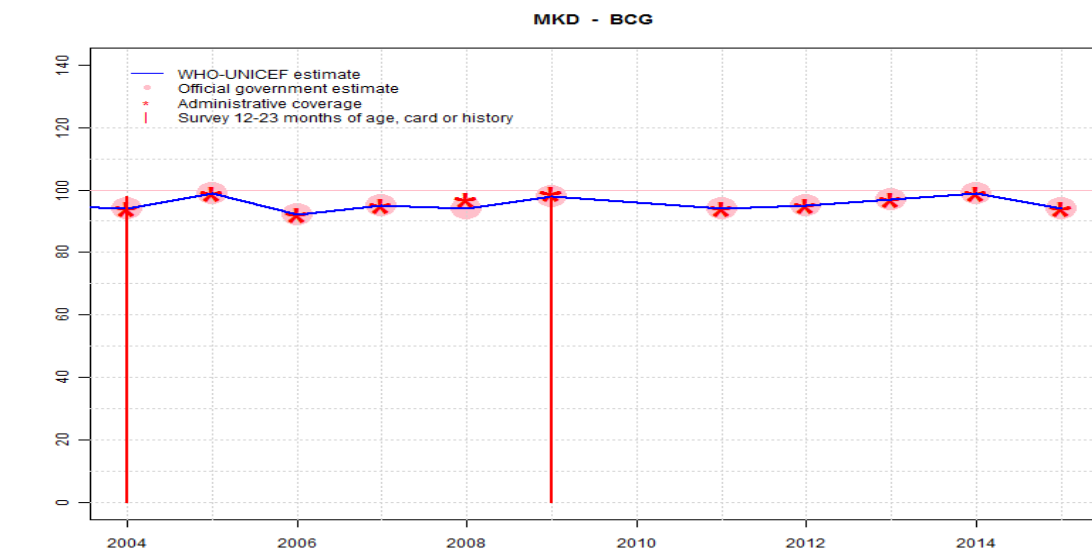


The former Yugoslav Republic of Macedonia - BCG



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	94	99	92	95	94	98	96	94	95	97	99	94
Estimate GoC	•	•••	•••	••	••	••	•	••	••	••	••	••
Official	94	99	92	95	94	98	NA	94	95	97	99	94
Administrative	94	99	92	95	97	99	NA	94	95	97	99	94
Survey	98	NA	NA	NA	NA	97.6	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.

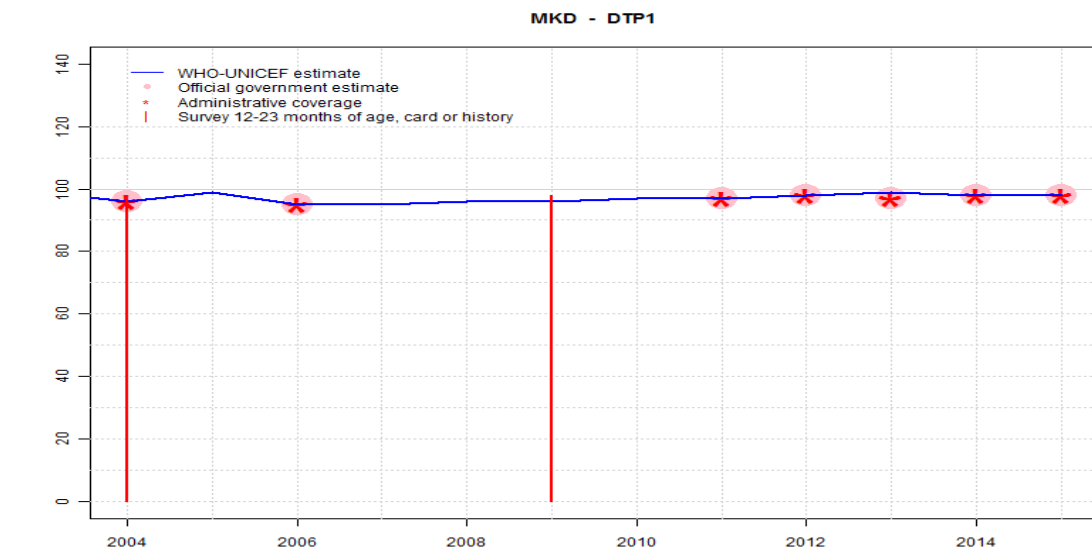
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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.

Description:

- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. Survey results ignored. Sample size 270 less than 300. GoC=R+ D+
- 2010: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

The former Yugoslav Republic of Macedonia - DTP1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	96	99	95	95	96	96	97	97	98	99	98	98
Estimate GoC	●●●	●●	●●●	●	●	●	●	●●	●●	●	●●	●●
Official	96	NA	95	NA	NA	NA	NA	97	98	97	98	98
Administrative	96	NA	95	NA	NA	NA	NA	97	98	97	98	98
Survey	96.6	NA	NA	NA	NA	97.9	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.

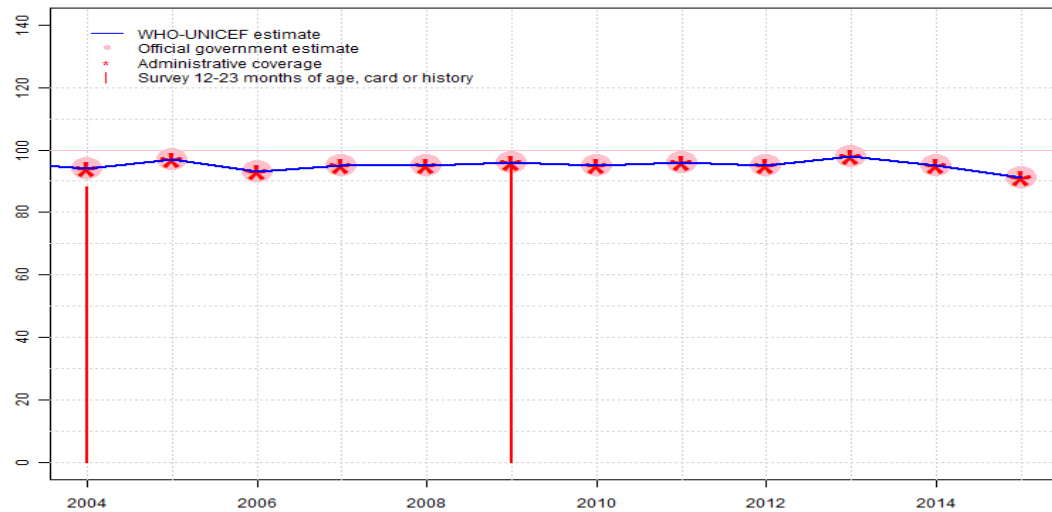
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: 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+
- 2005: DTP1 coverage estimated based on DTP3 coverage of 97. GoC=S+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2007: 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
- 2009: Estimate based on interpolation between data reported by national government. Survey results ignored. Sample size 270 less than 300. GoC=No accepted empirical data
- 2010: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+
- 2013: DTP1 coverage estimated based on DTP3 coverage of 98. Estimate challenged by: R-
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

The former Yugoslav Republic of Macedonia - DTP3

MKD - DTP3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	94	97	93	95	95	96	95	96	95	98	95	91
Estimate GoC	●●●	●●●	●●●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Official	94	97	93	95	95	96	95	96	95	98	95	91
Administrative	94	97	93	95	95	96	95	96	95	98	95	91
Survey	88.3	NA	NA	NA	NA	95.2	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.

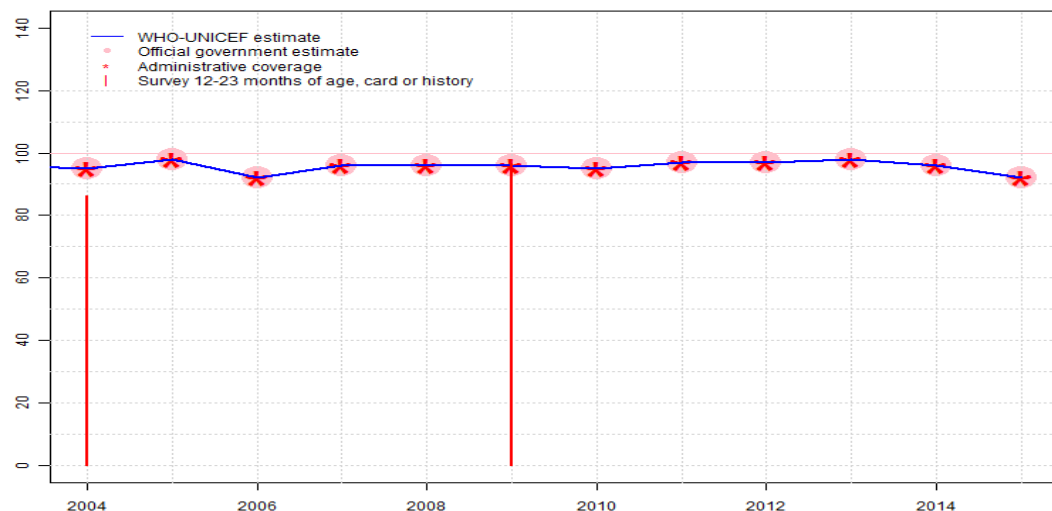
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 93 percent based on 1 survey(s). Republic of Macedonia Multiple Indicator Cluster Survey 2005-2006 card or history results of 88 percent modified for recall bias to 93 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 75 percent and 3d dose card only coverage of 72 percent. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. Survey results ignored. Sample size 270 less than 300. Macedonia MICS 2011 card or history results of 95 percent modified for recall bias to 96 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 96 percent and 3d dose card only coverage of 94 percent. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

The former Yugoslav Republic of Macedonia - Pol3

MKD - Pol3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	95	98	92	96	96	96	95	97	97	98	96	92
Estimate GoC	●●●	●●●	●●●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Official	95	98	92	96	96	96	95	97	97	98	96	92
Administrative	95	98	92	96	96	96	95	97	97	98	96	92
Survey	86.4	NA	NA	NA	NA	96.7	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.

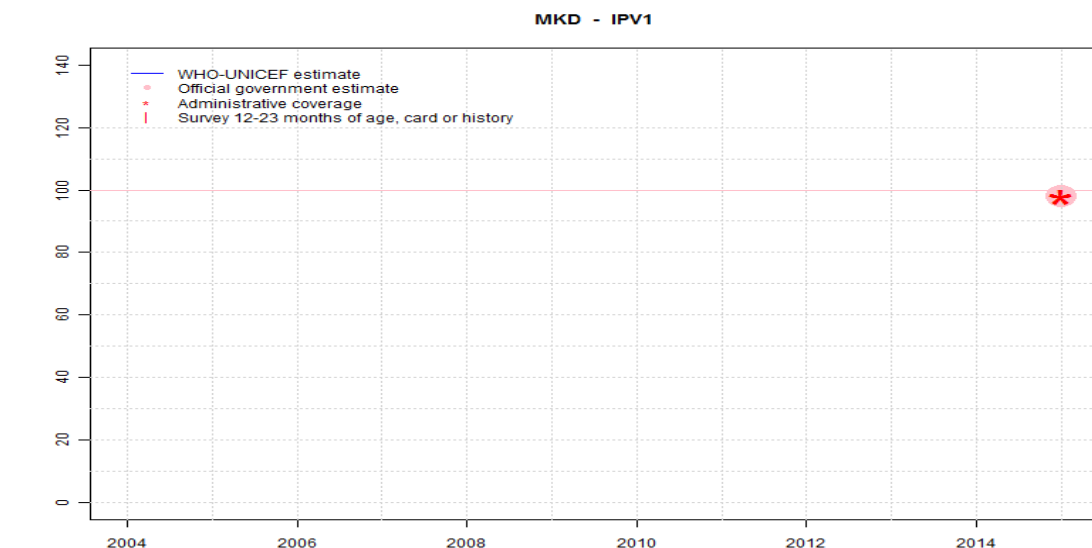
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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.

Description:

- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 95 percent based on 1 survey(s). Republic of Macedonia Multiple Indicator Cluster Survey 2005-2006 card or history results of 86 percent modified for recall bias to 95 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 74 percent and 3d dose card only coverage of 72 percent. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. Survey results ignored. Sample size 270 less than 300. Macedonia MICS 2011 card or history results of 97 percent modified for recall bias to 97 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 96 percent and 3d dose card only coverage of 95 percent. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

The former Yugoslav Republic of Macedonia - IPV1



Description:

2015: 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. IPV introduced as DTaP-Hib-IPV and DTaP-Hib-IPV-HepB in 2015 GoC=R+ D+

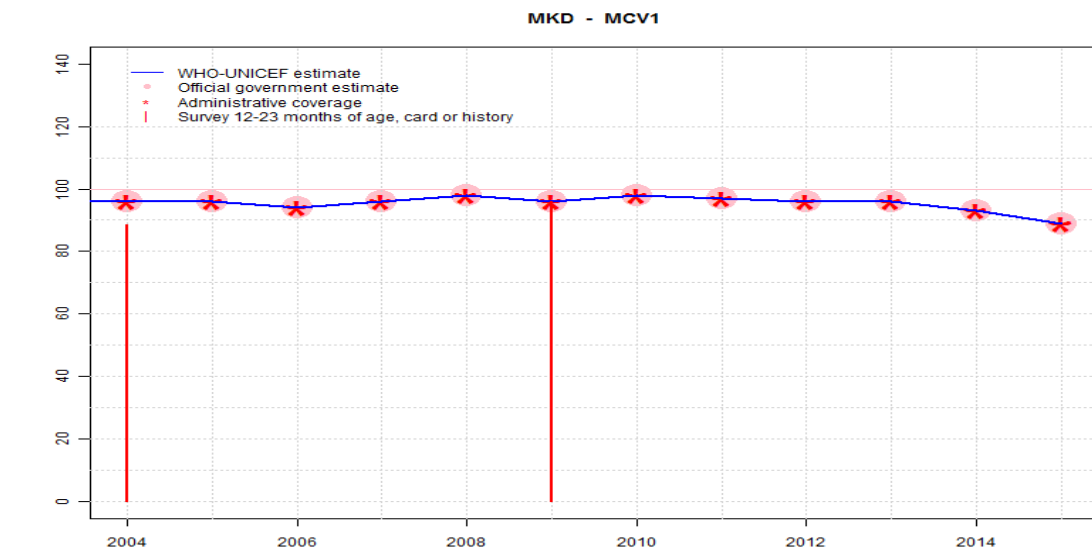
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	98
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	98
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	98
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

The former Yugoslav Republic of Macedonia - MCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	96	96	94	96	98	96	98	97	96	96	93	89
Estimate GoC	●●●	●●●	●●●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Official	96	96	94	96	98	96	98	97	96	96	93	89
Administrative	96	96	94	96	98	96	98	97	96	96	93	89
Survey	88.4	NA	NA	NA	NA	96	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.

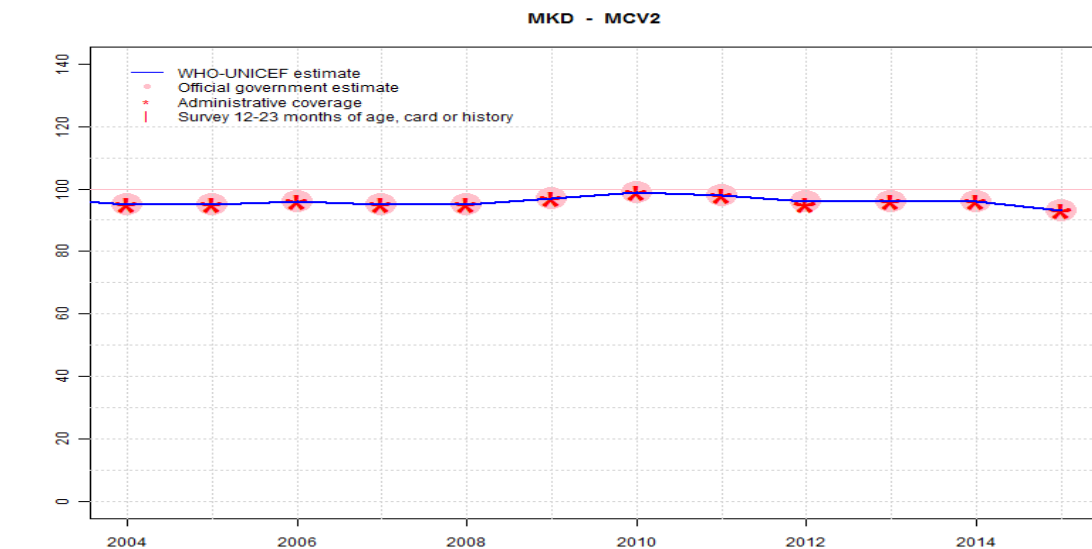
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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.

Description:

- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. Survey results ignored. Sample size 270 less than 300. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

The former Yugoslav Republic of Macedonia - MCV2



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.

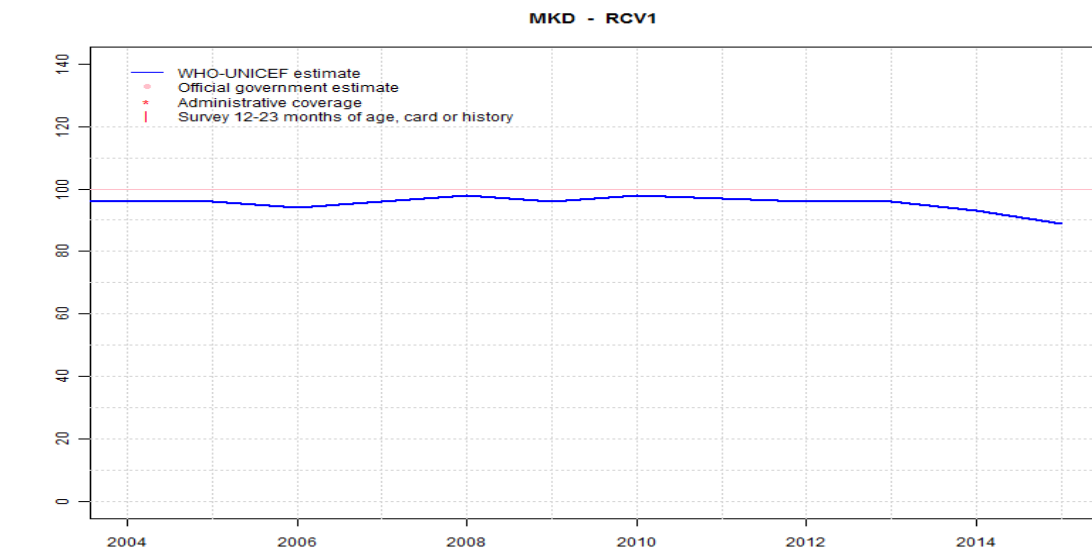
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

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

- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

The former Yugoslav Republic of Macedonia - RCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	96	96	94	96	98	96	98	97	96	96	93	89
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.

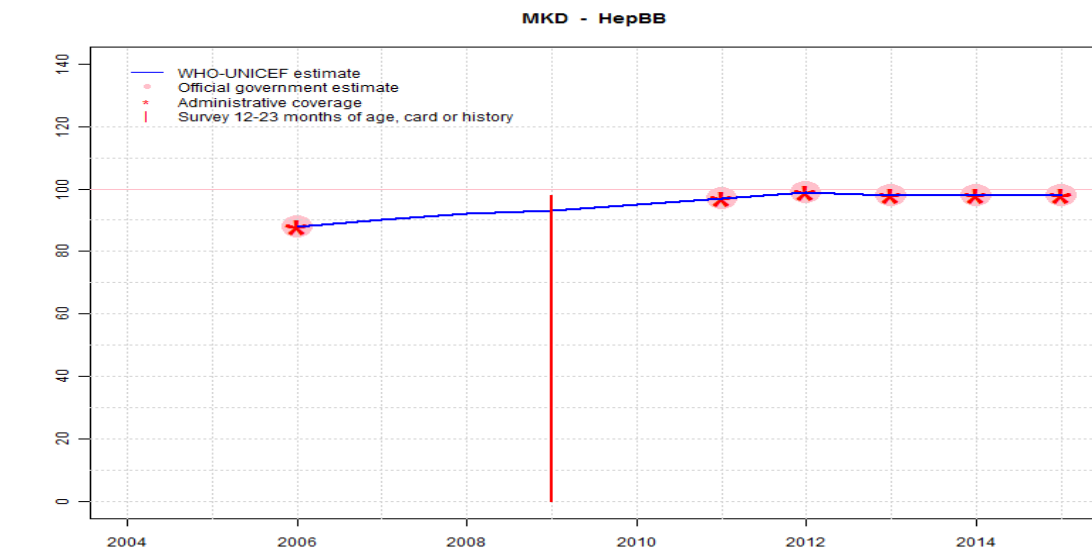
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

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 accompanying graph and data table.

- 2004: Estimate based on estimated MCV1. GoC=R+ S+ D+
- 2005: Estimate based on estimated MCV1. GoC=R+ S+ D+
- 2006: Estimate based on estimated MCV1. GoC=R+ S+ D+
- 2007: Estimate based on estimated MCV1. GoC=R+ D+
- 2008: Estimate based on estimated MCV1. GoC=R+ D+
- 2009: Estimate based on estimated MCV1. GoC=R+ D+
- 2010: Estimate based on estimated MCV1. GoC=R+ D+
- 2011: Estimate based on estimated MCV1. GoC=R+ D+
- 2012: Estimate based on estimated MCV1. GoC=R+
- 2013: Estimate based on estimated MCV1. GoC=R+ D+
- 2014: Estimate based on estimated MCV1. GoC=R+ D+
- 2015: 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+

The former Yugoslav Republic of Macedonia - HepBB



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	88	90	92	93	95	97	99	98	98	98
Estimate GoC	NA	NA	••	•	•	•	•	••	••	••	••	••
Official	NA	NA	88	NA	NA	NA	NA	97	99	98	98	98
Administrative	NA	NA	88	NA	NA	NA	NA	97	99	98	98	98
Survey	NA	NA	NA	NA	NA	97.8	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.

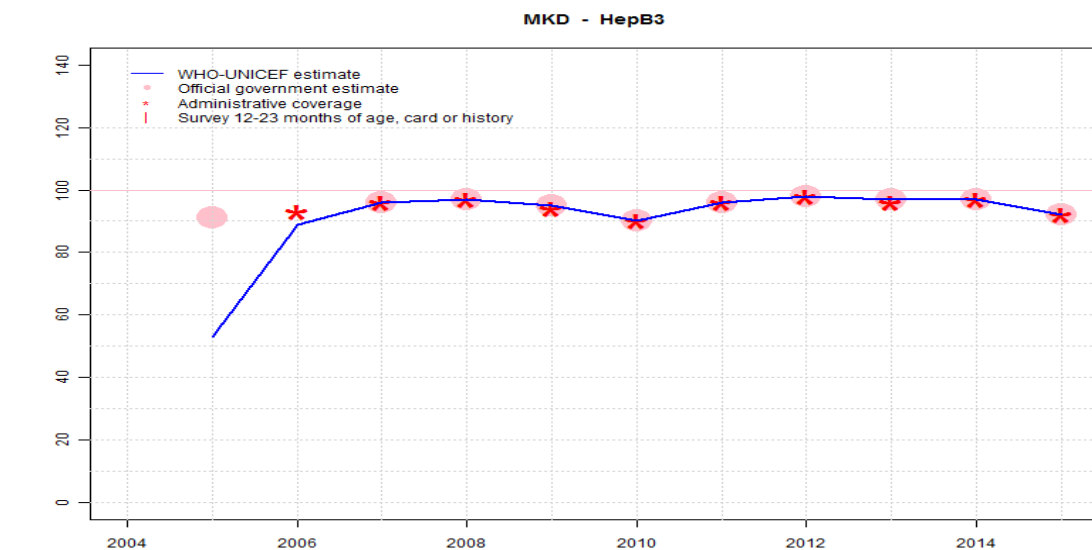
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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.

Description:

- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2008: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2009: Estimate based on interpolation between reported values. Survey results ignored. Sample size 270 less than 300. GoC=No accepted empirical data
- 2010: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

The former Yugoslav Republic of Macedonia - HepB3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	53	89	96	97	95	90	96	98	97	97	92
Estimate GoC	NA	●	●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Official	NA	91	NA	96	97	95	90	96	98	97	97	92
Administrative	NA	NA	93	96	97	94	90	96	98	96	97	92
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.

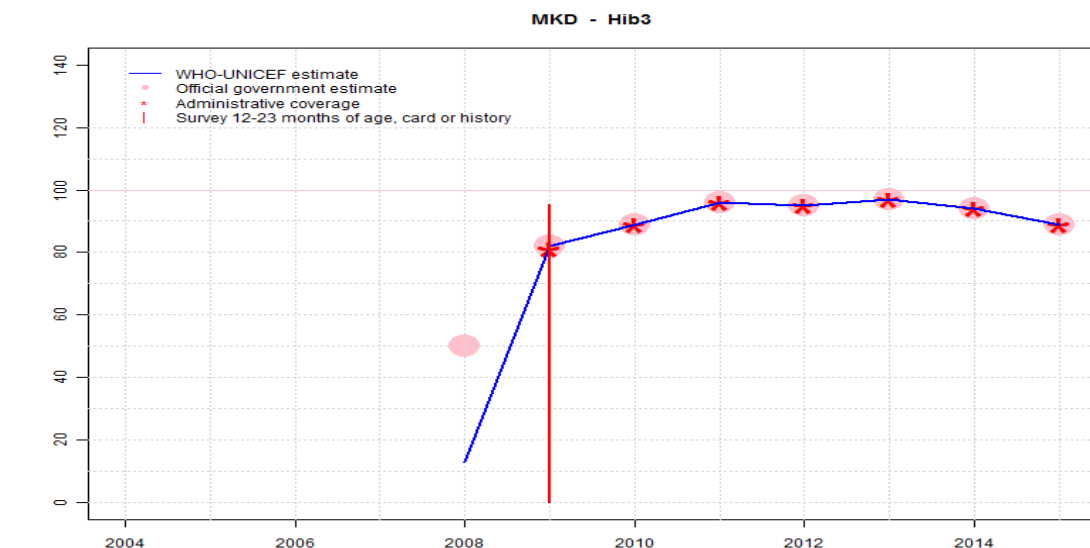
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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.

Description:

- 2005: Ninety-one percent coverage achieved in 58 percent of the country. HepB vaccine introduced in 2004. Reporting started in 2005. Vaccine presentation is HepB. Estimate challenged by: R-
- 2006: Ninety-three percent coverage achieved in 95 percent of the country. Estimate challenged by: R-
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

The former Yugoslav Republic of Macedonia - Hib3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	13	82	89	96	95	97	94	89
Estimate GoC	NA	NA	NA	NA	•	••	••	••	••	••	••	•
Official	NA	NA	NA	NA	50	82	89	96	95	97	94	89
Administrative	NA	NA	NA	NA	NA	81	89	96	95	97	94	89
Survey	NA	NA	NA	NA	NA	95.3	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.

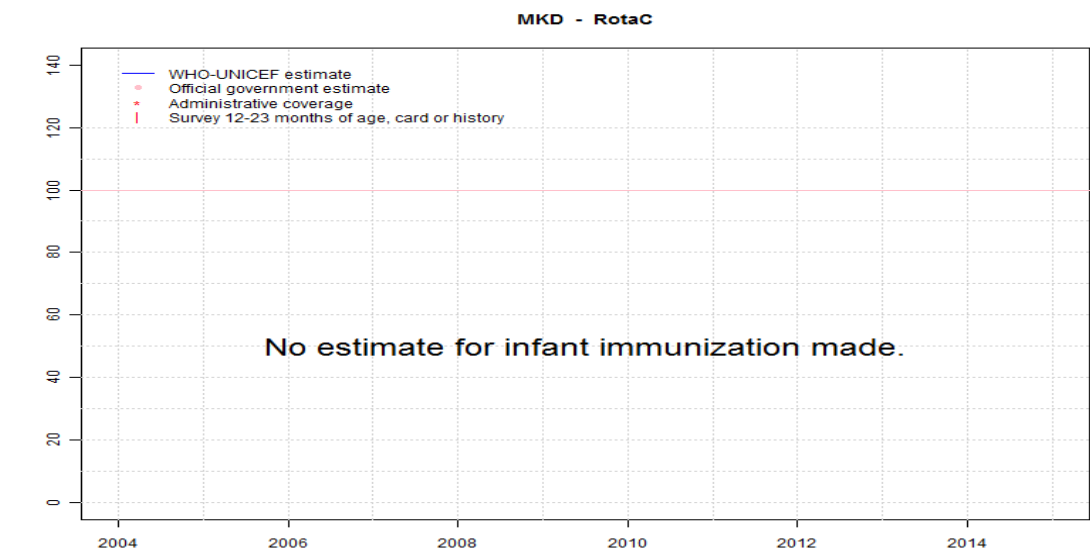
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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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Description:

- 2008: Hib vaccine introduced in 2008. Vaccine presentation is Hib mono. In 2008, 49 percent coverage was reached in 27 percent of the country. Estimate challenged by: R-
- 2009: Estimate based on coverage reported by national government. Survey results ignored. Sample size 270 less than 300. Macedonia MICS 2011 card or history results of 95 percent modified for recall bias to 95 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 97 percent and 3d dose card only coverage of 94 percent. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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. Estimate challenged by: D-

The former Yugoslav Republic of Macedonia - RotaC



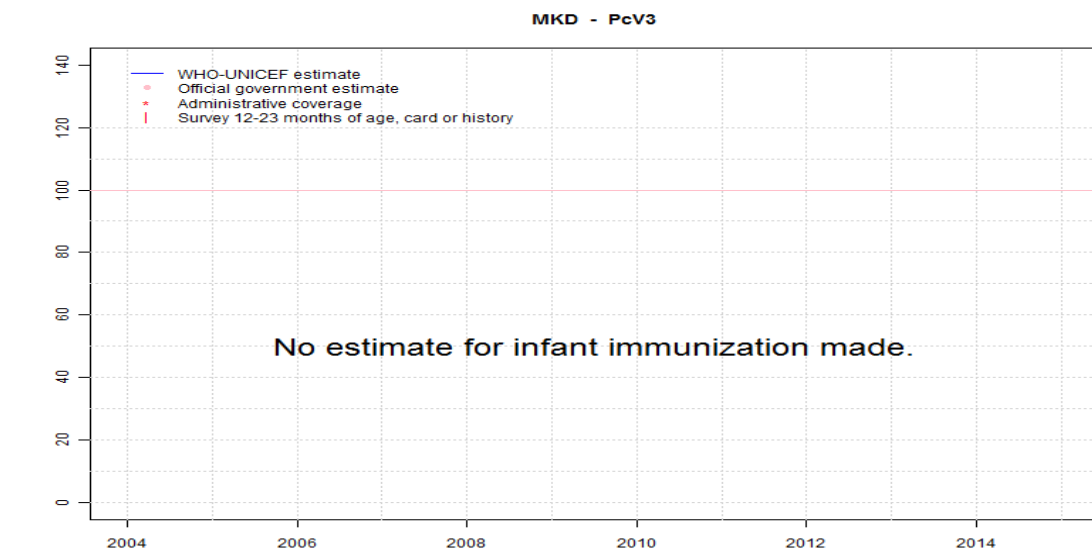
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

The former Yugoslav Republic of Macedonia - PcV3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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.

The former Yugoslav Republic of Macedonia - survey details

2009 Macedonia MICS 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <18 months	97	18-29 m	-	89
BCG	Card	95.9	18-29 m	-	89
BCG	Card or History	97.6	18-29 m	270	89
BCG	History	1.8	18-29 m	-	89
DTP1	C or H <18 months	97.9	18-29 m	-	89
DTP1	Card	96.2	18-29 m	-	89
DTP1	Card or History	97.9	18-29 m	270	89
DTP1	History	1.8	18-29 m	-	89
DTP3	C or H <18 months	91.9	18-29 m	-	89
DTP3	Card	94.3	18-29 m	-	89
DTP3	Card or History	95.2	18-29 m	270	89
DTP3	History	0.9	18-29 m	-	89
HepB1	C or H <18 months	96.5	18-29 m	-	89
HepB1	Card	92.1	18-29 m	-	89
HepB1	Card or History	96.9	18-29 m	270	89
HepB1	History	4.8	18-29 m	-	89
HepBB	C or H <18 months	97.4	18-29 m	-	89
HepBB	Card	96.1	18-29 m	-	89
HepBB	Card or History	97.8	18-29 m	270	89
HepBB	History	1.8	18-29 m	-	89
Hib1	C or H <18 months	97.9	18-29 m	-	89
Hib1	Card	97	18-29 m	-	89
Hib1	Card or History	97.9	18-29 m	270	89
Hib1	History	0.9	18-29 m	-	89
Hib3	C or H <18 months	93.5	18-29 m	-	89
Hib3	Card	94.4	18-29 m	-	89
Hib3	Card or History	95.3	18-29 m	270	89
Hib3	History	0.9	18-29 m	-	89
MCV1	C or H <18 months	91.6	18-29 m	-	89
MCV1	Card	94.3	18-29 m	-	89
MCV1	Card or History	96	18-29 m	270	89
MCV1	History	1.8	18-29 m	-	89
Pol1	C or H <18 months	97.9	18-29 m	-	89
Pol1	Card	96.2	18-29 m	-	89
Pol1	Card or History	97.9	18-29 m	270	89
Pol1	History	1.8	18-29 m	-	89
Pol3	C or H <18 months	92.5	18-29 m	-	89

Pol3	Card	94.9	18-29 m	-	89
Pol3	Card or History	96.7	18-29 m	270	89
Pol3	History	1.8	18-29 m	-	89

2004 Republic of Macedonia Multiple Indicator Cluster Survey 2005-2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	97.2	15-26 m	884	75
BCG	Card	74.3	15-26 m	884	75
BCG	Card or History	98	15-26 m	884	75
BCG	History	19.1	15-26 m	884	75
DTP1	C or H <12 months	94	15-26 m	884	75
DTP1	Card	74.6	15-26 m	884	75
DTP1	Card or History	96.6	15-26 m	884	75
DTP1	History	14.9	15-26 m	884	75
DTP3	C or H <12 months	82.1	15-26 m	884	75
DTP3	Card	71.6	15-26 m	884	75
DTP3	Card or History	88.3	15-26 m	884	75
DTP3	History	10.1	15-26 m	884	75
MCV1	C or H <12 months	80.4	15-26 m	884	75
MCV1	Card	67.6	15-26 m	884	75
MCV1	Card or History	88.4	15-26 m	884	75
MCV1	History	15.2	15-26 m	884	75
Pol1	C or H <12 months	94.6	15-26 m	884	75
Pol1	Card	73.8	15-26 m	884	75
Pol1	Card or History	97	15-26 m	884	75
Pol1	History	17.6	15-26 m	884	75
Pol3	C or H <12 months	80.8	15-26 m	884	75
Pol3	Card	72.1	15-26 m	884	75
Pol3	Card or History	86.4	15-26 m	884	75
Pol3	History	9.4	15-26 m	884	75

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

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	99.1	13-24 m	275	-

The former Yugoslav Republic of Macedonia - survey details

DTP3	Card or History	97.9	13-24 m	275	-
MCV1	Card or History	92	13-24 m	275	-

Pol3	Card or History	97.9	13-24 m	275	-
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Further information and estimates for previous years are available at:

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

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