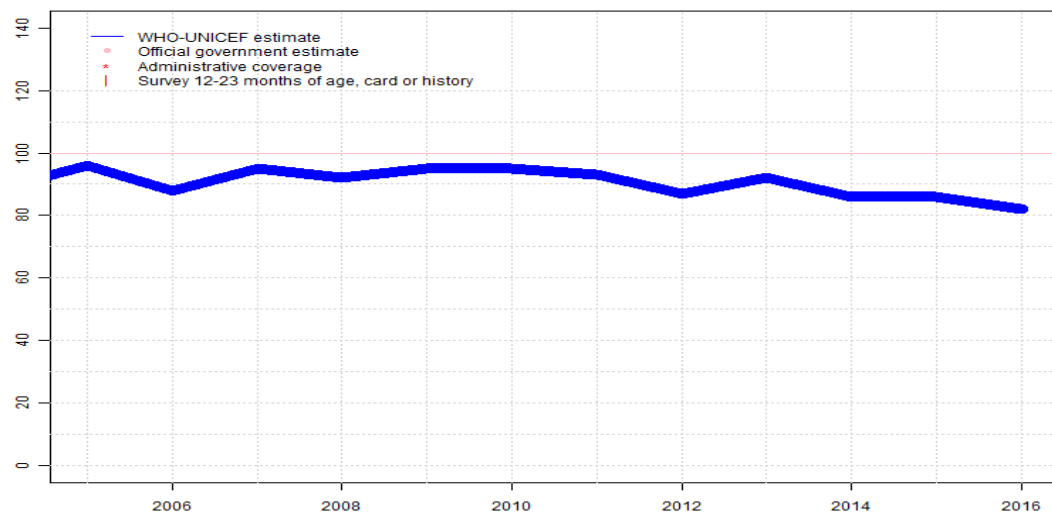
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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

Serbia - RCV1

SRB - RCV1



Description:

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

2016: Estimate based on estimated MCV1. Estimate challenged by: D-
 2015: Estimate based on estimated MCV1. Estimate challenged by: D-
 2014: Estimate based on estimated MCV1. Estimate challenged by: D-
 2013: Estimate based on estimated MCV1. Estimate challenged by: D-
 2012: Estimate based on estimated MCV1. Estimate challenged by: D-
 2011: Estimate based on estimated MCV1. Estimate challenged by: D-
 2010: Estimate based on estimated MCV1. Estimate challenged by: D-
 2009: Estimate based on estimated MCV1. Estimate challenged by: D-
 2008: Estimate based on estimated MCV1. Estimate challenged by: D-
 2007: Estimate based on estimated MCV1. Estimate challenged by: D-
 2006: Estimate based on estimated MCV1. Estimate challenged by: D-
 2005: Estimate based on estimated MCV1. Estimate challenged by: D-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	96	88	95	92	95	95	93	87	92	86	86	82
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

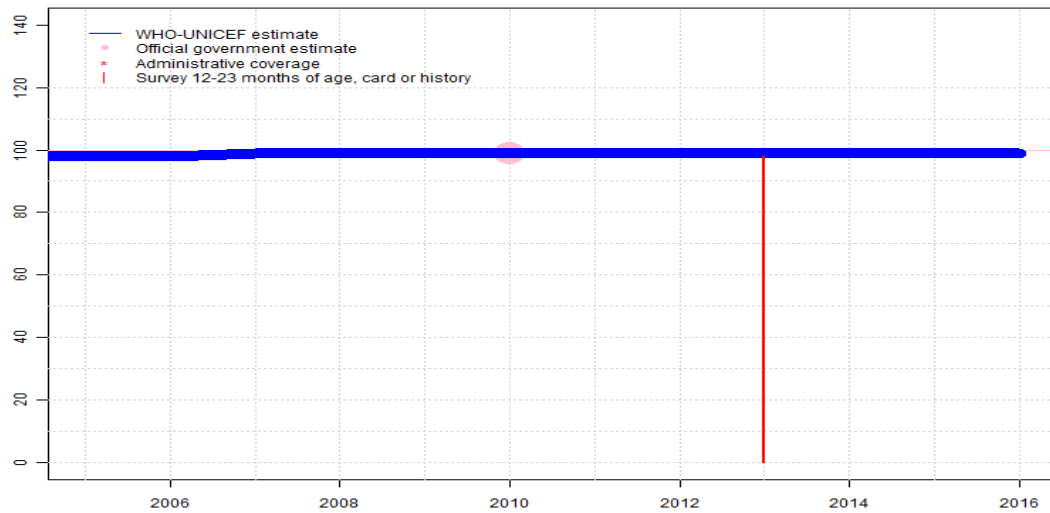
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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

Serbia - HepBB

SRB - HepBB



Description:

- 2016: Estimate based on extrapolation from data reported by national government. GoC=No accepted empirical data
- 2015: Estimate based on extrapolation from data reported by national government. GoC=S+
- 2014: Estimate based on extrapolation from data reported by national government. GoC=S+
- 2013: Estimate based on extrapolation from data reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). GoC=S+
- 2012: Estimate based on extrapolation from data reported by national government. GoC=S+
- 2011: Estimate based on extrapolation from data reported by national government. GoC=S+
- 2010: Estimate based on reported data. GoC=R+
- 2009: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2008: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2007: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2006: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2005: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	98	98	99	99	99	99	99	99	99	99	99	99
Estimate GoC	•	•	•	•	•	••	••	••	••	••	••	•
Official	NA	NA	NA	NA	NA	99	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	98	NA	NA	NA

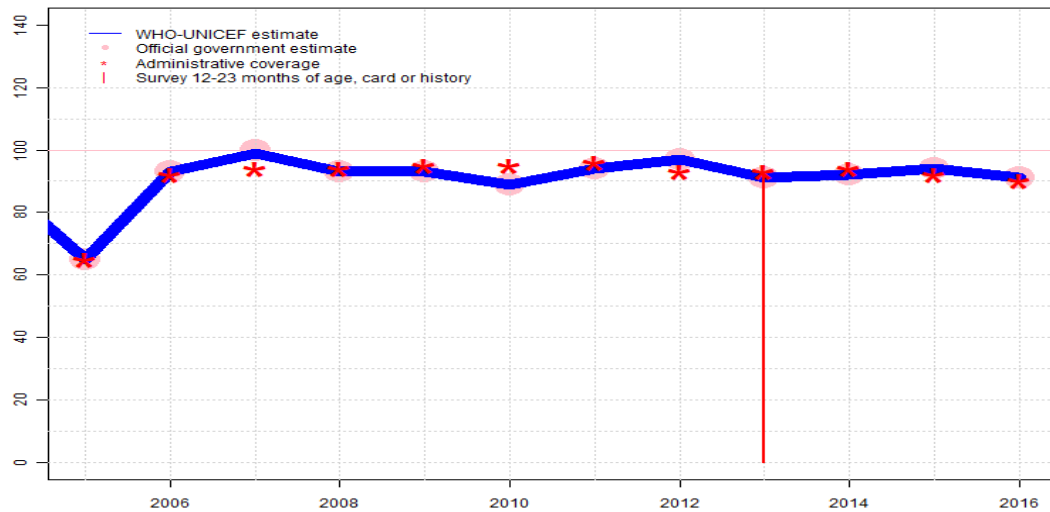
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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

Serbia - HepB3

SRB - HepB3



Description:

- 2016: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 93 percent based on 1 survey(s). Estimate challenged by: D-
- 2012: Estimate based on reported data. Estimate challenged by: D-
- 2011: Estimate based on reported data. Estimates do not include Kosovo. Estimate challenged by: D-
- 2010: Estimate based on reported data. Estimates do not include Kosovo. Estimate challenged by: D-
- 2009: Estimate based on reported data. Estimates do not include Kosovo. Estimate challenged by: D-
- 2008: Estimate based on reported data. Estimates do not include Kosovo. Estimate challenged by: D-
- 2007: Estimate based on reported data. Estimates do not include Kosovo. Estimate challenged by: D-
- 2006: Estimate based on reported data. Estimates do not include Kosovo. Estimate challenged by: D-
- 2005: Estimate based on reported data. Estimates do not include Montenegro and Kosovo. HepB partially introduced. Estimate challenged by: D-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	65	93	99	93	93	89	94	97	91	92	94	91
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	65	93	100	93	93	89	94	97	91	92	94	91
Administrative	65	92	94	94	95	95	96	93	93	94	92	90
Survey	NA	NA	NA	NA	NA	NA	NA	NA	93	NA	NA	NA

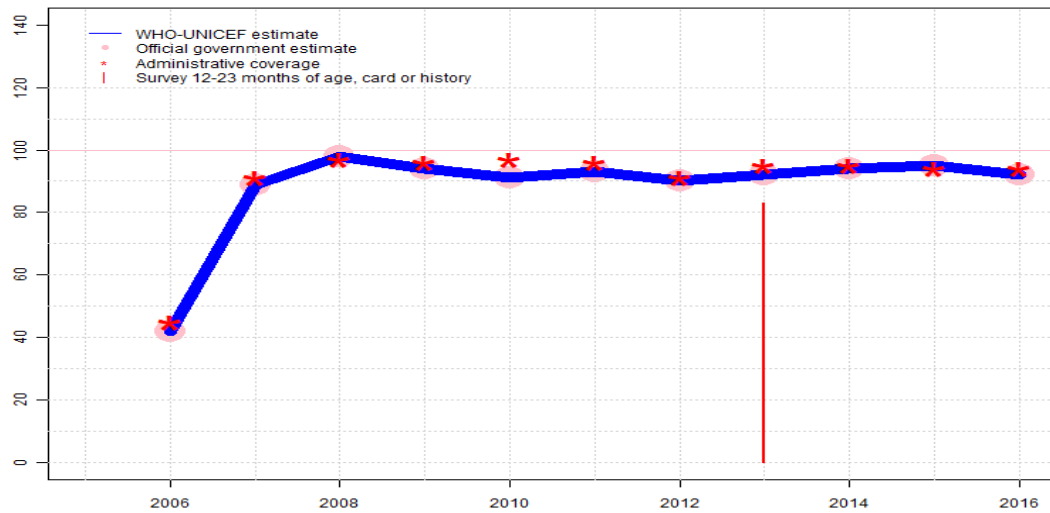
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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

Serbia - Hib3

SRB - Hib3



Description:

- 2016: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 83 percent based on 1 survey(s). Estimate challenged by: D-
- 2012: Estimate based on reported data. Estimate challenged by: D-
- 2011: Estimate based on reported data. Estimates do not include Kosovo. Estimate challenged by: D-
- 2010: Estimate based on reported data. Estimates do not include Kosovo. Estimate challenged by: D-
- 2009: Estimate based on reported data. Estimates do not include Kosovo. Estimate challenged by: D-
- 2008: Estimate based on reported data. Estimates do not include Kosovo. Estimate challenged by: D-
- 2007: Estimate based on reported data. Estimates do not include Kosovo. Estimate challenged by: D-
- 2006: Estimate based on reported data. Estimates do not include Kosovo. Estimate challenged by: D-

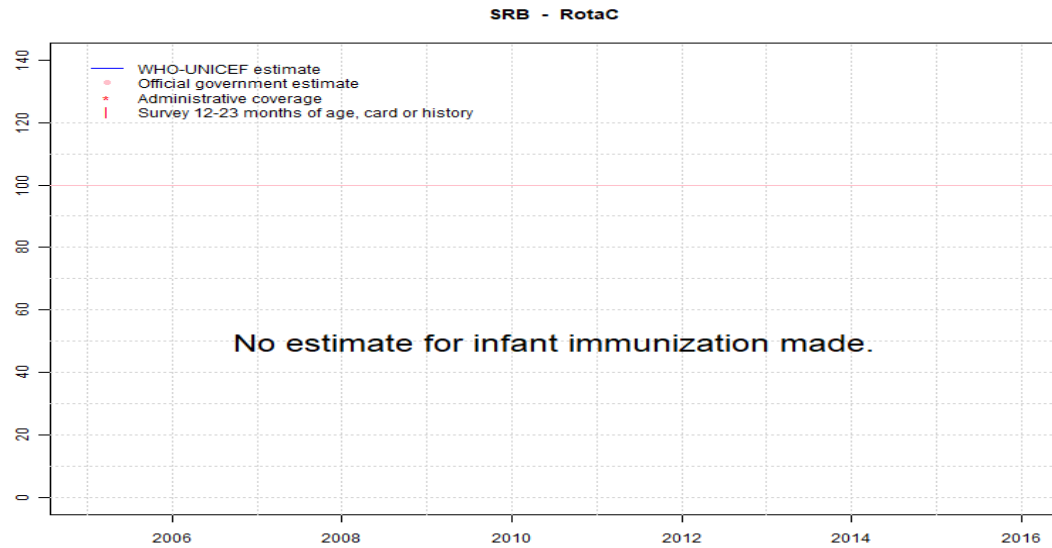
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	42	89	98	94	91	93	90	92	94	95	92
Estimate GoC	NA	•	•	•	•	•	•	•	•	•	•	•
Official	NA	42	89	98	94	91	93	90	92	94	95	92
Administrative	NA	45	91	97	96	97	96	91	95	95	94	94
Survey	NA	NA	NA	NA	NA	NA	NA	NA	83	NA	NA	NA

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

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

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Serbia - RotaC



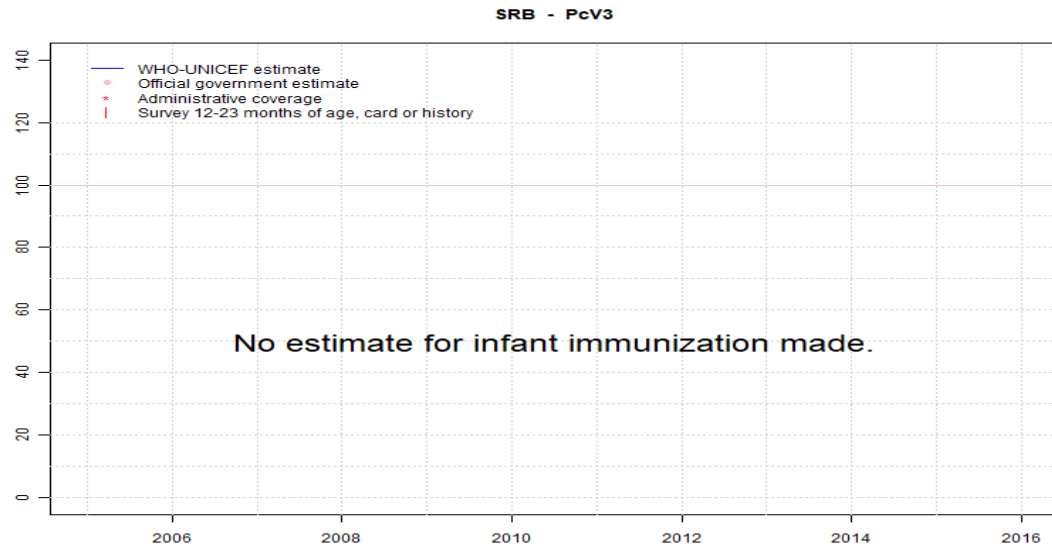
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

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Serbia - PcV3



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

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

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

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

Serbia - survey details

2013 Serbia Multiple Indicator Cluster Survey 2014

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	98	12-23 m	489	87
BCG	Card	80	12-23 m	-	87
BCG	Card or History	98	12-23 m	489	87
BCG	History	18	12-23 m	-	87
DTP1	C or H <12 months	93	12-23 m	489	87
DTP1	Card	87	12-23 m	-	87
DTP1	Card or History	93	12-23 m	489	87
DTP1	History	6	12-23 m	-	87
DTP3	C or H <12 months	87	12-23 m	489	87
DTP3	Card	84	12-23 m	-	87
DTP3	Card or History	89	12-23 m	489	87
DTP3	History	5	12-23 m	-	87
HepB1	C or H <12 months	98	12-23 m	489	87
HepB1	Card	86	12-23 m	-	87
HepB1	Card or History	98	12-23 m	489	87
HepB1	History	12	12-23 m	-	87
HepB3	C or H <12 months	91	12-23 m	489	87
HepB3	Card	82	12-23 m	-	87
HepB3	Card or History	93	12-23 m	489	87
HepB3	History	11	12-23 m	-	87
HepBB	C or H <12 months	98	12-23 m	489	87
HepBB	Card	86	12-23 m	-	87
HepBB	Card or History	98	12-23 m	489	87
HepBB	History	12	12-23 m	-	87
Hib1	C or H <12 months	92	12-23 m	489	87
Hib1	Card	85	12-23 m	-	87
Hib1	Card or History	92	12-23 m	489	87
Hib1	History	7	12-23 m	-	87
Hib3	C or H <12 months	80	12-23 m	489	87
Hib3	Card	77	12-23 m	-	87
Hib3	Card or History	83	12-23 m	489	87
Hib3	History	6	12-23 m	-	87
MCV1	Card	82	24-35 m	-	87
MCV1	Card or History	94	24-35 m	465	87
MCV1	History	12	24-35 m	-	87
Pol1	C or H <12 months	93	12-23 m	489	87
Pol1	Card	86	12-23 m	-	87

Pol1	Card or History	93	12-23 m	489	87
Pol1	History	6	12-23 m	-	87
Pol3	C or H <12 months	86	12-23 m	489	87
Pol3	Card	83	12-23 m	-	87
Pol3	Card or History	88	12-23 m	489	87
Pol3	History	5	12-23 m	-	87

2012 Serbia Multiple Indicator Cluster Survey 2014

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	99	24-35 m	465	87
DTP1	C or H <12 months	90	24-35 m	465	87
DTP3	C or H <12 months	86	24-35 m	465	87
HepB1	C or H <12 months	99	24-35 m	465	87
HepBB	C or H <12 months	99	24-35 m	465	87
Hib1	C or H <12 months	91	24-35 m	465	87
Hib3	C or H <12 months	82	24-35 m	465	87
MCV1	C or H <24 months	93	24-35 m	465	87
Pol1	C or H <12 months	91	24-35 m	465	87
Pol3	C or H <12 months	86	24-35 m	465	87

2004 Serbia Multiple Indicator Cluster Survey 2005

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	74	18-29 m	782	71
BCG	Card	44	18-29 m	782	71
BCG	Card or History	74	18-29 m	782	71
BCG	History	30	18-29 m	782	71
DTP1	C or H <12 months	97	18-29 m	782	71
DTP1	Card	73	18-29 m	782	71
DTP1	Card or History	98	18-29 m	782	71
DTP1	History	26	18-29 m	782	71
DTP3	C or H <12 months	90	18-29 m	782	71
DTP3	Card	78	18-29 m	782	71
DTP3	Card or History	96	18-29 m	782	71
DTP3	History	18	18-29 m	782	71
MCV1	C or H <12 months	84	18-29 m	782	71
MCV1	Card	64	18-29 m	782	71

Serbia - survey details

Survey	Confirmation method	Coverage	Age cohort	Sample	Cards seen
MCV1	Card or History	87	18-29 m	782	71
MCV1	History	22	18-29 m	782	71
Pol1	C or H <12 months	95	18-29 m	782	71
Pol1	Card	70	18-29 m	782	71
Pol1	Card or History	97	18-29 m	782	71
Pol1	History	27	18-29 m	782	71
Pol3	C or H <12 months	88	18-29 m	782	71
Pol3	Card	75	18-29 m	782	71
Pol3	Card or History	94	18-29 m	782	71
Pol3	History	19	18-29 m	782	71

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	100	12-23 m	341	76
DTP1	C or H <12 months	98	12-23 m	341	76
DTP3	C or H <12 months	95	12-23 m	341	76
Pol1	C or H <12 months	98	12-23 m	341	76
Pol3	C or H <12 months	98	12-23 m	341	76

1998 Federal Republic of Yugoslavia, Multiple Indicator Cluster Survey II 2000 (excluding Kosovo)

1999 Federal Republic of Yugoslavia, Multiple Indicator Cluster Survey II 2000 (excluding Kosovo)

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
MCV1	Card or History	89	24-35 m	341	76

Further information and estimates for previous years are available at:

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

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