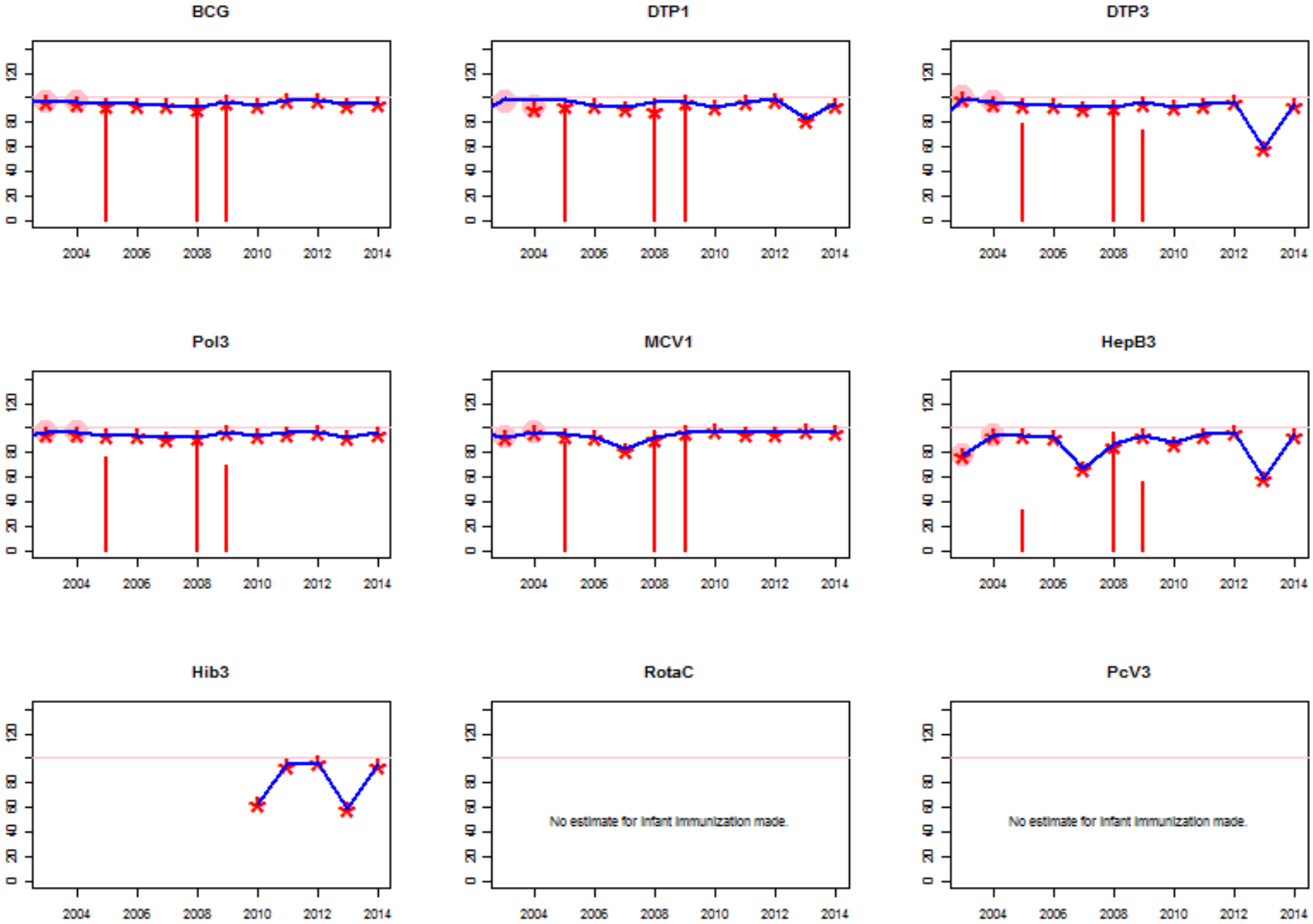
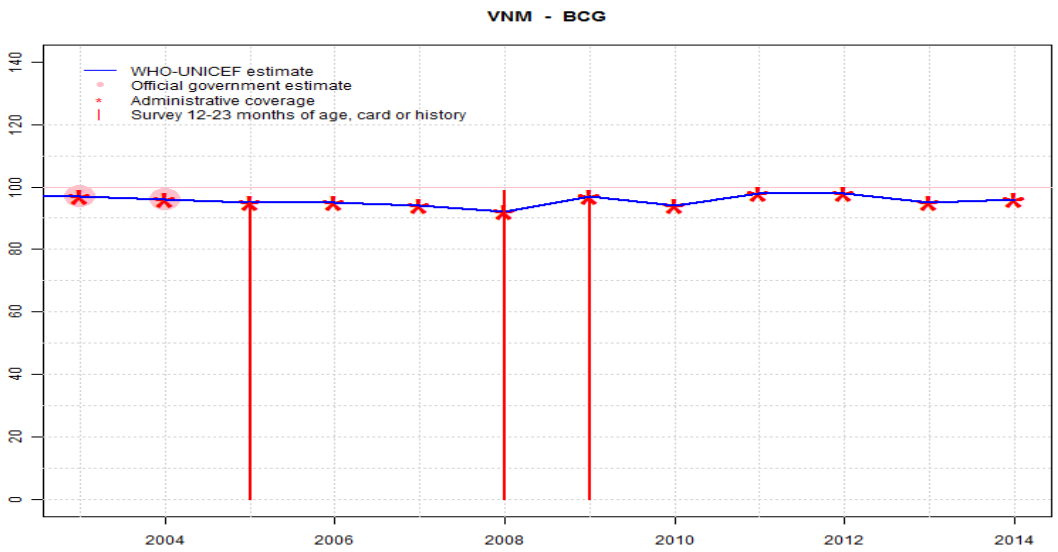

BCG
DTP1
DTP3
Pol3
MCV1
HepB3
Hib3
RotaC
PcV3
No estimate for infant immunization made.
No estimate for infant immunization made.
0
20
40
60
80
120
2004
2006
2008
2010
2012
2014

Viet Nam - BCG



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	97	96	95	95	94	92	97	94	98	98	95	96
Estimate GoC	•	•••	•••	•••	•••	•	•••	•••	•	•	•	•
Official	97	96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	97	96	95	95	94	92	97	94	98	98	95	96
Survey	NA	NA	95	NA	NA	99	96	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: S-

2004: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2005: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 95 percent based on 1 survey(s). GoC=R+ S+ D+

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

2007: Estimate based on reported administrative data. GoC=R+ S+ D+

2008: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 99 percent based on 1 survey(s). Estimate challenged by: D-

2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). GoC=R+ S+ D+

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

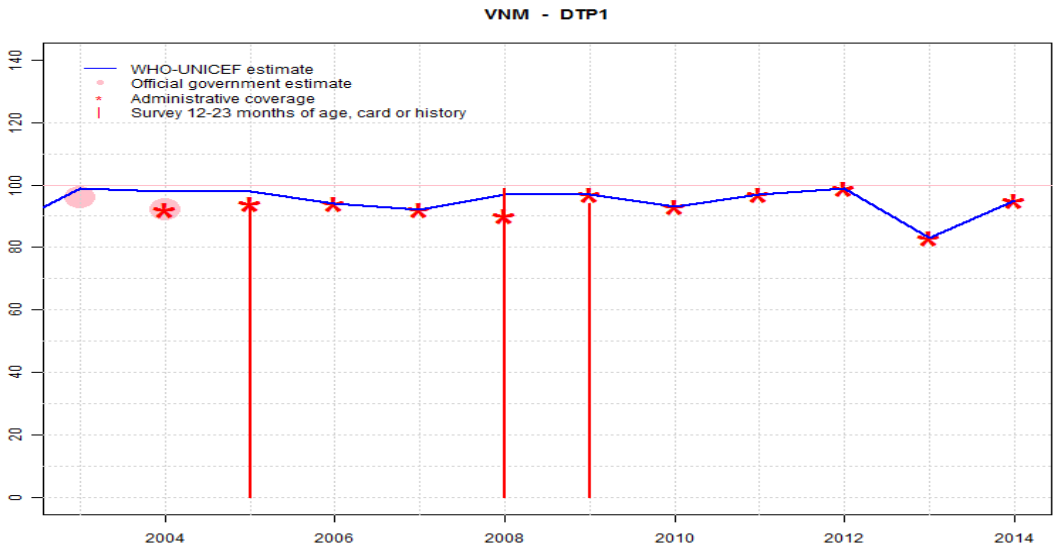
2011: Estimate based on reported administrative data. Estimate challenged by: D-

2012: Estimate based on reported administrative data. Estimate challenged by: D-

2013: Estimate based on reported administrative data. Estimate challenged by: D-

2014: Estimate based on reported administrative data. WHO and UNICEF await the final results of the 2013-14 MICS. Estimate challenged by: D-

Viet Nam - DTP1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	99	98	98	94	92	97	97	93	97	99	83	95
Estimate GoC	•	•	•	•••	•••	•	•	•	•	•	•	•
Official	96	92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	92	94	94	92	90	97	93	97	99	83	95
Survey	NA	NA	94	NA	NA	99	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: DTP1 coverage estimated based on DTP3 coverage of 100. Estimate challenged by: R-S-

2004: DTP1 coverage estimated based on DTP3 coverage of 96. Estimate challenged by: R-

2005: DTP1 coverage estimated based on DTP3 coverage of 95. Estimate challenged by: R-

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

2007: Estimate based on reported administrative data. GoC=R+ S+ D+

2008: DTP1 coverage estimated based on DTP3 coverage of 93. Estimate challenged by: R-

2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Estimate challenged by: D-

2010: Estimate based on reported administrative data. Estimate challenged by: D-

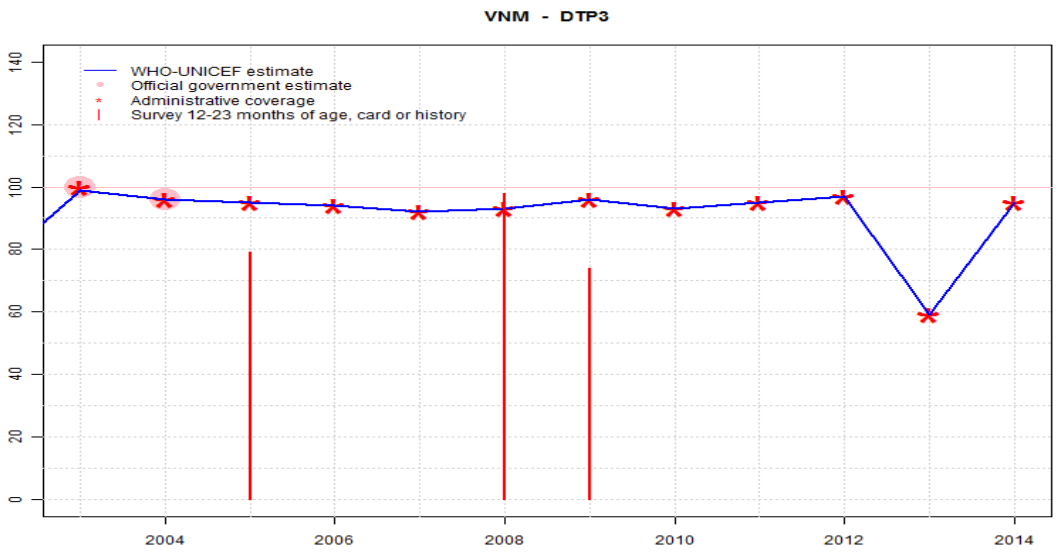
2011: Estimate based on reported administrative data. Estimate challenged by: D-

2012: Estimate based on reported administrative data. Estimate challenged by: D-

2013: Estimate based on reported administrative data. Decline in coverage due to suspension of DTP-HepB-Hib pentavalent vaccine at national level for 5 months following adverse events. Estimate challenged by: D-

2014: Estimate based on reported administrative data. WHO and UNICEF await the final results of the 2013-14 MICS. Recovery in coverage following suspension of DTP-HepB-Hib pentavalent vaccine at national level for 5 months following adverse events. Estimate challenged by: D-

Viet Nam - DTP3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	99	96	95	94	92	93	96	93	95	97	59	95
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	100	96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	100	96	95	94	92	93	96	93	95	97	59	95
Survey	NA	NA	79	NA	NA	98	74	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: S-

2004: Estimate based on coverage reported by national government. Estimate challenged by: S-

2005: Estimate based on reported administrative data. Viet Nam Multiple Indicator Cluster Survey 2006 - MICS3 results ignored by working group. The 2006 MICS survey has a card retention rate of 38.4 percent, affecting the accuracy of results for higher doses of multiple-dose antigens.Viet Nam Multiple Indicator Cluster Survey 2006 - MICS3 card or history results of 79 percent modifed for recall bias to 89 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 38 percent and 3d dose card only coverage of 36 percent. Estimate challenged by: S-

2006: Estimate based on reported administrative data. Estimate challenged by: S-

2007: Estimate based on reported administrative data. Estimate challenged by: S-

2008: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). Immunization Coverage Survey Vietnam 2009 card or history results of 98 percent modifed for recall bias to 97 percent based on 1st dose card or history coverage of 99 percent, 1st dose card only coverage of 96 percent and 3d dose card only coverage of 94 percent. Estimate challenged by: D-

2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Viet Nam Multiple Indicator Cluster Survey 2010–2011 card or history results of 74 percent modifed for recall bias to 88 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 50 percent and 3d dose card only coverage of 47 percent. Estimate challenged by: D-

2010: Estimate based on reported administrative data. Estimate challenged by: D-

2011: Estimate based on reported administrative data. Estimate challenged by: D-

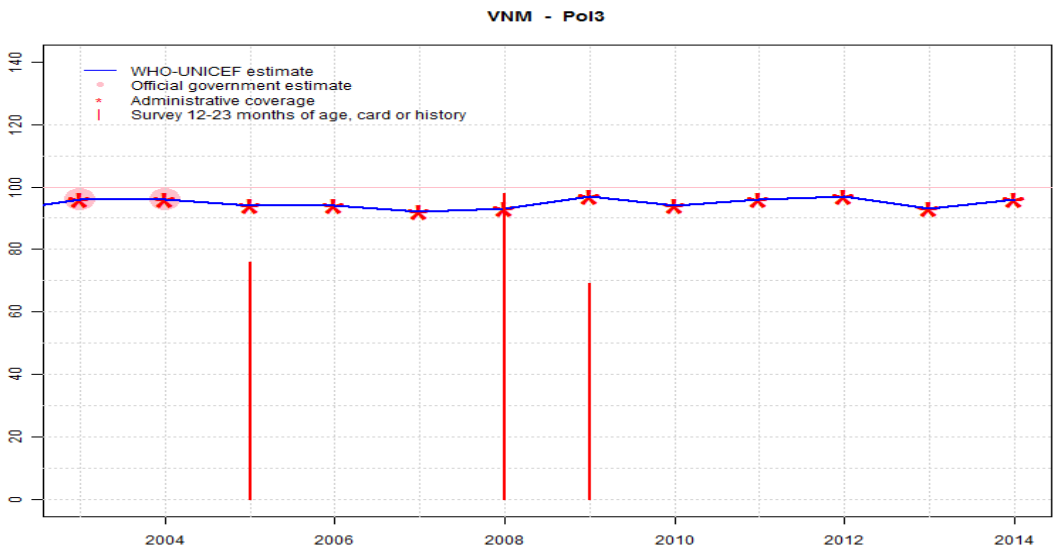
2012: Estimate based on reported administrative data. Estimate challenged by: D-

2013: Estimate based on reported administrative data. Decline in coverage due to suspension of DTP-HepB-Hib pentavalent vaccine at national level for 5 months following adverse events. Estimate challenged by: D-

2014: Estimate based on reported administrative data. WHO and UNICEF await the final results of the 2013-14 MICS. Recovery in coverage following suspension of DTP-HepB-Hib pentavalent vaccine at national level for 5

months following adverse events. Estimate challenged by: D-

Viet Nam - Pol3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	96	96	94	94	92	93	97	94	96	97	93	96
Estimate GoC	•	•••	•••	•••	•••	•	•	•	•	•	•	•
Official	96	96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	96	96	94	94	92	93	97	94	96	97	93	96
Survey	NA	NA	76	NA	NA	98	69	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: S-

2004: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2005: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 91 percent based on 1 survey(s). Viet Nam Multiple Indicator Cluster Survey 2006 - MICS3 card or history results of 76 percent modifed for recall bias to 91 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 38 percent and 3d dose card only coverage of 36 percent. GoC=R+ S+ D+

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

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

2007: Estimate based on reported administrative data. GoC=R+ S+ D+

2007: Estimate based on reported administrative data. GoC=R+ S+ D+

2007: Estimate based on reported administrative data. GoC=R+ S+ D+

2008: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). Immunization Coverage Survey Vietnam 2009 card or history results of 98 percent modifed for recall bias to 97 percent based on 1st dose card or history coverage of 99 percent, 1st dose card only coverage of 96 percent and 3d dose card only coverage of 94 percent. Estimate challenged by: D-

2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Viet Nam Multiple Indicator Cluster Survey 2010–2011 card or history results of 69 percent modifed for recall bias to 88 percent based on 1st dose card or history coverage of 92 percent, 1st dose card only coverage of 47 percent and 3d dose card only coverage of 45 percent. Estimate challenged by: D-

2010: Estimate based on reported administrative data. Estimate challenged by: D-

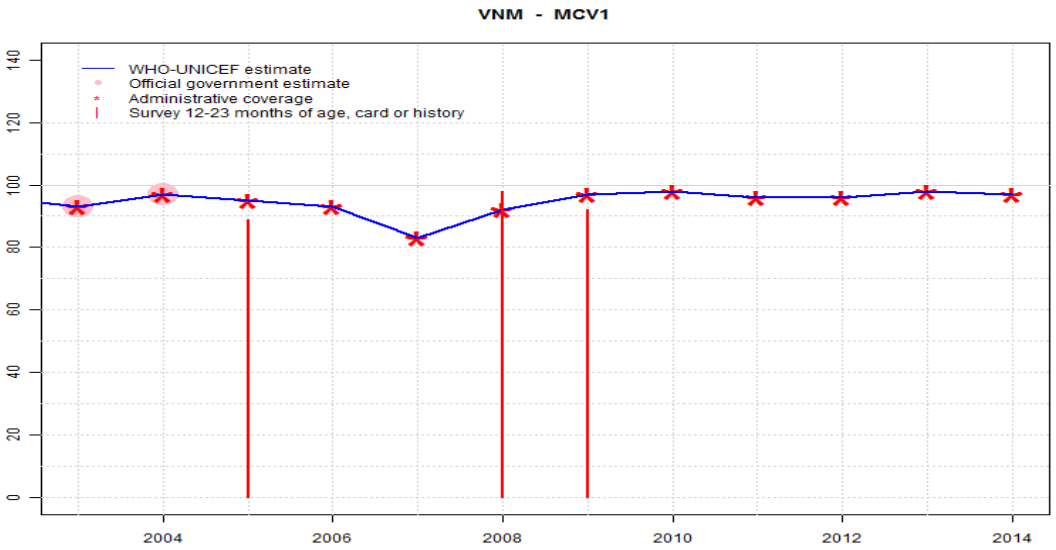
2011: Estimate based on reported administrative data. Estimate challenged by: D-

2012: Estimate based on reported administrative data. Estimate challenged by: D-

2013: Estimate based on reported administrative data. Estimate challenged by: D-

2014: Estimate based on reported administrative data. WHO and UNICEF await the final results of the 2013-14 MICS. Estimate challenged by: D-

Viet Nam - MCV1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	93	97	95	93	83	92	97	98	96	96	98	97
Estimate GoC	•	•••	•••	•••	•••	•	•	•	•	•	•	•
Official	93	97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	93	97	95	93	83	92	97	98	96	96	98	97
Survey	NA	NA	89	NA	NA	98	92	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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• 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: S-

2004: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2005: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). GoC=R+ S+ D+

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

2007: Estimate based on reported administrative data. GoC=R+ S+ D+

2008: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). Estimate challenged by: D-

2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 92 percent based on 1 survey(s). Estimate challenged by: D-

2010: Estimate based on reported administrative data. Estimate challenged by: D-

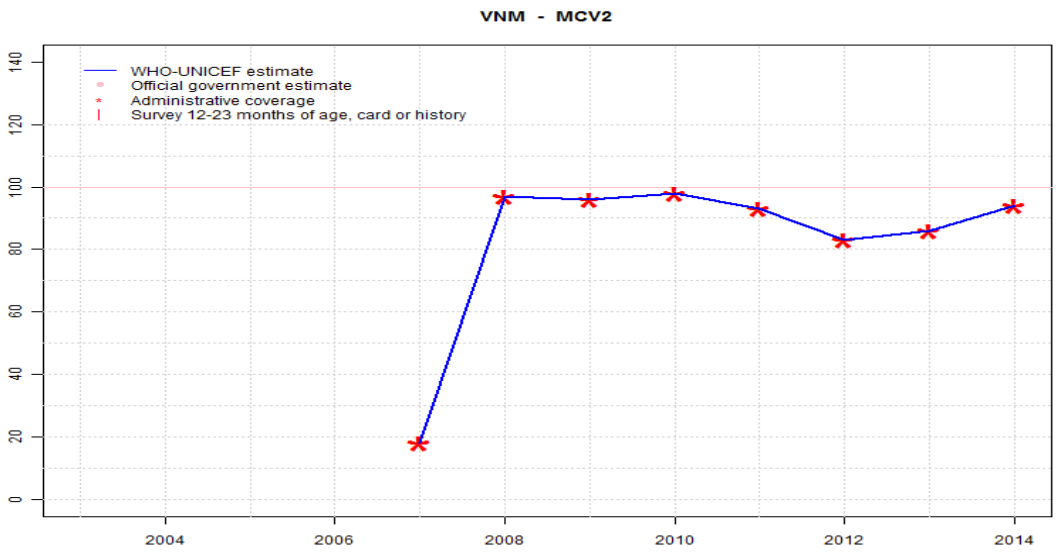
2011: Estimate based on reported administrative data. Estimate challenged by: D-

2012: Estimate based on reported administrative data. Estimate challenged by: D-

2013: Estimate based on reported administrative data. Estimate challenged by: D-

2014: Estimate based on reported administrative data. WHO and UNICEF await the final results of the 2013-14 MICS. Estimate challenged by: D-

Viet Nam - MCV2



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	18	97	96	98	93	83	86	94
Estimate GoC	NA	NA	NA	NA	●●	●●	●●	●●	●	●●	●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	18	97	96	98	93	83	86	94
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.

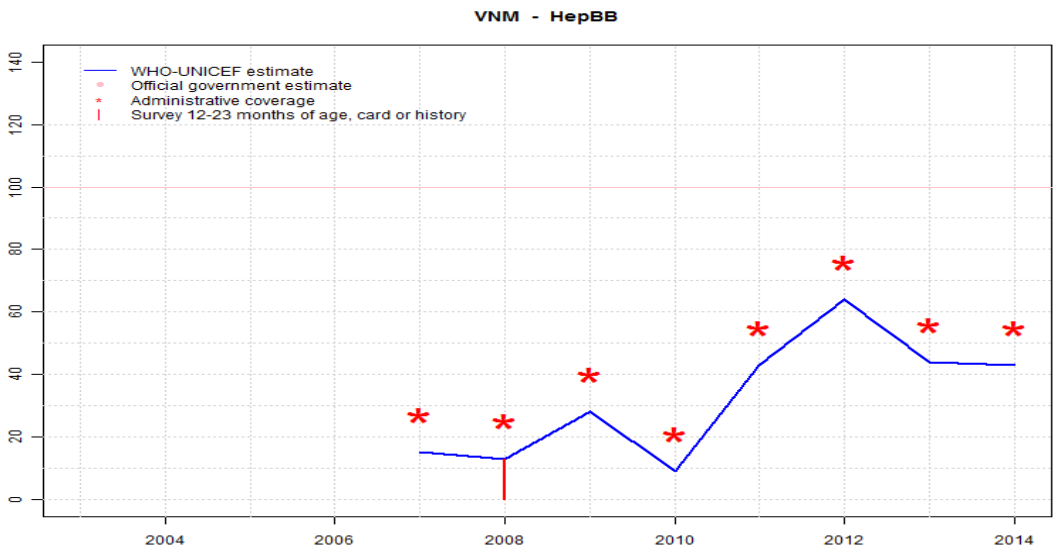
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

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

2007: Estimate based on reported administrative estimate. GoC=R+ D+
2008: Estimate based on reported administrative estimate. GoC=R+ D+
2009: Estimate based on reported administrative estimate. GoC=R+ D+
2010: Estimate based on reported administrative estimate. GoC=R+ D+
2011: Estimate based on reported administrative estimate. Estimate challenged by: D-
2012: Estimate based on reported administrative estimate. GoC=R+ D+
2013: Estimate based on reported administrative estimate. Estimate challenged by: D-
2014: Estimate based on reported administrative estimate. WHO and UNICEF await the final results of the 2013-14 MICS. Estimate challenged by: D-

Viet Nam - HepBB



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	15	13	28	9	43	64	44	43
Estimate GoC	NA	NA	NA	NA	•	•	•	•	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	27	25	40	21	55	76	56	55
Survey	NA	NA	NA	NA	NA	13	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:

2007: Reported data calibrated to 2008 levels. Estimate challenged by: D-

2008: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 13 percent based on 1 survey(s). Estimate challenged by: D-R-

2009: Reported data calibrated to 2008 levels. Estimate based on reported coverage data. Estimate challenged by: D-

2010: Reported data calibrated to 2008 levels. Decline in coverage reflects suspension of vaccination following adverse event. Estimate challenged by: D-

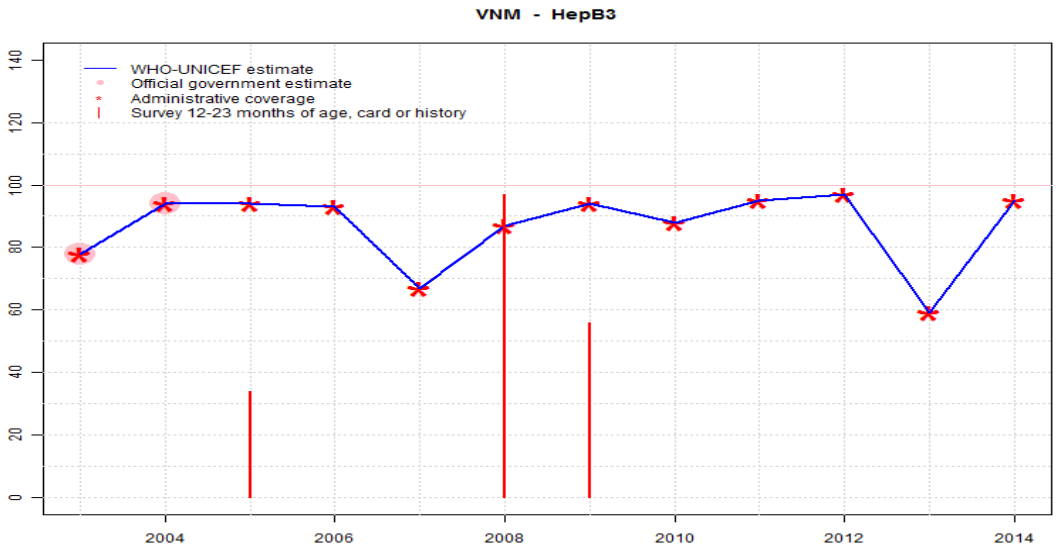
2011: Reported data calibrated to 2008 levels. Estimate challenged by: D-

2012: Reported data calibrated to 2008 levels. Estimate based on reported coverage data. Estimate challenged by: D-

2013: Reported data calibrated to 2008 levels. Decline in coverage due to suspension of DTP-HepB-Hib pentavalent vaccine at national level for 5 months following adverse events. Estimate challenged by: D-

2014: Reported data calibrated to 2008 levels. WHO and UNICEF await the final results of the 2013-14 MICS. GoC=No accepted empirical data

Viet Nam - HepB3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	78	94	94	93	67	87	94	88	95	97	59	95
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	78	94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	78	94	94	93	67	87	94	88	95	97	59	95
Survey	NA	NA	34	NA	NA	97	56	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 reported data. HepB vaccine introduced in 2003 Vaccine presentation is HepB . Estimate challenged by: S-

2004: Estimate based on reported data. Estimate challenged by: S-

2005: Estimate based on reported data. Viet Nam Multiple Indicator Cluster Survey 2006 - MICS3 results ignored by working group. The 2006 MICS survey has a card retention rate of 38.4 percent, affecting the accuracy of results for higher doses of multiple-dose antigens.Viet Nam Multiple Indicator Cluster Survey 2006 - MICS3 card or history results of 34 percent modifed for recall bias to 36 percent based on 1st dose card or history coverage of 38 percent, 1st dose card only coverage of 36 percent and 3d dose card only coverage of 34 percent. Estimate challenged by: S-

2006: Estimate based on reported data. Estimate challenged by: S-

2007: Estimate based on reported data. There was a stock-out of one month in 2007. Estimate challenged by: S-

2008: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 91 percent based on 1 survey(s). Immunization Coverage Survey Vietnam 2009 card or history results of 97 percent modifed for recall bias to 91 percent based on 1st dose card or history coverage of 99 percent, 1st dose card only coverage of 96 percent and 3d dose card only coverage of 88 percent. Estimate challenged by: S-

2009: Estimate based on reported administrative data. Viet Nam Multiple Indicator Cluster Survey 2010–2011 results ignored by working group. Survey results likely too low due to confusion of monovalent HepB and pentavalent doses.Viet Nam Multiple Indicator Cluster Survey 2010–2011 card or history results of 56 percent modifed for recall bias to 73 percent based on 1st dose card or history coverage of 91 percent, 1st dose card only coverage of 50 percent and 3d dose card only coverage of 40 percent. Estimate challenged by: D-S-

2010: Estimate based on reported administrative data. Estimate challenged by: D-S-

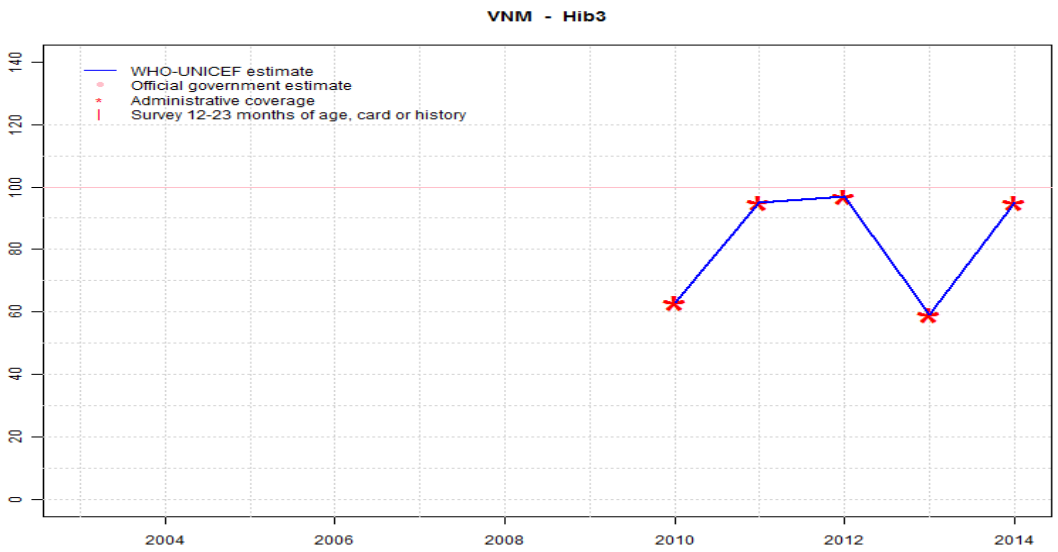
2011: Estimate based on reported administrative data. Estimate challenged by: D-S-

2012: Estimate based on reported administrative data. Estimate challenged by: D-

2013: Estimate based on reported administrative data. Decline in coverage due to suspension of DTP-HepB-Hib pentavalent vaccine at national level for 5 months following adverse events. Estimate challenged by: D-

2014: Estimate based on reported administrative data. WHO and UNICEF await the final results of the 2013-14 MICS. Recovery in coverage following suspension of DTP-HepB-Hib pentavalent vaccine at national level for 5 months following adverse events. Estimate challenged by: D-

Viet Nam - Hib3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	NA	NA	NA	63	95	97	59	95
Estimate GoC	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	63	95	97	59	95
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:

2010: Estimate based on reported administrative estimate. Hib vaccine introduced in 2010. Vaccine presentation is DTP-HepB-Hib. GoC=R+ D+

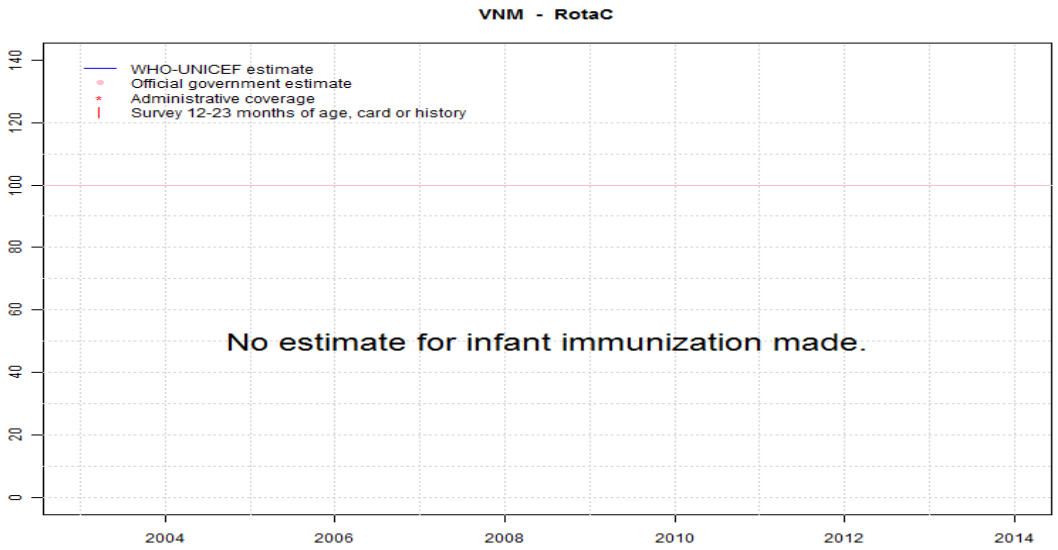
2011: Estimate based on reported administrative estimate. Estimate challenged by: D-

2012: Estimate based on reported administrative estimate. Estimate challenged by: D-

2013: Estimate based on reported administrative estimate. Decline in coverage due to suspension of DTP-HepB-Hib pentavalent vaccine at national level for 5 months following adverse events. Estimate challenged by: D-

2014: Estimate based on reported administrative estimate. WHO and UNICEF await the final results of the 2013-14 MICS. Recovery in coverage following suspension of DTP-HepB-Hib pentavalent vaccine at national level for 5 months following adverse events. Estimate challenged by: D-

Viet Nam - 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.

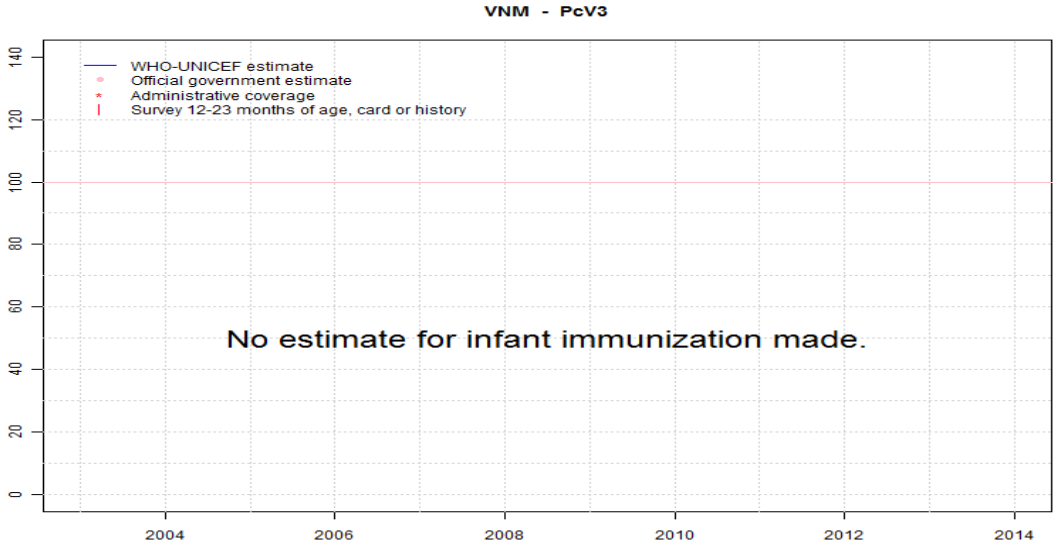
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

●● 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.

Viet Nam - PcV3



	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.

Viet Nam - survey details

2009 Viet Nam Multiple Indicator Cluster Survey 2010–2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	95	12-23 m	759	52
BCG	Card	50	12-23 m	759	52
BCG	Card or History	96	12-23 m	759	52
BCG	History	45	12-23 m	759	52
DTP1	C or H <12 months	94	12-23 m	759	52
DTP1	Card	50	12-23 m	759	52
DTP1	Card or History	94	12-23 m	759	52
DTP1	History	44	12-23 m	759	52
DTP3	C or H <12 months	73	12-23 m	759	52
DTP3	Card	47	12-23 m	759	52
DTP3	Card or History	74	12-23 m	759	52
DTP3	History	27	12-23 m	759	52
HepB1	C or H <12 months	90	12-23 m	759	52
HepB1	Card	50	12-23 m	759	52
HepB1	Card or History	91	12-23 m	759	52
HepB1	History	41	12-23 m	759	52
HepB3	C or H <12 months	53	12-23 m	759	52
HepB3	Card	40	12-23 m	759	52
HepB3	Card or History	56	12-23 m	759	52
HepB3	History	16	12-23 m	759	52
MCV1	C or H <12 months	84	12-23 m	759	52
MCV1	Card	47	12-23 m	759	52
MCV1	Card or History	92	12-23 m	759	52
MCV1	History	45	12-23 m	759	52
Pol1	C or H <12 months	91	12-23 m	759	52
Pol1	Card	47	12-23 m	759	52
Pol1	Card or History	92	12-23 m	759	52
Pol1	History	44	12-23 m	759	52
Pol3	C or H <12 months	68	12-23 m	759	52
Pol3	Card	45	12-23 m	759	52
Pol3	Card or History	69	12-23 m	759	52
Pol3	History	24	12-23 m	759	52

2008 Immunization Coverage Survey Vietnam 2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	96	12-23 m	1812	-
BCG	Card or History	99	12-23 m	1812	-
DTP1	Card	96	12-23 m	1812	-
DTP1	Card or History	99	12-23 m	1812	-
DTP3	Card	94	12-23 m	1812	-
DTP3	Card or History	98	12-23 m	1812	-
HepB1	Card	96	12-23 m	1812	-
HepB1	Card or History	99	12-23 m	1812	-
HepB3	Card	88	12-23 m	1812	-
HepB3	Card or History	97	12-23 m	1812	-
HepBB	Card	12	12-23 m	1812	-
HepBB	Card or History	13	12-23 m	1812	-
MCV1	Card	91	12-23 m	1812	-
MCV1	Card or History	98	12-23 m	1812	-
Pol1	Card	96	12-23 m	1812	-
Pol1	Card or History	99	12-23 m	1812	-
Pol3	Card	94	12-23 m	1812	-
Pol3	Card or History	98	12-23 m	1812	-

2005 Dieu tra dánh giá các muc tiêu ve tre em và phu nu Viet Nam 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	94	12-23 m	555	38
BCG	Card	38	12-23 m	555	38
BCG	Card or History	95	12-23 m	555	38
BCG	History	57	12-23 m	555	38
DTP1	C or H <12 months	92	12-23 m	555	38
DTP1	Card	38	12-23 m	555	38
DTP1	Card or History	94	12-23 m	555	38
DTP1	History	56	12-23 m	555	38
DTP3	C or H <12 months	76	12-23 m	555	38
DTP3	Card	36	12-23 m	555	38
DTP3	Card or History	79	12-23 m	555	38
DTP3	History	43	12-23 m	555	38
HepB1	C or H <12 months	37	12-23 m	555	38
HepB1	Card	36	12-23 m	555	38
HepB1	Card or History	38	12-23 m	555	38

Viet Nam - survey details

HepB1	History	1	12-23 m	555	38
HepB3	C or H <12 months	32	12-23 m	555	38
HepB3	Card	34	12-23 m	555	38
HepB3	Card or History	34	12-23 m	555	38
HepB3	History	0	12-23 m	555	38
MCV1	C or H <12 months	87	12-23 m	555	38
MCV1	Card	34	12-23 m	555	38
MCV1	Card or History	89	12-23 m	555	38
MCV1	History	55	12-23 m	555	38
Pol1	C or H <12 months	94	12-23 m	555	38
Pol1	Card	38	12-23 m	555	38
Pol1	Card or History	96	12-23 m	555	38
Pol1	History	58	12-23 m	555	38
Pol3	C or H <12 months	74	12-23 m	555	38
Pol3	Card	36	12-23 m	555	38
Pol3	Card or History	76	12-23 m	555	38
Pol3	History	39	12-23 m	555	38

2001 Vietnam Demographic and Health Survey 2002, 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	93	12-23 m	457	40
BCG	History	54	12-23 m	457	40
DTP1	Card	38	12-23 m	457	40
DTP1	Card or History	88	12-23 m	457	40
DTP1	History	50	12-23 m	457	40
DTP3	Card	35	12-23 m	457	40
DTP3	Card or History	72	12-23 m	457	40
DTP3	History	38	12-23 m	457	40
MCV1	Card	36	12-23 m	457	40
MCV1	Card or History	83	12-23 m	457	40
MCV1	History	47	12-23 m	457	40
Pol1	Card	39	12-23 m	457	40
Pol1	Card or History	93	12-23 m	457	40
Pol1	History	54	12-23 m	457	40
Pol3	Card	36	12-23 m	457	40
Pol3	Card or History	76	12-23 m	457	40
Pol3	History	39	12-23 m	457	40

2000 Children Indicators in Vietnam 2001, 2002

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	97	12-23 m	-	-
DTP3	Card or History	96	12-23 m	-	-
MCV1	Card or History	98	12-23 m	-	-
Pol3	Card or History	96	12-23 m	-	-

1997 EPI Review Vietnam 1998

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	94	12-23 m	1057	-
BCG	Card or History	96	12-23 m	1057	-

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

Viet Nam
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	85
2004	85
2005	86
2006	87
2007	86
2008	84
2009	87
2010	87
2011	87
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.