

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

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

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

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

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

DATA SOURCES.

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

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

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

ABBREVIATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

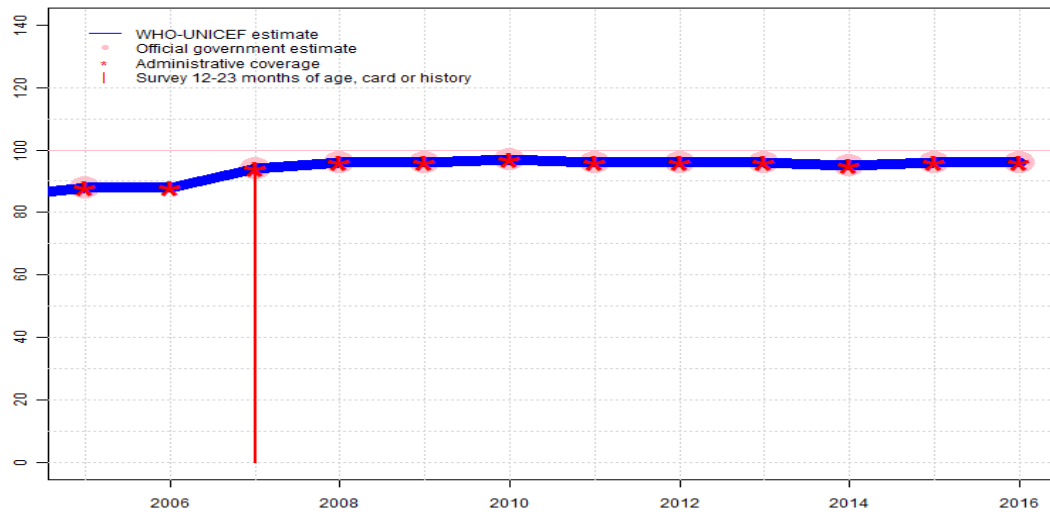
PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect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

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

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Turkey - BCG

TUR - BCG



Description:

- 2016: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Estimate of 96 percent changed from previous revision value of 95 percent. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). GoC=R+ S+ D+
- 2006: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2005: From 2005 onward survey results support reported data. GoC=R+ S+ D+

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	88	88	94	96	96	97	96	96	96	95	96	96
Estimate GoC	●●●	●●●	●●●	●●●	●●●	●●	●●	●●	●●	●●	●●	●●
Official	88	NA	94	96	96	97	96	96	96	95	96	96
Administrative	88	88	94	96	96	97	96	96	96	95	96	96
Survey	NA	NA	96	NA	NA	NA	NA	NA	NA	NA	NA	NA

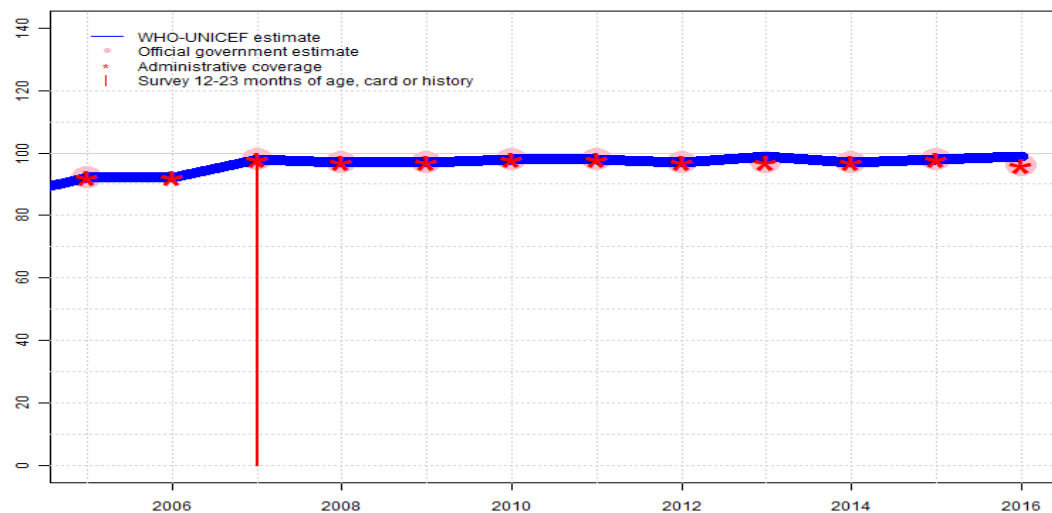
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Turkey - DTP1

TUR - DTP1



Description:

- 2016: DTP1 coverage estimated based on DTP3 coverage of 98. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: R-
- 2015: Estimate based on coverage reported by national government. Estimate of 98 percent changed from previous revision value of 97 percent. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: DTP1 coverage estimated based on DTP3 coverage of 98. Estimate challenged by: R-
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). GoC=R+ S+ D+
- 2006: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	92	92	98	97	97	98	98	97	99	97	98	99
Estimate GoC	●●●	●●●	●●●	●●●	●●●	●●	●●	●●	●	●●	●●	●●
Official	92	NA	98	97	97	98	98	97	97	97	98	96
Administrative	92	92	98	97	97	98	98	97	97	97	98	96
Survey	NA	NA	97	NA	NA	NA	NA	NA	NA	NA	NA	NA

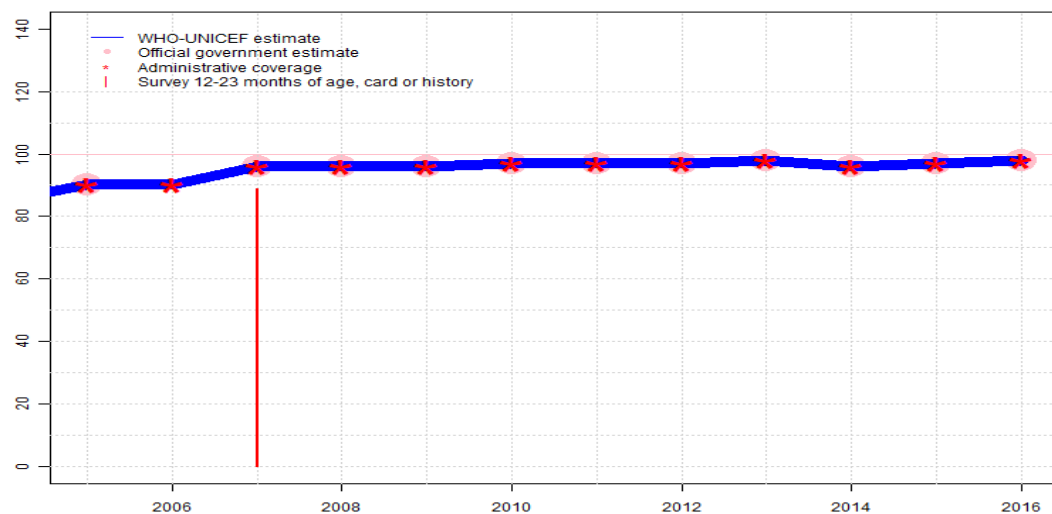
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

TUR - DTP3



Description:

- 2016: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Estimate of 97 percent changed from previous revision value of 96 percent. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). Turkey Demographic and Health Survey 2008 card or history results of 89 percent modified for recall bias to 96 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 71 percent. GoC=R+ S+ D+
- 2006: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	90	90	96	96	96	97	97	97	98	96	97	98
Estimate GoC	●●●	●●●	●●●	●	●●●	●●	●●	●●	●●	●●	●●	●●
Official	90	NA	96	96	96	97	97	97	98	96	97	98
Administrative	90	90	96	96	96	97	97	97	98	96	97	98
Survey	NA	NA	89	NA	NA	NA	NA	NA	NA	NA	NA	NA

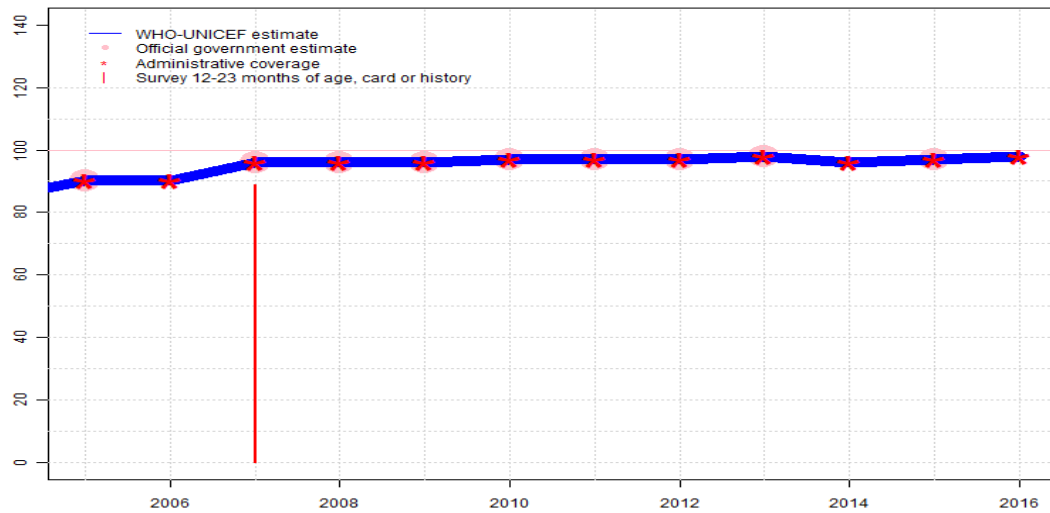
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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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Turkey - Pol3

TUR - Pol3



Description:

- 2016: Estimate based on reported administrative data. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Estimate of 97 percent changed from previous revision value of 96 percent. GoC=R+ D+
- 2014: Estimate based on reported administrative data. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Turkey Demographic and Health Survey 2008 card or history results of 89 percent modified for recall bias to 94 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 70 percent. GoC=R+ S+ D+
- 2006: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	90	90	96	96	96	97	97	97	98	96	97	98
Estimate GoC	●●●	●●●	●●●	●	●●●	●●	●●	●●	●●	●●	●●	●●
Official	90	NA	96	96	96	97	97	97	98	NA	97	NA
Administrative	90	90	96	96	96	97	97	97	98	96	97	98
Survey	NA	NA	89	NA	NA	NA	NA	NA	NA	NA	NA	NA

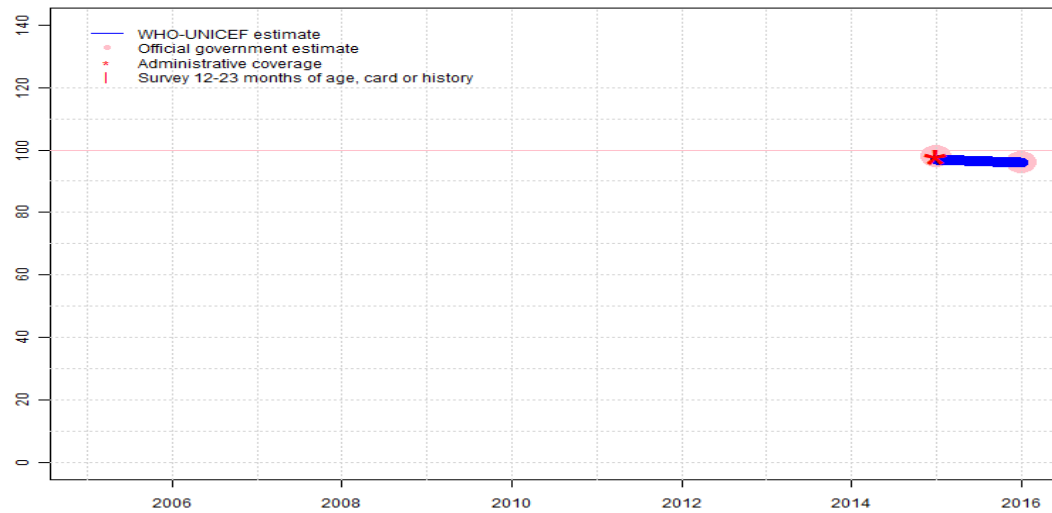
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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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Turkey - IPV1

TUR - IPV1



Description:

- 2016: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+
- 2015: IPV vaccine was introduced in sequential schedule as a combination of DTP-Hib-IPV vaccine in 2008. Estimate based on DTP1 coverage. Estimate challenged by: R-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	97	96
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●	●●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	98	96
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	98	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

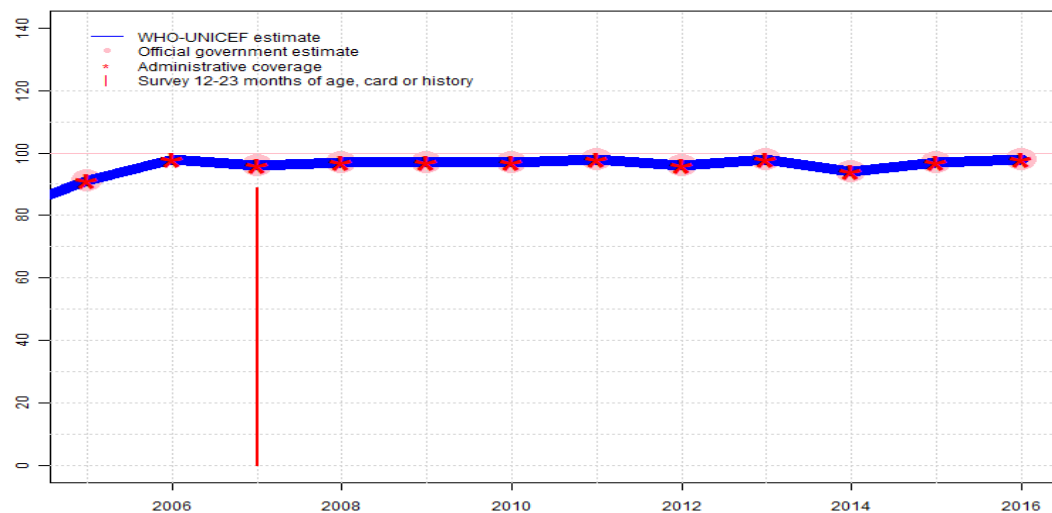
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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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Turkey - MCV1

TUR - MCV1



Description:

- 2016: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Estimate of 97 percent changed from previous revision value of 94 percent. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2007: In 2006 the recommended age for measles immunization was changed to 12 months of age. The survey results for children 12-23 months of age under-represented coverage GoC=R+ S+ D+
- 2006: Estimate based on reported administrative data. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: S-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	91	98	96	97	97	97	98	96	98	94	97	98
Estimate GoC	•	•	•••	•••	•••	••	••	••	••	••	••	••
Official	91	NA	96	97	97	97	98	96	98	94	97	98
Administrative	91	98	96	97	97	97	98	96	98	94	97	98
Survey	NA	NA	89	NA	NA	NA	NA	NA	NA	NA	NA	NA

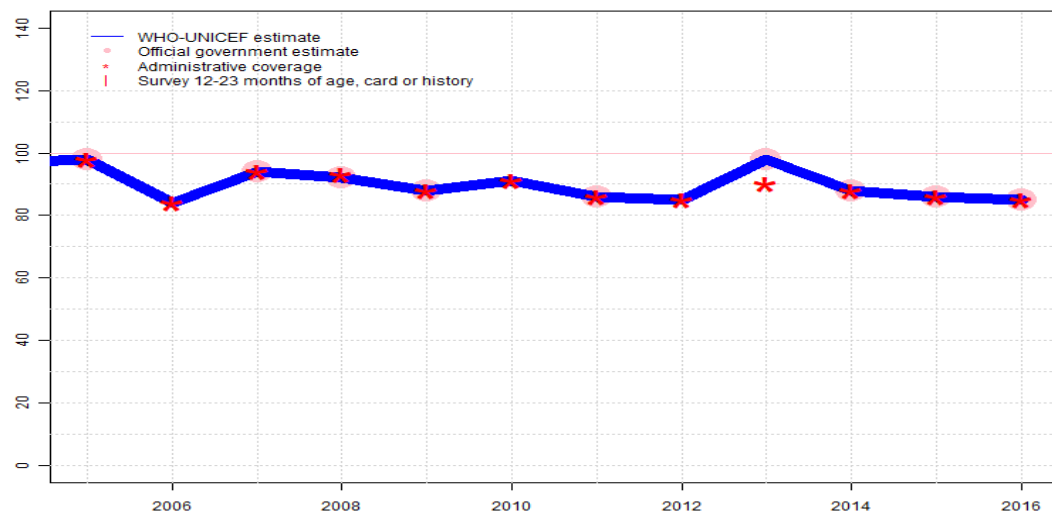
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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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Turkey - MCV2

TUR - 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. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

2015: Estimate based on coverage reported by national government. Estimate of 86 percent changed from previous revision value of 88 percent. GoC=R+ D+

2014: Estimate based on coverage reported by national government. GoC=R+ D+

2013: Estimate based on coverage reported by national government. Estimate challenged by: D-

2012: Estimate based on reported administrative estimate. GoC=R+ D+

2011: Estimate based on coverage reported by national government. GoC=R+ D+

2010: Estimate based on reported administrative estimate. GoC=R+ D+

2009: Estimate based on coverage reported by national government. GoC=R+ D+

2008: Estimate based on coverage reported by national government. GoC=R+ D+

2007: Estimate based on coverage reported by national government. GoC=R+ D+

2006: Estimate based on reported administrative estimate. GoC=R+ D+

2005: Estimate based on coverage reported by national government. GoC=R+ D+

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	98	84	94	92	88	91	86	85	98	88	86	85
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●	●●	●●	●●
Official	98	NA	94	92	88	NA	86	NA	98	88	86	85
Administrative	98	84	94	93	88	91	86	85	90	88	86	85
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

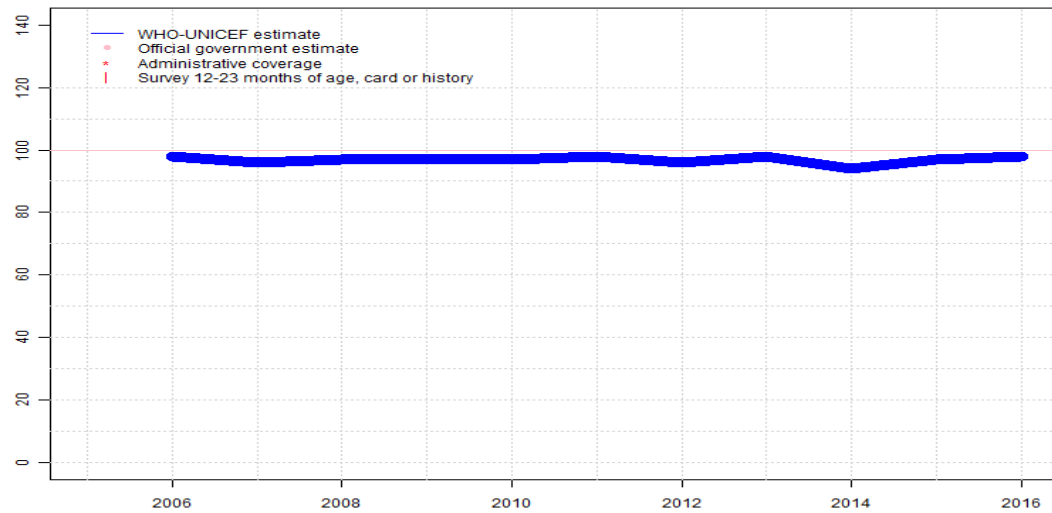
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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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Turkey - RCV1

TUR - 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. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

2015: Estimate based on estimated MCV1. Estimate of 97 percent changed from previous revision value of 94 percent. GoC=R+ D+

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

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

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

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

2010: Estimate based on estimated MCV1. GoC=R+ D+

2009: Estimate based on estimated MCV1. GoC=R+ S+ D+

2008: Estimate based on estimated MCV1. GoC=R+ S+ D+

2007: Estimate based on estimated MCV1. GoC=R+ S+ D+

2006: Estimate based on estimated MCV1. Estimate challenged by: D-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	98	96	97	97	97	98	96	98	94	97	98
Estimate GoC	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

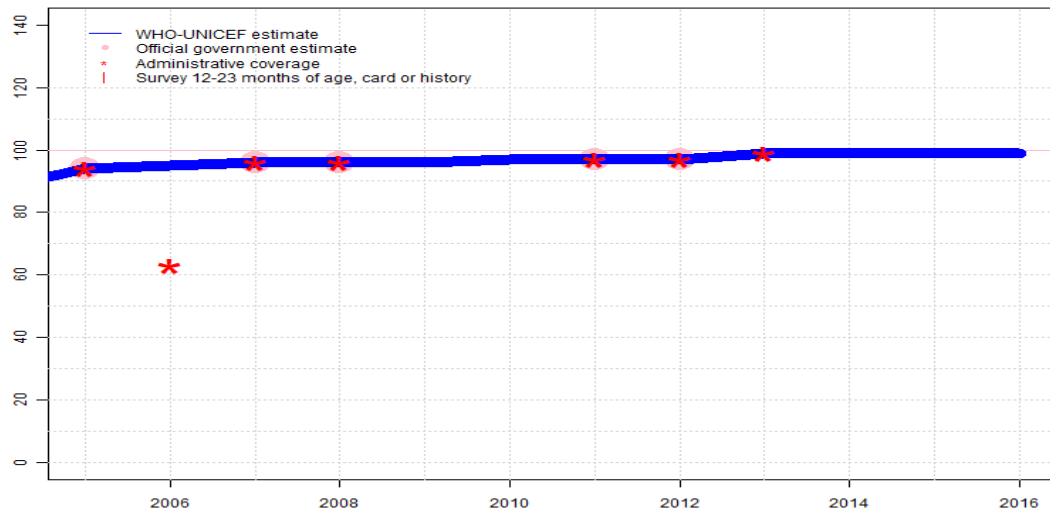
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Turkey - HepBB

TUR - HepBB



Description:

- 2016: Estimate based on extrapolation from data reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=No accepted empirical data
- 2015: Estimate based on extrapolation from data reported by national government. GoC=No accepted empirical data
- 2014: Estimate based on extrapolation from data reported by national government. GoC=No accepted empirical data
- 2013: Estimate based on reported administrative estimate. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2009: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on interpolation between reported values. Reported data excluded due to decline in reported coverage from 94 percent to 63 percent with increase to 96 percent. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	94	95	96	96	96	97	97	97	99	99	99	99
Estimate GoC	●●	●	●●	●●	●	●	●●	●●	●●	●	●	●
Official	94	NA	96	96	NA	NA	97	97	NA	NA	NA	NA
Administrative	94	63	96	96	NA	NA	97	97	99	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

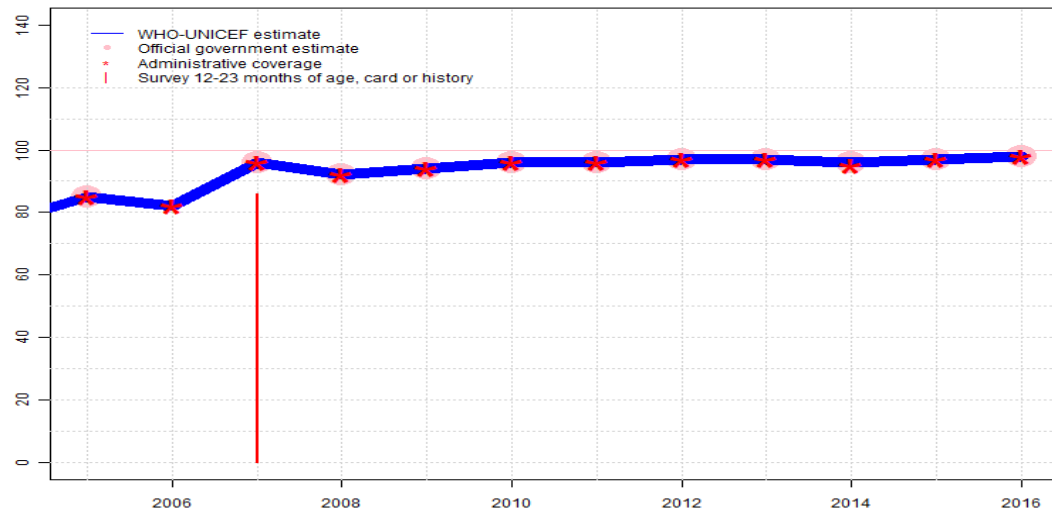
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Turkey - HepB3

TUR - HepB3



Description:

- 2016: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Estimate of 97 percent changed from previous revision value of 96 percent. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 93 percent based on 1 survey(s). Turkey Demographic and Health Survey 2008 card or history results of 86 percent modified for recall bias to 93 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 70 percent. GoC=R+ S+ D+
- 2006: Estimate based on reported data. Estimate challenged by: S-
- 2005: Estimate based on reported data. GoC=R+ S+ D+

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	85	82	96	92	94	96	96	97	97	96	97	98
Estimate GoC	●●●	●	●●●	●●●	●●●	●●	●●	●●	●●	●●	●●	●●
Official	85	NA	96	92	94	96	96	97	97	96	97	98
Administrative	85	82	96	92	94	96	96	97	97	95	97	98
Survey	NA	NA	86	NA	NA	NA	NA	NA	NA	NA	NA	NA

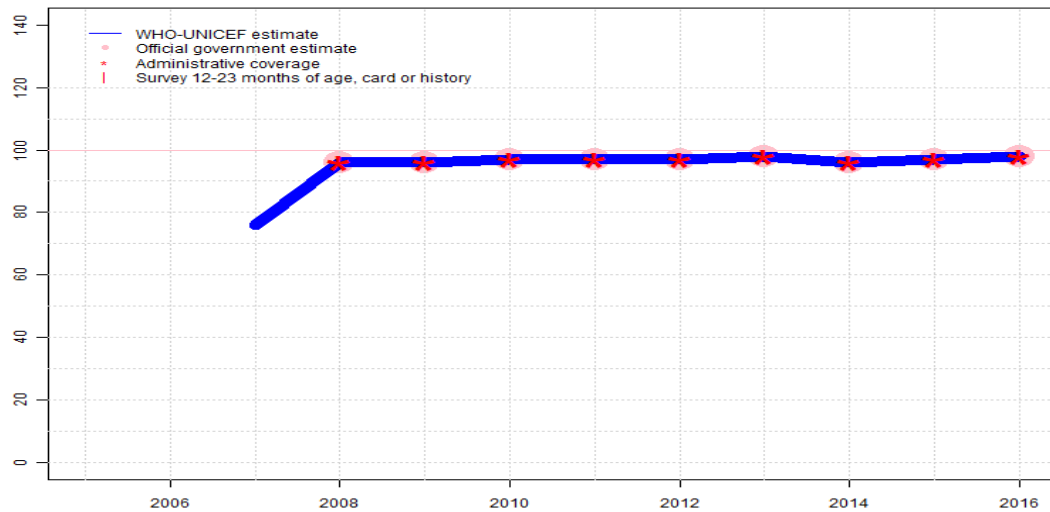
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Turkey - Hib3

TUR - Hib3



Description:

- 2016: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Estimate of 97 percent changed from previous revision value of 96 percent. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Hib vaccine introduced in 2006 and full coverage achieved in 2008. Estimate challenged by: D-
- 2007: Estimate of 76 percent assigned by working group. Hib vaccine introduced in 2006. 91 percent coverage achieved during the last 10 months of 2007. Hib vaccine introduced in 2006. Reporting started in 2007. GoC=D+

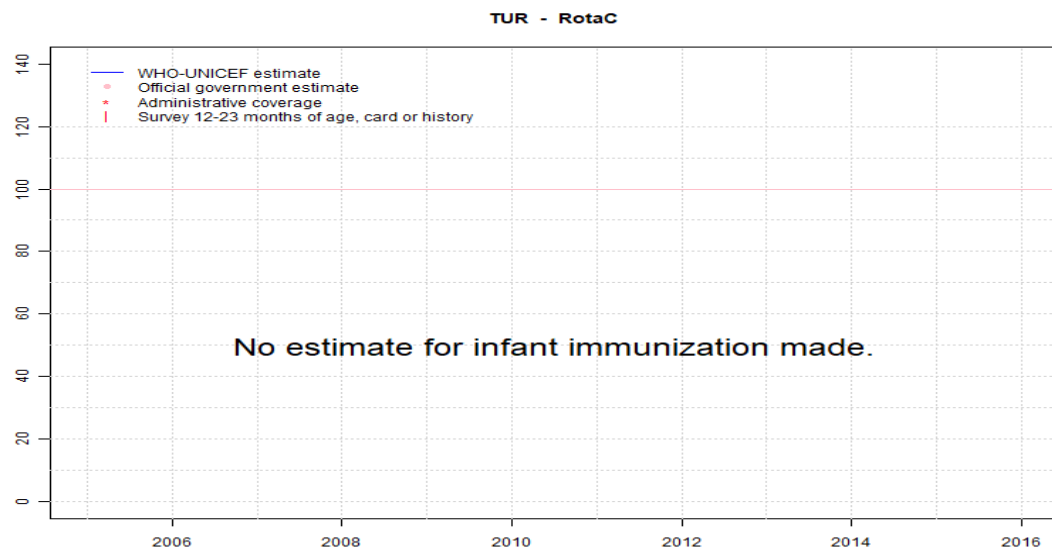
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	76	96	96	97	97	97	98	96	97	98
Estimate GoC	NA	NA	••	•	••	••	••	••	••	••	••	••
Official	NA	NA	NA	96	96	97	97	97	98	96	97	98
Administrative	NA	NA	NA	96	96	97	97	97	98	96	97	98
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

Turkey - 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

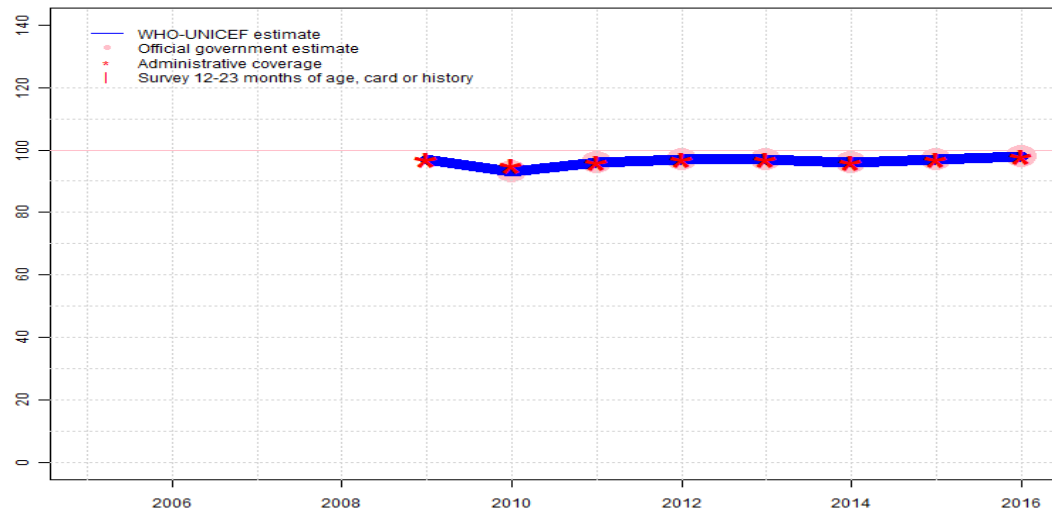
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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.

Turkey - PcV3

TUR - PcV3



Description:

- 2016: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Estimate of 97 percent changed from previous revision value of 96 percent. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on reported administrative estimate. Pneumococcal conjugate vaccine was introduced in 2008 and reporting began in 2009. GoC=R+ D+

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	97	93	96	97	97	96	97	98
Estimate GoC	NA	NA	NA	NA	••	••	••	••	••	••	••	••
Official	NA	NA	NA	NA	NA	93	96	97	97	96	97	98
Administrative	NA	NA	NA	NA	97	95	96	97	97	96	97	98
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.

Turkey - survey details

2007 Turkey Demographic and Health Survey 2008

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <15 months	96	15-26 m	711	73
BCG	Card	71	15-26 m	711	73
BCG	Card or History	96	15-26 m	711	73
BCG	History	25	15-26 m	711	73
DTP1	C or H <15 months	96	15-26 m	711	73
DTP1	Card	72	15-26 m	711	73
DTP1	Card or History	97	15-26 m	711	73
DTP1	History	25	15-26 m	711	73
DTP3	C or H <15 months	85	15-26 m	711	73
DTP3	Card	71	15-26 m	711	73
DTP3	Card or History	89	15-26 m	711	73
DTP3	History	18	15-26 m	711	73
HepB1	C or H <15 months	96	15-26 m	711	73
HepB1	Card	72	15-26 m	711	73
HepB1	Card or History	96	15-26 m	711	73
HepB1	History	24	15-26 m	711	73
HepB3	C or H <15 months	84	15-26 m	711	73
HepB3	Card	70	15-26 m	711	73
HepB3	Card or History	86	15-26 m	711	73
HepB3	History	16	15-26 m	711	73
MCV1	C or H <15 months	86	15-26 m	711	73
MCV1	Card	66	15-26 m	711	73
MCV1	Card or History	89	15-26 m	711	73
MCV1	History	23	15-26 m	711	73
Pol1	C or H <15 months	96	15-26 m	711	73
Pol1	Card	72	15-26 m	711	73
Pol1	Card or History	97	15-26 m	711	73
Pol1	History	25	15-26 m	711	73
Pol3	C or H <15 months	85	15-26 m	711	73
Pol3	Card	70	15-26 m	711	73
Pol3	Card or History	89	15-26 m	711	73
Pol3	History	19	15-26 m	711	73

2003 Turkey Demographic and Health Survey 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	86	12-23 m	749	54
BCG	Card	52	12-23 m	749	54
BCG	Card or history	88	12-23 m	749	54
BCG	History	36	12-23 m	749	54
DTP1	C or H <12 months	87	12-23 m	749	54
DTP1	Card	52	12-23 m	749	54
DTP1	Card or history	88	12-23 m	749	54
DTP1	History	37	12-23 m	749	54
DTP3	C or H <12 months	62	12-23 m	749	54
DTP3	Card	48	12-23 m	749	54
DTP3	Card or history	64	12-23 m	749	54
DTP3	History	16	12-23 m	749	54
MCV1	C or H <12 months	71	12-23 m	749	54
MCV1	Card	49	12-23 m	749	54
MCV1	Card or history	79	12-23 m	749	54
MCV1	History	30	12-23 m	749	54
Pol1	C or H <12 months	92	12-23 m	749	54
Pol1	Card	52	12-23 m	749	54
Pol1	Card or history	95	12-23 m	749	54
Pol1	History	42	12-23 m	749	54
Pol3	C or H <12 months	66	12-23 m	749	54
Pol3	Card	48	12-23 m	749	54
Pol3	Card or history	69	12-23 m	749	54
Pol3	History	21	12-23 m	749	54

1997 Turkish Demographic and Health Survey 1998, 1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	87	12-23 m	689	38
BCG	Card	36	12-23 m	266	38
BCG	Card or History	88	12-23 m	689	38
BCG	History	52	12-23 m	424	38
DTP1	C or H <12 months	86	12-23 m	689	38
DTP1	Card	38	12-23 m	266	38
DTP1	Card or History	87	12-23 m	689	38
DTP1	History	49	12-23 m	424	38
DTP3	C or H <12 months	56	12-23 m	689	38
DTP3	Card	34	12-23 m	266	38

Turkey - survey details

DTP3	Card or History	59	12-23 m	689	38	Pol1	Card or History	94	12-23 m	689	38
DTP3	History	24	12-23 m	424	38	Pol1	History	56	12-23 m	424	38
MCV1	C or H <12 months	71	12-23 m	689	38	Pol3	C or H <12 months	61	12-23 m	689	38
MCV1	Card	33	12-23 m	266	38	Pol3	Card	36	12-23 m	266	38
MCV1	Card or History	78	12-23 m	689	38	Pol3	Card or History	64	12-23 m	689	38
MCV1	History	45	12-23 m	424	38	Pol3	History	29	12-23 m	424	38
Pol1	C or H <12 months	92	12-23 m	689	38						
Pol1	Card	38	12-23 m	266	38						

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