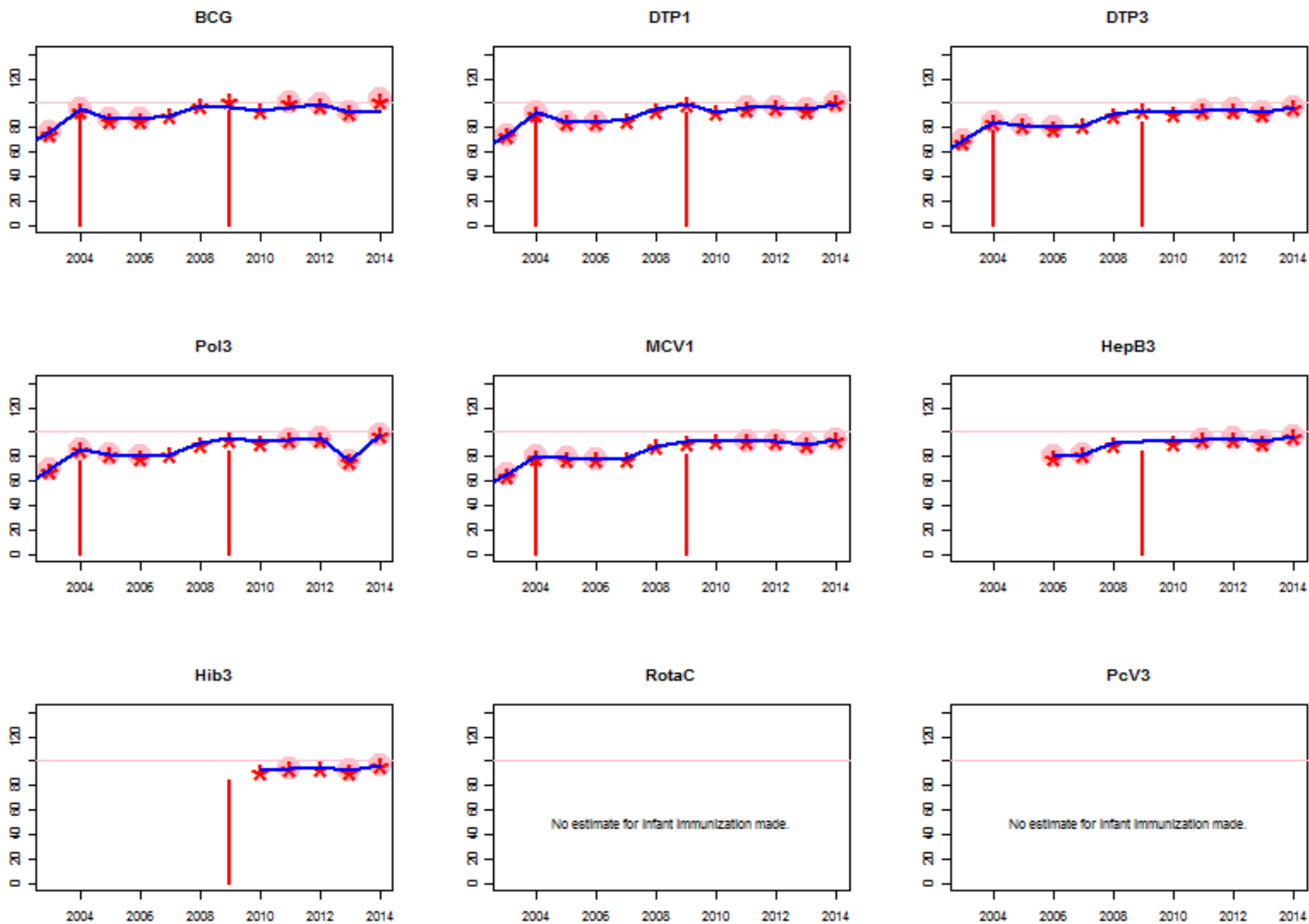
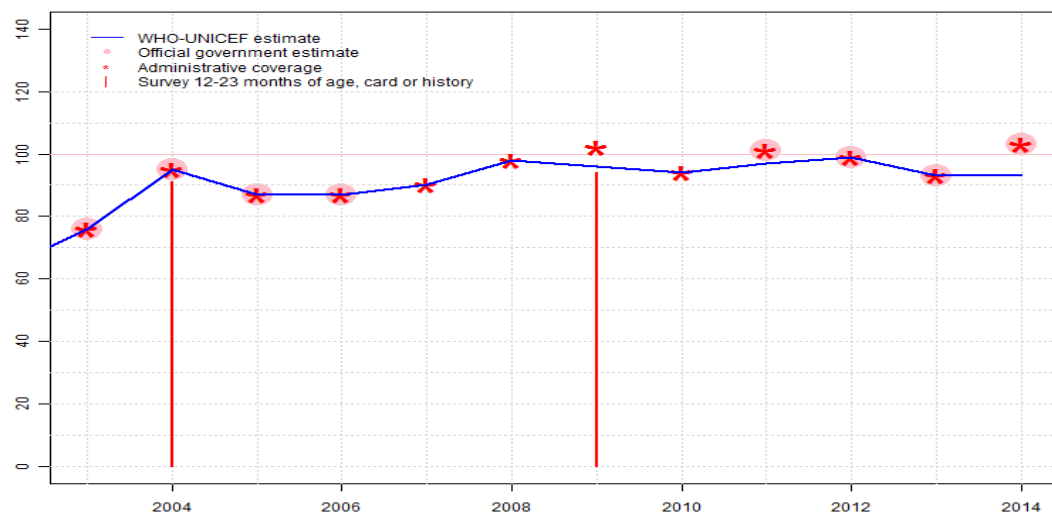


Cambodia: WHO and UNICEF estimates of immunization coverage: 2014 revision



Cambodia - BCG

KHM - BCG



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	76	95	87	87	90	98	96	94	97	99	93	93
Estimate GoC	•	•••	•••	•••	•••	•••	••	•••	••	••	••	••
Official	76	95	87	87	NA	NA	NA	NA	101	99	93	103
Administrative	76	95	87	87	90	98	102	94	101	99	93	103
Survey	NA	91	NA	NA	NA	NA	94	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: 2012 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.

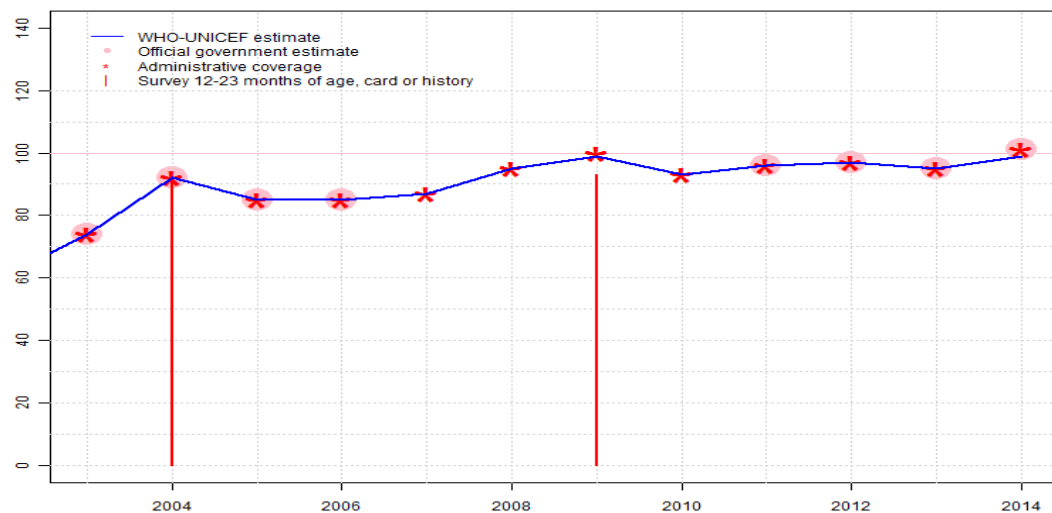
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 91 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 reported administrative data. GoC=R+ S+ D+
- 2008: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2009: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Reported data excluded. 102 percent greater than 100 percent. GoC=S+ D+
- 2010: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2011: Estimate based on interpolation between data reported by national government. Reported data excluded. 101 percent greater than 100 percent. GoC=S+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. Four months national stockout reported. GoC=R+ D+
- 2014: Estimate based on extrapolation from data reported by national government. Reported data excluded. 103 percent greater than 100 percent. WHO and UNICEF await the final results of the 2014 DHS survey. GoC=D+

Cambodia - DTP1

KHM - DTP1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	74	92	85	85	87	95	99	93	96	97	95	99
Estimate GoC	●	●	●	●	●	●●●	●●●	●●●	●●●	●●	●●	●
Official	74	92	85	85	NA	NA	NA	NA	96	97	95	101
Administrative	74	92	85	85	87	95	100	93	96	97	95	101
Survey	NA	91	NA	NA	NA	NA	93	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: 2012 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.

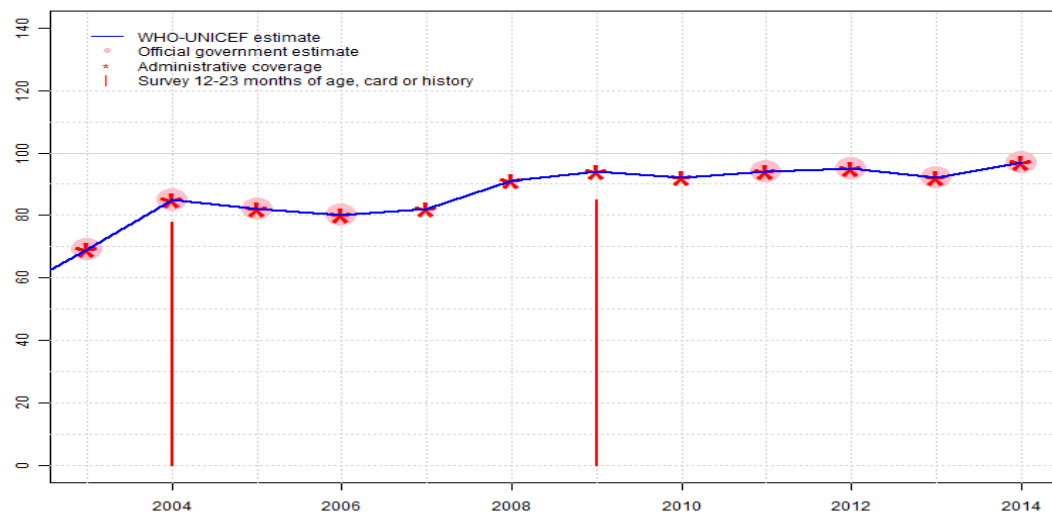
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 91 percent based on 1 survey(s). Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2007: Estimate based on reported administrative data. Estimate challenged by: D-
- 2008: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 93 percent based on 1 survey(s). GoC=R+ S+ D+
- 2010: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ 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: DTP1 coverage estimated based on DTP3 coverage of 97. Reported data excluded. 101 percent greater than 100 percent. WHO and UNICEF await the final results of the 2014 DHS survey. Estimate challenged by: R-

Cambodia - DTP3

KHM - DTP3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	69	85	82	80	82	91	94	92	94	95	92	97
Estimate GoC	●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●	●●	●●
Official	69	85	82	80	NA	NA	NA	NA	94	95	92	97
Administrative	69	85	82	80	82	91	94	92	94	95	92	97
Survey	NA	78	NA	NA	NA	NA	85	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: 2012 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.

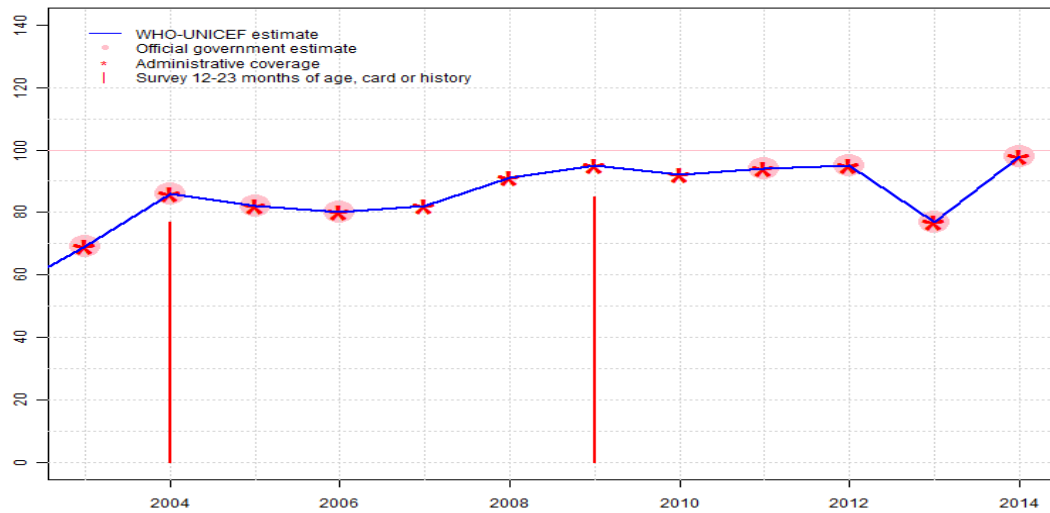
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2003: Estimate based on coverage reported by national government. 2003 reported data confirmed by data quality audit. Estimate challenged by: D-
- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 84 percent based on 1 survey(s). Cambodia Demographic and Health Survey 2005 card or history results of 78 percent modified for recall bias to 84 percent based on 1st dose card or history coverage of 91 percent, 1st dose card only coverage of 66 percent and 3d dose card only coverage of 61 percent. In 2004 the Ministry of Health and the Ministry of Planning revised the estimated number of births resulting in an increased proportion of children vaccinated. 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 reported administrative data. GoC=R+ S+ D+
- 2008: Estimate based on reported administrative data. Increase in 2008 due to change in the denominator based on the General Population Census, 2008. GoC=R+ S+ D+
- 2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 87 percent based on 1 survey(s). Cambodia Demographic and Health Survey 2010 card or history results of 85 percent modified for recall bias to 87 percent based on 1st dose card or history coverage of 93 percent, 1st dose card only coverage of 76 percent and 3d dose card only coverage of 71 percent. GoC=R+ S+ D+
- 2010: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ 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. WHO and UNICEF await the final results of the 2014 DHS survey. GoC=R+ D+

Cambodia - Pol3

KHM - Pol3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	69	86	82	80	82	91	95	92	94	95	77	98
Estimate GoC	●	●●●	●●●	●	●●●	●●●	●●●	●●●	●●●	●●	●●	●●
Official	69	86	82	80	NA	NA	NA	NA	94	95	77	98
Administrative	69	86	82	80	82	91	95	92	94	95	77	98
Survey	NA	77	NA	NA	NA	NA	85	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: 2012 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.

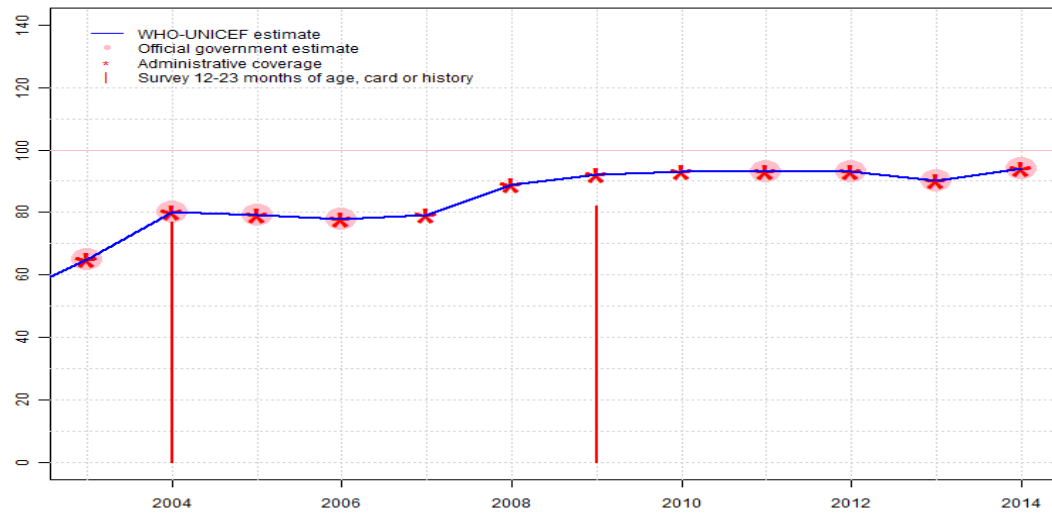
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2003: Estimate based on coverage reported by national government. 2003 reported data confirmed by data quality audit. Estimate challenged by: D-
- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 83 percent based on 1 survey(s). Cambodia Demographic and Health Survey 2005 card or history results of 77 percent modified for recall bias to 83 percent based on 1st dose card or history coverage of 91 percent, 1st dose card only coverage of 66 percent and 3d dose card only coverage of 60 percent. In 2004 the Ministry of Health and the Ministry of Planning revised the estimated number of births resulting in an increased proportion of children vaccinated. 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. Estimate challenged by: D-
- 2007: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2008: Estimate based on reported administrative data. Increase in 2008 due to change in the denominator based on the General Population Census, 2008. GoC=R+ S+ D+
- 2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Cambodia Demographic and Health Survey 2010 card or history results of 85 percent modified for recall bias to 88 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 76 percent and 3d dose card only coverage of 71 percent. GoC=R+ S+ D+
- 2010: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. Reported decline likely due to five months vaccine stockout. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. WHO and UNICEF await the final results of the 2014 DHS survey. Recovery from stock-out during prior year. GoC=R+ D+

Cambodia - MCV1

KHM - MCV1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	65	80	79	78	79	89	92	93	93	93	90	94
Estimate GoC	•	•••	•••	•••	•	•••	•••	••	••	••	••	••
Official	65	80	79	78	NA	NA	NA	NA	93	93	90	94
Administrative	65	80	79	78	79	89	92	93	93	93	90	94
Survey	NA	77	NA	NA	NA	NA	82	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: 2012 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.

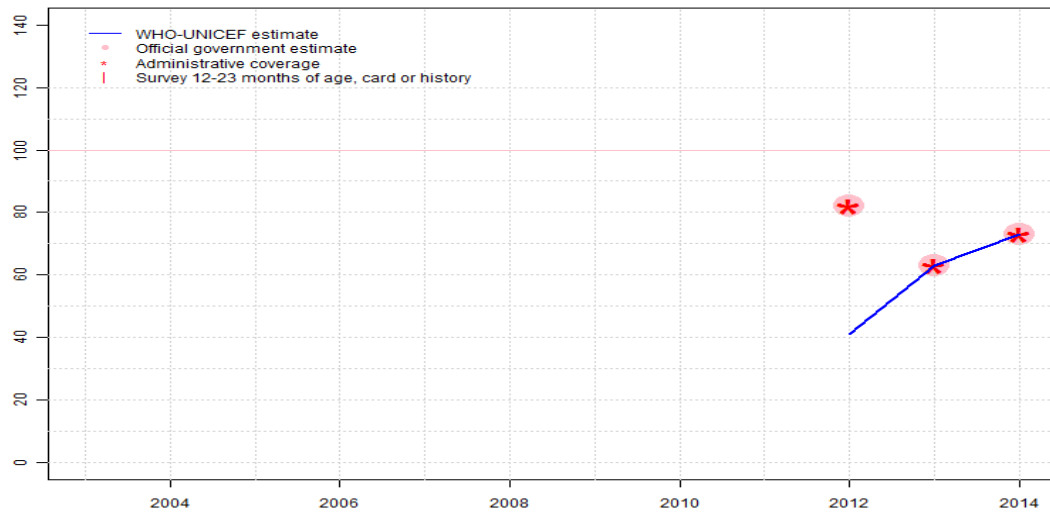
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2003: Estimate based on coverage reported by national government. 2003 reported data confirmed by data quality audit. Estimate challenged by: D-
- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 77 percent based on 1 survey(s). In 2004 the Ministry of Health and the Ministry of Planning revised the estimated number of births resulting in an increased proportion of children vaccinated. 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 reported administrative data. Estimate challenged by: D-
- 2008: Estimate based on reported administrative data. Increase in 2008 due to change in the denominator based on the General Population Census, 2008. Increase is consistent with other vaccines. GoC=R+ S+ D+
- 2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 82 percent based on 1 survey(s). GoC=R+ S+ D+
- 2010: Estimate based on reported administrative data. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. Measles and rubella combination introduced in 2012; second dose recommend at 18 months. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. WHO and UNICEF await the final results of the 2014 DHS survey. GoC=R+ D+

Cambodia - MCV2

KHM - MCV2



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	41	63	73
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	••	•••
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	82	63	73
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	82	63	73
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: 2012 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.

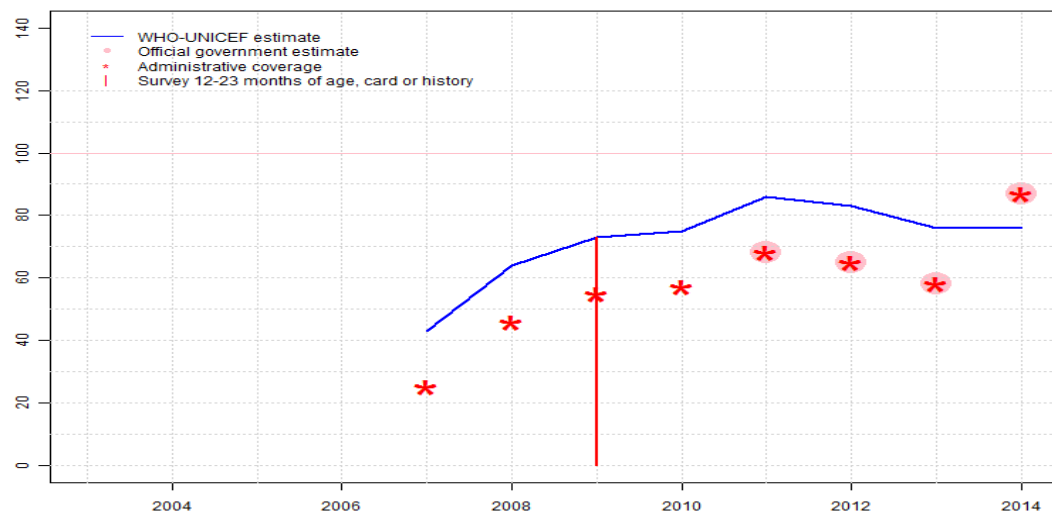
2012: Eighty-two percent coverage achieved in 50 percent of the national target population. Measles and rubella combination introduced in 2012; second dose recommend at 18 months. Estimate challenged by: R-

2013: Estimate based on nationally reported data. GoC=R+ D+

2014: Estimate based on coverage reported by national government. WHO and UNICEF await the final results of the 2014 DHS survey. GoC=R+ D+

Cambodia - HepBB

KHM - HepBB



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	43	64	73	75	86	83	76	76
Estimate GoC	NA	NA	NA	NA	•	•	•	•	•	•	•	••
Official	NA	NA	NA	NA	NA	NA	NA	NA	68	65	58	87
Administrative	NA	NA	NA	NA	25	46	55	57	68	65	58	87
Survey	NA	NA	NA	NA	NA	NA	73	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: 2012 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.

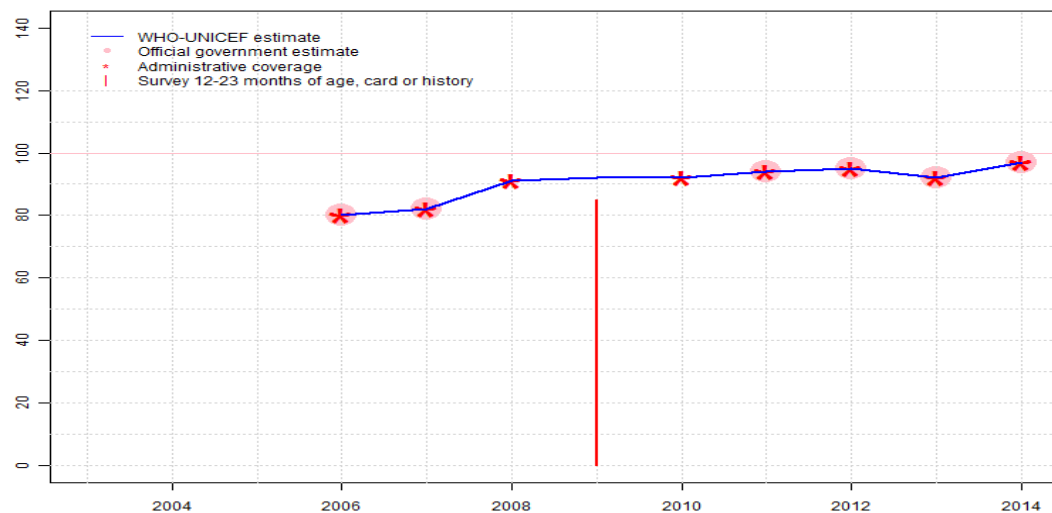
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2007: Reported data calibrated to 2009 levels. Estimate of 43 percent changed from previous revision value of 25 percent. Estimate challenged by: D-
- 2008: Reported data calibrated to 2009 levels. Estimate of 64 percent changed from previous revision value of 46 percent. Estimate challenged by: D-
- 2009: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 73 percent based on 1 survey(s). Estimate of 73 percent changed from previous revision value of 55 percent. Estimate challenged by: D-R-
- 2010: Reported data calibrated to 2009 levels. Estimate of 75 percent changed from previous revision value of 57 percent. Estimate challenged by: D-
- 2011: Reported data calibrated to 2009 levels. Estimate of 86 percent changed from previous revision value of 68 percent. Estimate challenged by: D-
- 2012: Reported data calibrated to 2009 levels. Estimate of 83 percent changed from previous revision value of 65 percent. Estimate challenged by: D-
- 2013: Reported data calibrated to 2009 levels. Three months national stockout reported. Estimate of 76 percent changed from previous revision value of 58 percent. Estimate challenged by: D-
- 2014: Reported data calibrated to 2009 levels. Reported data excluded. Change in reported coverage from 58 level to 87 percent. WHO and UNICEF await the final results of the 2014 DHS survey. GoC=D+

Cambodia - HepB3

KHM - HepB3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	80	82	91	92	92	94	95	92	97
Estimate GoC	NA	NA	NA	●●	●●●	●●●	●●	●●●	●●●	●●	●●	●●
Official	NA	NA	NA	80	82	NA	NA	NA	94	95	92	97
Administrative	NA	NA	NA	80	82	91	NA	92	94	95	92	97
Survey	NA	NA	NA	NA	NA	NA	85	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: 2012 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.

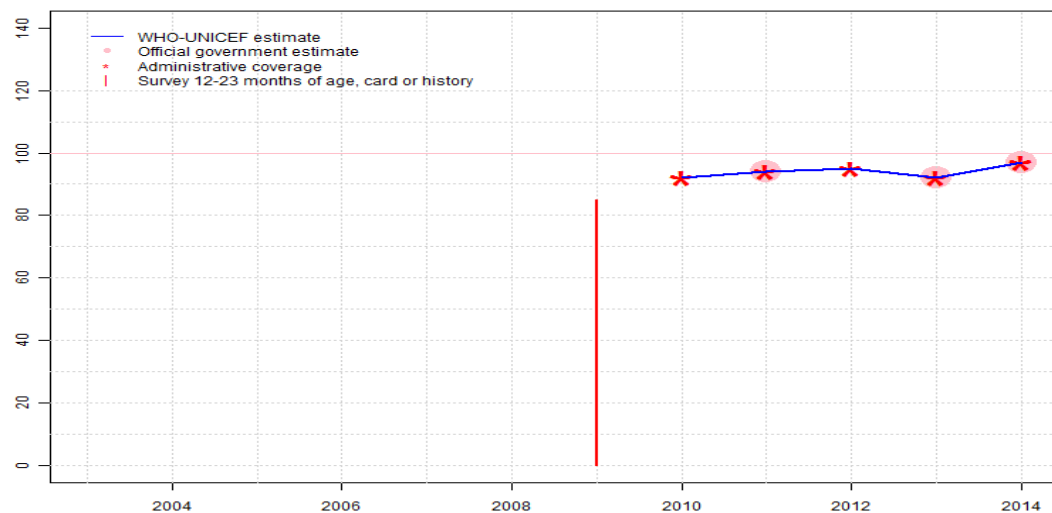
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2006: Estimate based on reported data. HepB vaccine introduced in 2006
GoC=R+ D+
- 2007: Estimate based on reported data. GoC=R+ S+ D+
- 2008: Estimate based on reported data. Increase in 2008 due to change in the denominator based on the General Population Census, 2008. GoC=R+ S+ D+
- 2009: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 87 percent based on 1 survey(s). Cambodia Demographic and Health Survey 2010 card or history results of 85 percent modified for recall bias to 87 percent based on 1st dose card or history coverage of 93 percent, 1st dose card only coverage of 76 percent and 3d dose card only coverage of 71 percent. GoC=S+
- 2010: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ 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. WHO and UNICEF await the final results of the 2014 DHS survey. GoC=R+ D+

Cambodia - Hib3

KHM - Hib3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	NA	NA	NA	92	94	95	92	97
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	●●	●●	●●	●●	●●
Official	NA	NA	NA	NA	NA	NA	NA	NA	94	NA	92	97
Administrative	NA	NA	NA	NA	NA	NA	NA	92	94	95	92	97
Survey	NA	NA	NA	NA	NA	NA	85	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.

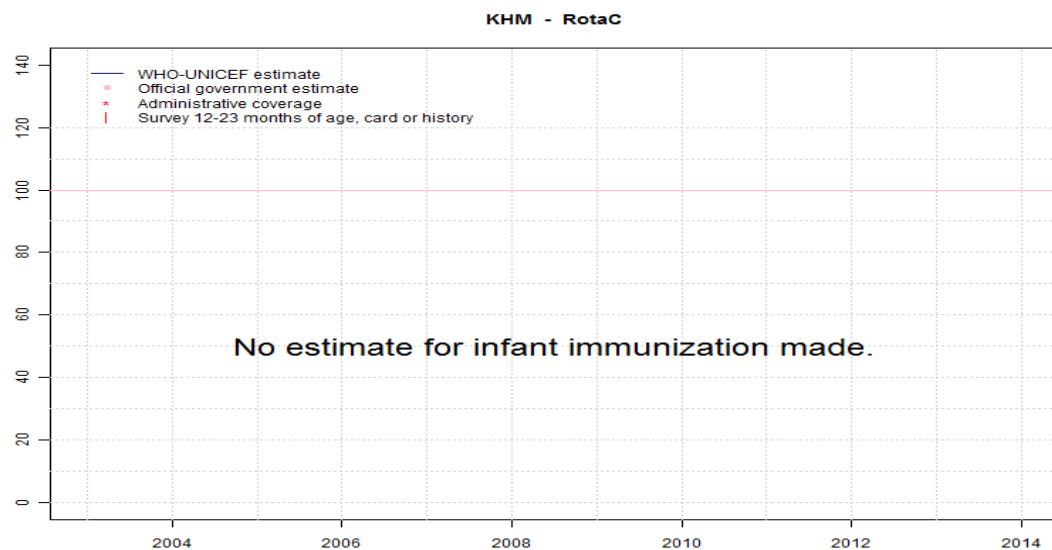
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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:

- 2010: Estimate based on reported administrative estimate. DTP-HepB-Hib pentavalent vaccine introduced in 2010. DHS survey results for Hib3 appear to refer to DTP-HepB tetravalent vaccine. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on reported administrative estimate. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. WHO and UNICEF await the final results of the 2014 DHS survey. GoC=R+ D+

Cambodia - RotaC

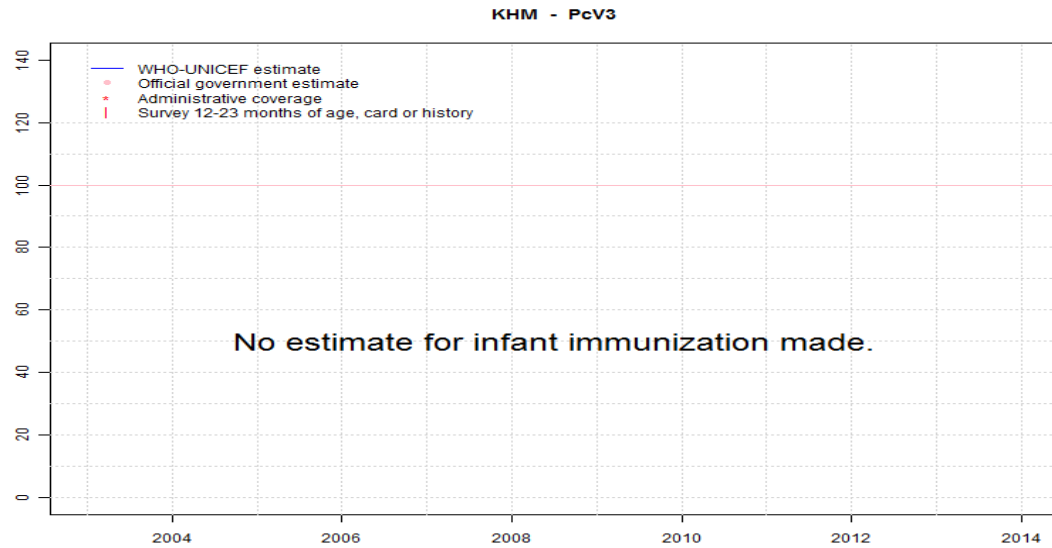


	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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: 2012 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.
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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.



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
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: 2012 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.

Cambodia - survey details

2009 Cambodia Demographic and Health Survey 2010

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	94	12-23 m	1614	77
BCG	Card	77	12-23 m	1614	77
BCG	Card or History	94	12-23 m	1614	77
BCG	History	17	12-23 m	1614	77
DTP1	C or H <12 months	93	12-23 m	1614	77
DTP1	Card	76	12-23 m	1614	77
DTP1	Card or History	93	12-23 m	1614	77
DTP1	History	18	12-23 m	1614	77
DTP3	C or H <12 months	84	12-23 m	1614	77
DTP3	Card	71	12-23 m	1614	77
DTP3	Card or History	85	12-23 m	1614	77
DTP3	History	14	12-23 m	1614	77
HepB1	C or H <12 months	93	12-23 m	1614	77
HepB1	Card	76	12-23 m	1614	77
HepB1	Card or History	93	12-23 m	1614	77
HepB1	History	18	12-23 m	1614	77
HepB3	C or H <12 months	84	12-23 m	1614	77
HepB3	Card	71	12-23 m	1614	77
HepB3	Card or History	85	12-23 m	1614	77
HepB3	History	14	12-23 m	1614	77
HepBB	C or H <12 months	73	12-23 m	1614	77
HepBB	Card	61	12-23 m	1249	77
HepBB	Card or History	73	12-23 m	1614	77
HepBB	History	12	12-23 m	364	77
Hib1	C or H <12 months	93	12-23 m	1614	77
Hib1	Card	76	12-23 m	1614	77
Hib1	Card or History	93	12-23 m	1614	77
Hib1	History	18	12-23 m	1614	77
Hib3	C or H <12 months	84	12-23 m	1614	77
Hib3	Card	71	12-23 m	1614	77
Hib3	Card or History	85	12-23 m	1614	77
Hib3	History	14	12-23 m	1614	77
MCV1	C or H <12 months	77	12-23 m	1614	77
MCV1	Card	67	12-23 m	1614	77
MCV1	Card or History	82	12-23 m	1614	77
MCV1	History	15	12-23 m	1614	77
Pol1	C or H <12 months	93	12-23 m	1614	77

Pol1	Card	76	12-23 m	1614	77
Pol1	Card or History	94	12-23 m	1614	77
Pol1	History	18	12-23 m	1614	77
Pol3	C or H <12 months	84	12-23 m	1614	77
Pol3	Card	71	12-23 m	1614	77
Pol3	Card or History	85	12-23 m	1614	77
Pol3	History	14	12-23 m	1614	77

2008 Cambodia Socio-Economic Survey 2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	78	12-23 m	1068	79
DTP1	Card	77	12-23 m	1068	79
DTP3	Card	56	12-23 m	1068	79
HepBB	Card	61	12-23 m	1068	79
MCV1	Card	59	12-23 m	1068	79

2004 Cambodia Demographic and Health Survey 2005

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	91	12-23 m	1517	67
BCG	Card	66	12-23 m	1517	67
BCG	Card or History	91	12-23 m	1517	67
BCG	History	26	12-23 m	1517	67
DTP1	C or H <12 months	90	12-23 m	1517	67
DTP1	Card	66	12-23 m	1517	67
DTP1	Card or History	91	12-23 m	1517	67
DTP1	History	24	12-23 m	1517	67
DTP3	C or H <12 months	76	12-23 m	1517	67
DTP3	Card	61	12-23 m	1517	67
DTP3	Card or History	78	12-23 m	1517	67
DTP3	History	17	12-23 m	1517	67
MCV1	C or H <12 months	70	12-23 m	1517	67
MCV1	Card	56	12-23 m	1517	67
MCV1	Card or History	77	12-23 m	1517	67
MCV1	History	21	12-23 m	1517	67
Pol1	C or H <12 months	90	12-23 m	1517	67
Pol1	Card	66	12-23 m	1517	67

Cambodia - survey details

Pol1	Card or History	91	12-23 m	1517	67
Pol1	History	24	12-23 m	1517	67
Pol3	C or H <12 months	74	12-23 m	1517	67
Pol3	Card	60	12-23 m	1517	67
Pol3	Card or History	77	12-23 m	1517	67
Pol3	History	17	12-23 m	1517	67

Pol3	Card	36	12-23 m	1253	48
Pol3	Card or History	52	12-23 m	1253	48
Pol3	History	16	12-23 m	1253	48

1997 National Health Survey Cambodia 1998, 1999

1999 Cambodia Demographic and Health Survey 2000, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	66	12-23 m	1253	48
BCG	Card	46	12-23 m	1253	48
BCG	Card or History	71	12-23 m	1253	48
BCG	History	26	12-23 m	1253	48
DTP1	C or H <12 months	63	12-23 m	1253	48
DTP1	Card	46	12-23 m	1253	48
DTP1	Card or History	68	12-23 m	1253	48
DTP1	History	22	12-23 m	1253	48
DTP3	C or H <12 months	43	12-23 m	1253	48
DTP3	Card	36	12-23 m	1253	48
DTP3	Card or History	48	12-23 m	1253	48
DTP3	History	13	12-23 m	1253	48
MCV1	C or H <12 months	41	12-23 m	1253	48
MCV1	Card	36	12-23 m	1253	48
MCV1	Card or History	55	12-23 m	1253	48
MCV1	History	19	12-23 m	1253	48
Pol1	C or H <12 months	69	12-23 m	1253	48
Pol1	Card	46	12-23 m	1253	48
Pol1	Card or History	75	12-23 m	1253	48
Pol1	History	29	12-23 m	1253	48
Pol3	C or H <12 months	45	12-23 m	1253	48

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	33	12-23 m	804	-
BCG	Card or History	67	12-23 m	804	-
BCG	History	33	12-23 m	804	-
DTP1	C or H <12 months	61	12-23 m	804	-
DTP1	Card	33	12-23 m	804	-
DTP1	Card or History	62	12-23 m	804	-
DTP1	History	29	12-23 m	804	-
DTP3	C or H <12 months	44	12-23 m	804	-
DTP3	Card	27	12-23 m	804	-
DTP3	Card or History	46	12-23 m	804	-
DTP3	History	20	12-23 m	804	-
MCV1	C or H <12 months	45	12-23 m	804	-
MCV1	Card	26	12-23 m	804	-
MCV1	Card or History	50	12-23 m	804	-
MCV1	History	24	12-23 m	804	-
Pol1	C or H <12 months	80	12-23 m	804	-
Pol1	Card	33	12-23 m	804	-
Pol1	Card or History	81	12-23 m	804	-
Pol1	History	48	12-23 m	804	-
Pol3	C or H <12 months	54	12-23 m	804	-
Pol3	Card	27	12-23 m	804	-
Pol3	Card or History	56	12-23 m	804	-
Pol3	History	30	12-23 m	804	-

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

Cambodia

WHO/UNICEF Estimates of Protection at Birth (PAB) against tetanus

In countries where tetanus is recommended for girls and women coverage is usually reported as "TT2+", i.e. the proportion of (pregnant) women who have received their second or superior TT dose in a given year. TT2 + coverage, however, can under-represent the actual proportion of births that are protected against tetanus as it does not include women who have previously received protective doses, women who received one dose without documentation of previous doses, and women who received doses in TT (or Td) supplemental immunization activities (SIA). In addition, girls who have received DTP in their childhood and are entering childbearing age, may be protected with TT booster doses.

WHO and UNICEF have developed a model that takes into account the above scenarios, and calculates the proportion of births in a given year that can be considered as having been protected against tetanus - "Protection at Birth".

In this model, annual cohorts of women are followed from infancy through their life. A proportion receives DTP in infancy (estimated based on the WHO-UNICEF estimates of DTP3 coverage). In addition some of these women also receive TT through routine services when they are pregnant and may also receive TT during SIAs. The model also adjusts reported data, taking into account coverage patterns in other years, and/or results available through surveys. The duration of protection is then calculated, based on WHO estimates of the duration of protection by doses ever received. The proportion of births that are protected against tetanus as a result of maternal immunization reflects the tetanus immunization received by the mother throughout her life rather than simply the TT immunizations received during the current pregnancy.

The model was used in the mid to late 2000. Currently, the coverage series developed by the model is used as the baseline, and efforts are made to obtain data from all sources that include the JRF and reported trend over the years, routine PAB reporting and its trend over the years, data from surveys (DHS, MICS, EPI), whether countries have been validated for the attainment of maternal and neonatal tetanus elimination and what the TT coverage figures are from the survey etc and all the information is used to arrive at an estimate of the protection-at-birth from TT vaccination.

Year	PAB coverage estimate (%)
2003	71
2004	79
2005	81
2006	84
2007	87
2008	87
2009	91
2010	91
2011	91
2012	91
2013	91
2014	91

¹ This model is described in: Griffiths U., Wolfson L., Quddus A., Younus M., Hafiz R.. Incremental cost-effectiveness of supplementary immunization activities to prevent neo-natal tetanus in Pakistan. Bulletin of the World Health Organization 2004; 82:643-651.