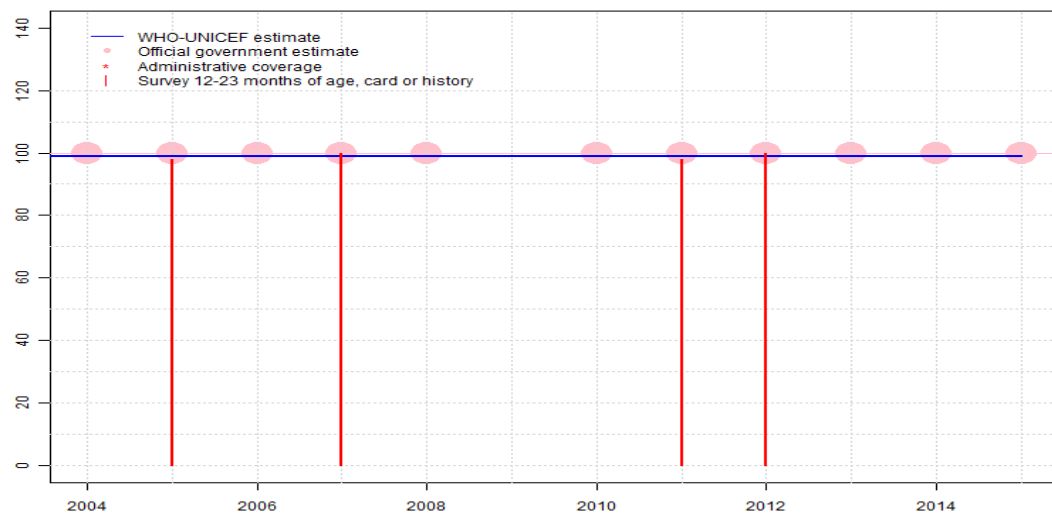


# Thailand - BCG

THA - BCG



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	99	99	99	99	99	99	99	99	99	99	99
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Official	100	100	100	100	100	NA	100	100	100	100	100	100
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	98	NA	100	NA	NA	NA	98	100	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.

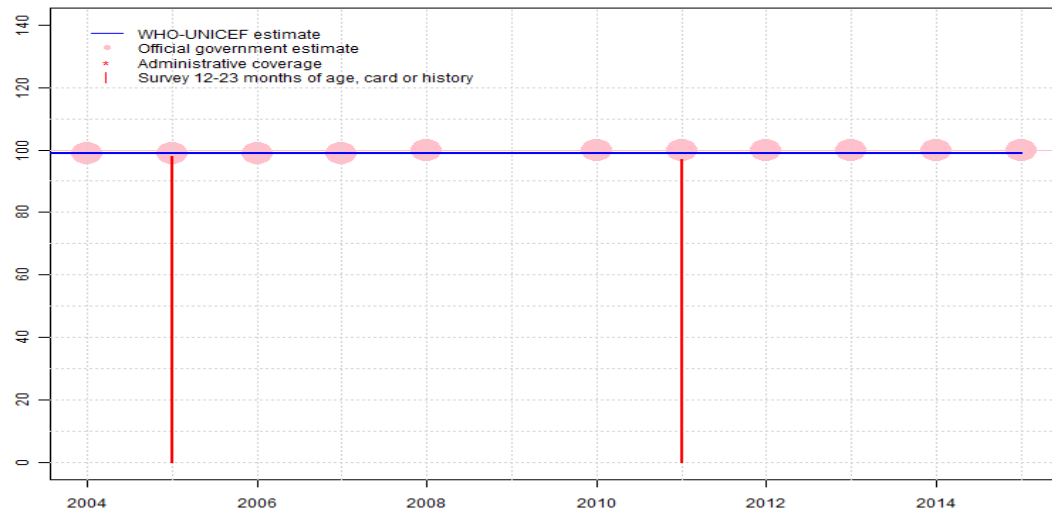
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on coverage reported by national government. GoC=R+ S+
- 2005: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). GoC=R+ S+
- 2006: Estimate based on coverage reported by national government. GoC=R+ S+
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 100 percent based on 1 survey(s). GoC=R+ S+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+
- 2009: Estimate based on interpolation between coverage reported by national government. GoC=S+
- 2010: Estimate based on coverage reported by national government. GoC=R+ S+
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). GoC=R+ S+
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 100 percent based on 1 survey(s). GoC=R+ S+
- 2013: Estimate based on coverage reported by national government. GoC=R+ S+
- 2014: Estimate based on coverage reported by national government. GoC=R+ S+
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=R+

# Thailand - DTP1

THA - DTP1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	99	99	99	99	99	99	99	99	99	99	99
Estimate GoC	••	••	••	••	••	••	••	••	••	••	••	••
Official	99	99	99	99	100	NA	100	100	100	100	100	100
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	98	NA	NA	NA	NA	NA	97	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.

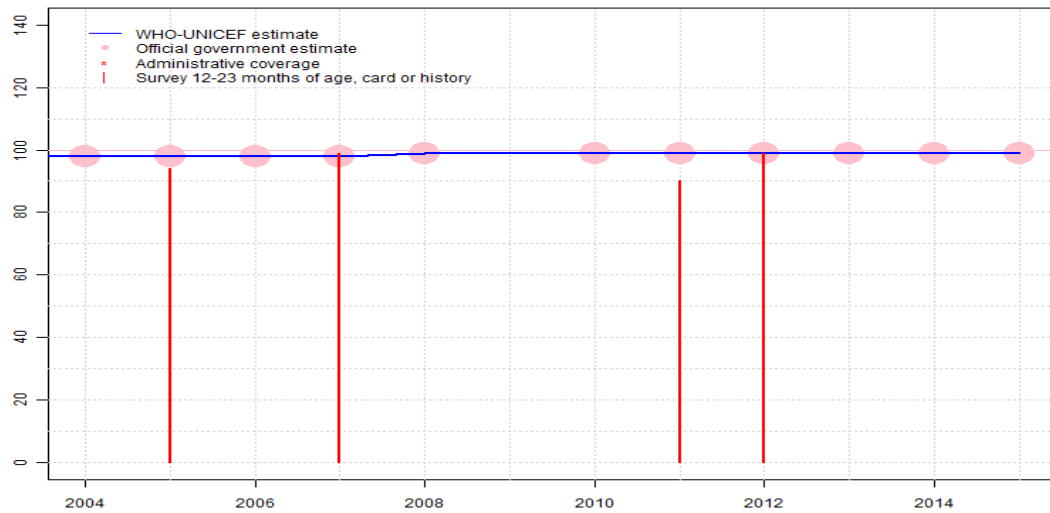
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on coverage reported by national government. GoC=R+ S+
- 2005: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). GoC=R+ S+
- 2006: Estimate based on coverage reported by national government. GoC=R+ S+
- 2007: Estimate based on coverage reported by national government. GoC=R+ S+
- 2008: Estimate based on coverage reported by national government. GoC=R+
- 2009: Estimate based on interpolation between coverage reported by national government. GoC=S+
- 2010: Estimate based on coverage reported by national government. GoC=R+ S+
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). GoC=R+ S+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+
- 2013: Estimate based on coverage reported by national government. GoC=R+ S+
- 2014: Estimate based on coverage reported by national government. GoC=R+
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=R+

# Thailand - DTP3

THA - DTP3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	98	98	98	98	99	99	99	99	99	99	99	99
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Official	98	98	98	98	99	NA	99	99	99	99	99	99
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	94	NA	99	NA	NA	NA	90	99	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.

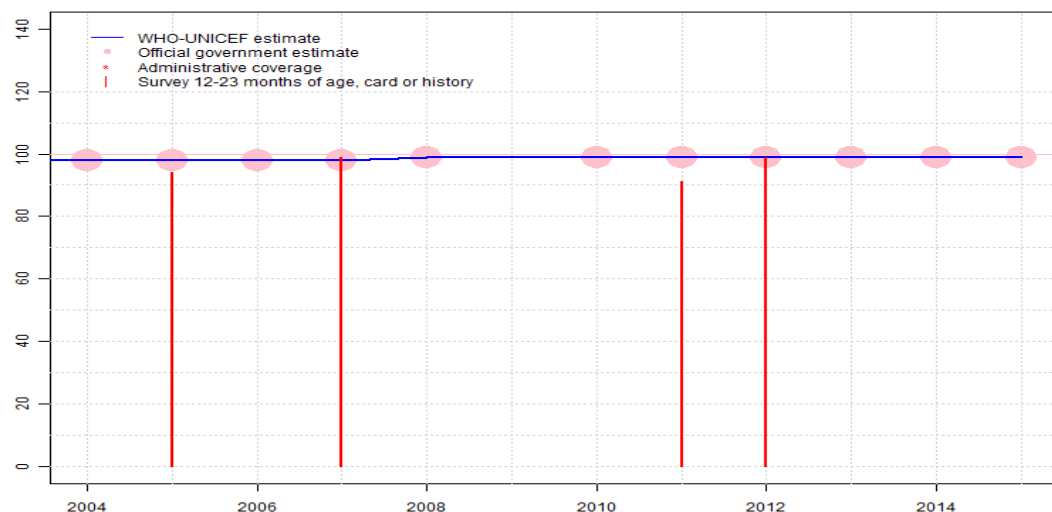
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on coverage reported by national government. GoC=R+ S+
- 2005: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). Thailand Multiple Indicator Cluster Survey, December 2005 – February 2006 card or history results of 94 percent modified for recall bias to 98 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 89 percent and 3d dose card only coverage of 89 percent. GoC=R+ S+
- 2006: Estimate based on coverage reported by national government. GoC=R+ S+
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 99 percent based on 1 survey(s). GoC=R+ S+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+
- 2009: Estimate based on interpolation between coverage reported by national government. GoC=S+
- 2010: Estimate based on coverage reported by national government. GoC=R+ S+
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 95 percent based on 1 survey(s). Thailand Multiple Indicator Cluster Survey 2012 card or history results of 90 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 82 percent and 3d dose card only coverage of 80 percent. GoC=R+ S+
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 99 percent based on 1 survey(s). GoC=R+ S+
- 2013: Estimate based on coverage reported by national government. GoC=R+ S+
- 2014: Estimate based on coverage reported by national government. GoC=R+ S+
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=R+

# Thailand - Pol3

THA - Pol3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	98	98	98	98	99	99	99	99	99	99	99	99
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Official	98	98	98	98	99	NA	99	99	99	99	99	99
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	94	NA	99	NA	NA	NA	91	99	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.

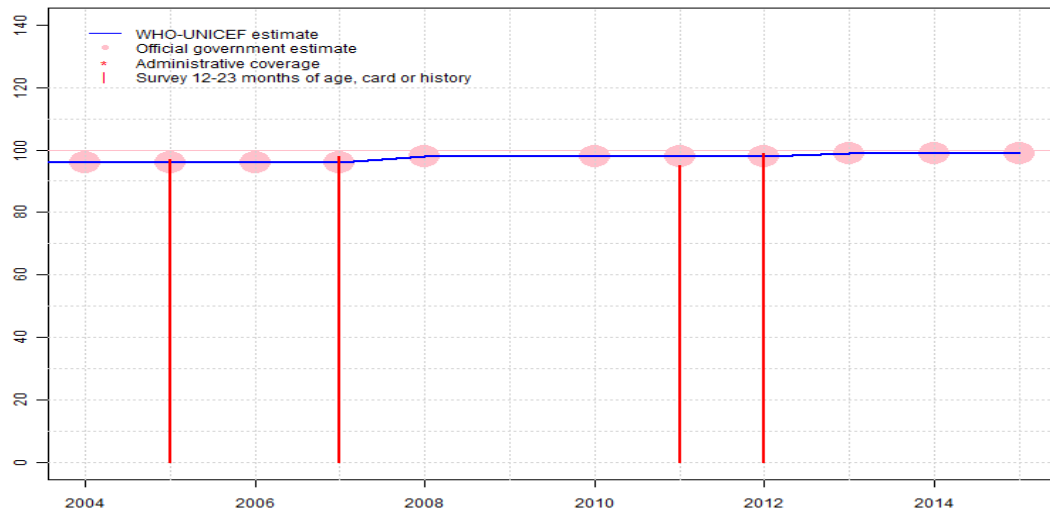
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on coverage reported by national government. GoC=R+ S+
- 2005: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). Thailand Multiple Indicator Cluster Survey, December 2005 – February 2006 card or history results of 94 percent modified for recall bias to 98 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 88 percent and 3d dose card only coverage of 88 percent. GoC=R+ S+
- 2006: Estimate based on coverage reported by national government. GoC=R+ S+
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 99 percent based on 1 survey(s). GoC=R+ S+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+
- 2009: Estimate based on interpolation between coverage reported by national government. GoC=S+
- 2010: Estimate based on coverage reported by national government. GoC=R+ S+
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 95 percent based on 1 survey(s). Thailand Multiple Indicator Cluster Survey 2012 card or history results of 91 percent modified for recall bias to 95 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 81 percent and 3d dose card only coverage of 80 percent. GoC=R+ S+
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 99 percent based on 1 survey(s). GoC=R+ S+
- 2013: Estimate based on coverage reported by national government. GoC=R+ S+
- 2014: Estimate based on coverage reported by national government. GoC=R+ S+
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=R+

# Thailand - MCV1

THA - MCV1



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

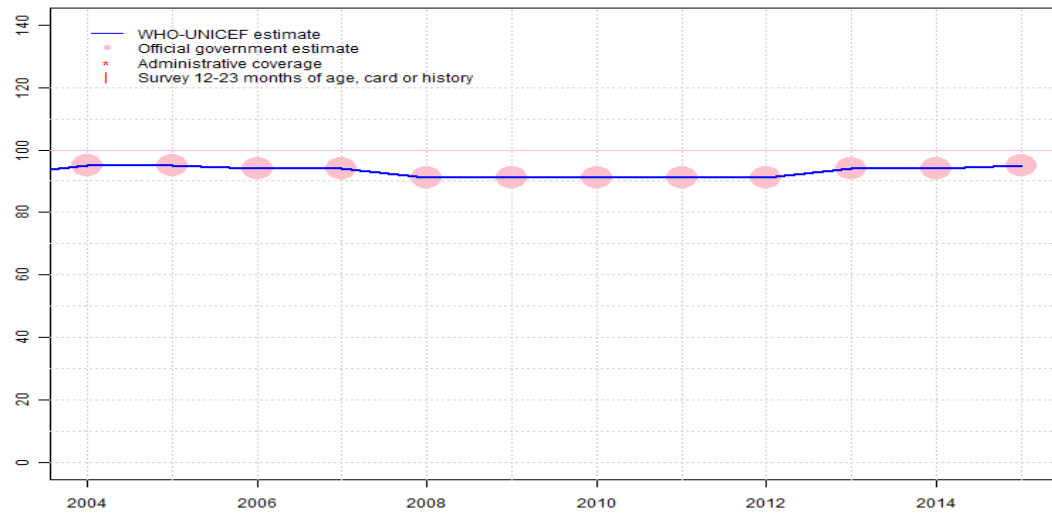
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on coverage reported by national government. GoC=R+ S+
- 2005: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). GoC=R+ S+
- 2006: Estimate based on coverage reported by national government. GoC=R+ S+
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). GoC=R+ S+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+
- 2009: Estimate based on interpolation between coverage reported by national government. GoC=S+
- 2010: Estimate based on coverage reported by national government. GoC=R+ S+
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 95 percent based on 1 survey(s). GoC=R+ S+
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 99 percent based on 1 survey(s). GoC=R+ S+
- 2013: Estimate based on coverage reported by national government. GoC=R+ S+
- 2014: Estimate based on coverage reported by national government. GoC=R+ S+
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=R+

# Thailand - MCV2

THA - MCV2



## 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. GoC=R+  
 2005: Estimate based on coverage reported by national government. GoC=R+  
 2006: Estimate based on coverage reported by national government. GoC=R+  
 2007: Estimate based on coverage reported by national government. GoC=R+  
 2008: Estimate based on coverage reported by national government. GoC=R+  
 2009: Estimate based on coverage reported by national government. GoC=R+  
 2010: Estimate based on coverage reported by national government. GoC=R+  
 2011: Estimate based on coverage reported by national government. GoC=R+  
 2012: Estimate based on coverage reported by national government. GoC=R+  
 2013: Estimate based on coverage reported by national government. GoC=R+  
 2014: Estimate based on coverage reported by national government. GoC=R+  
 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=R+

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	95	95	94	94	91	91	91	91	91	94	94	95
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Official	95	95	94	94	91	91	91	91	91	94	94	95
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.

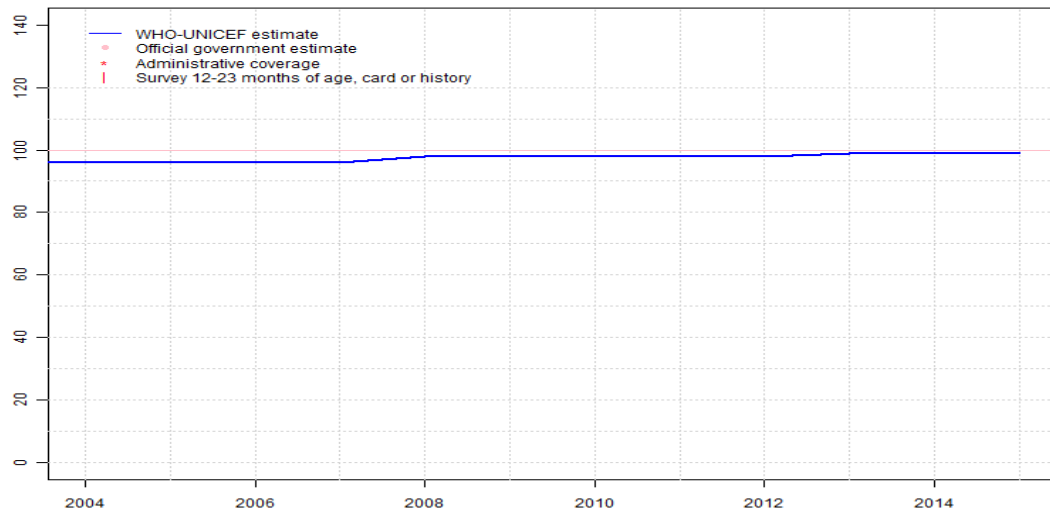
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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



# Thailand - RCV1

THA - RCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	96	96	96	96	98	98	98	98	98	99	99	99
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:

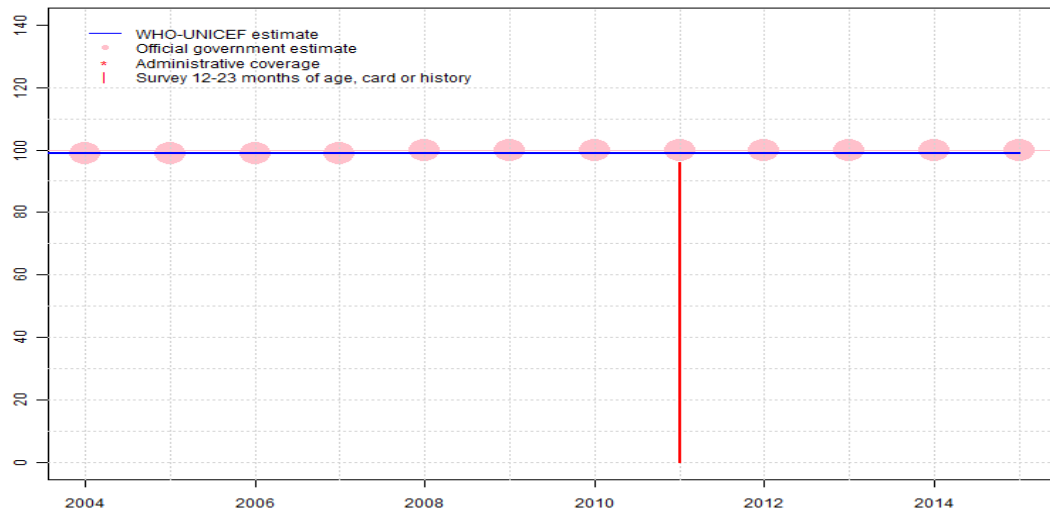
For this revision, coverage estimates for the first dose of rubella containing vaccine are based on WHO and UNICEF estimates of coverage of measles containing vaccine. Nationally reported coverage of rubella containing vaccine is not taken into consideration nor are they represented in the accompanying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

- 2004: Estimate based on estimated MCV1. GoC=R+ S+
- 2005: Estimate based on estimated MCV1. GoC=R+ S+
- 2006: Estimate based on estimated MCV1. GoC=R+ S+
- 2007: Estimate based on estimated MCV1. GoC=R+ S+
- 2008: Estimate based on estimated MCV1. GoC=R+ S+
- 2009: Estimate based on estimated MCV1. GoC=S+
- 2010: Estimate based on estimated MCV1. GoC=R+ S+
- 2011: Estimate based on estimated MCV1. GoC=R+ S+
- 2012: Estimate based on estimated MCV1. GoC=R+ S+
- 2013: Estimate based on estimated MCV1. GoC=R+ S+
- 2014: Estimate based on estimated MCV1. GoC=R+ S+
- 2015: Estimate based on estimated MCV1. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=R+



# Thailand - HepBB

THA - HepBB



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	99	99	99	99	99	99	99	99	99	99	99
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Official	99	99	99	99	100	100	100	100	100	100	100	100
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	96	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.

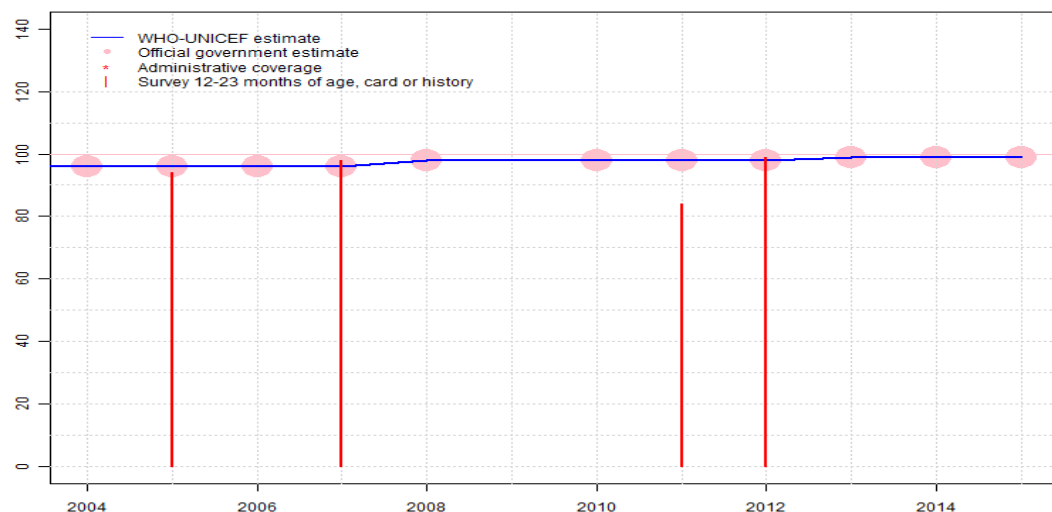
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on reported data. GoC=R+
- 2005: Estimate based on reported data. GoC=R+
- 2006: Estimate based on reported data. GoC=R+
- 2007: Estimate based on reported data. GoC=R+
- 2008: Estimate based on reported data. GoC=R+
- 2009: Estimate based on reported data. GoC=R+ S+
- 2010: Estimate based on reported data. GoC=R+ S+
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). GoC=R+ S+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+
- 2013: Estimate based on coverage reported by national government. GoC=R+ S+
- 2014: Estimate based on coverage reported by national government. GoC=R+
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=R+

# Thailand - HepB3

THA - HepB3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	96	96	96	96	98	98	98	98	98	99	99	99
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Official	96	96	96	96	98	NA	98	98	98	99	99	99
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	94	NA	98	NA	NA	NA	84	99	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.

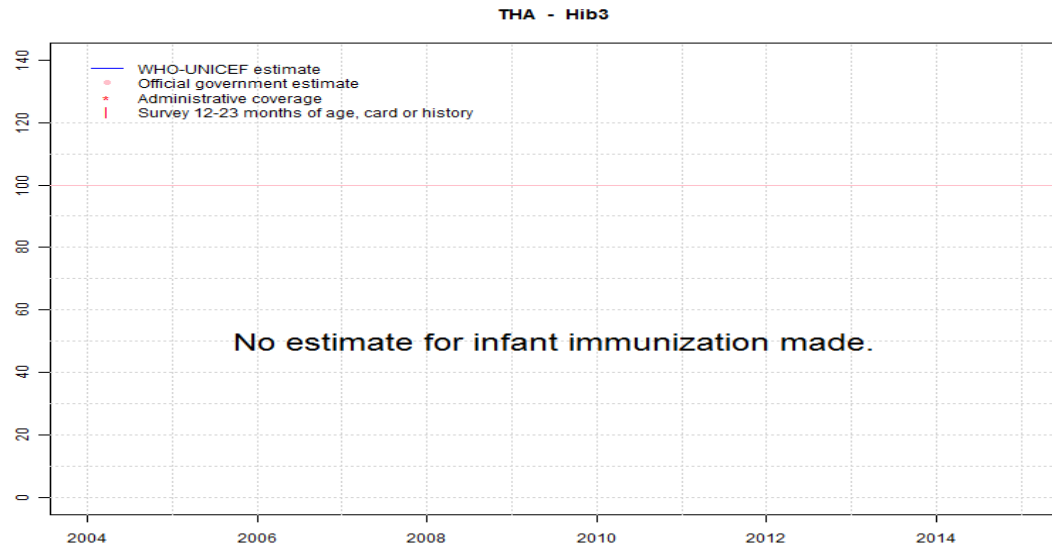
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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. GoC=R+ S+
- 2005: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). Thailand Multiple Indicator Cluster Survey, December 2005 – February 2006 card or history results of 94 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 89 percent and 3d dose card only coverage of 88 percent. GoC=R+ S+
- 2006: Estimate based on coverage reported by national government. GoC=R+ S+
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). GoC=R+ S+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+
- 2009: Estimate based on interpolation between coverage reported by national government. GoC=S+
- 2010: Estimate based on coverage reported by national government. GoC=R+ S+
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 92 percent based on 1 survey(s). Thailand Multiple Indicator Cluster Survey 2012 card or history results of 84 percent modified for recall bias to 92 percent based on 1st dose card or history coverage of 93 percent, 1st dose card only coverage of 82 percent and 3d dose card only coverage of 81 percent. GoC=R+ S+
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 99 percent based on 1 survey(s). GoC=R+ S+
- 2013: Estimate based on coverage reported by national government. GoC=R+ S+
- 2014: Estimate based on coverage reported by national government. GoC=R+ S+
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of an ongoing Multiple Indicator Cluster Survey and await the final results. GoC=R+

# Thailand - Hib3



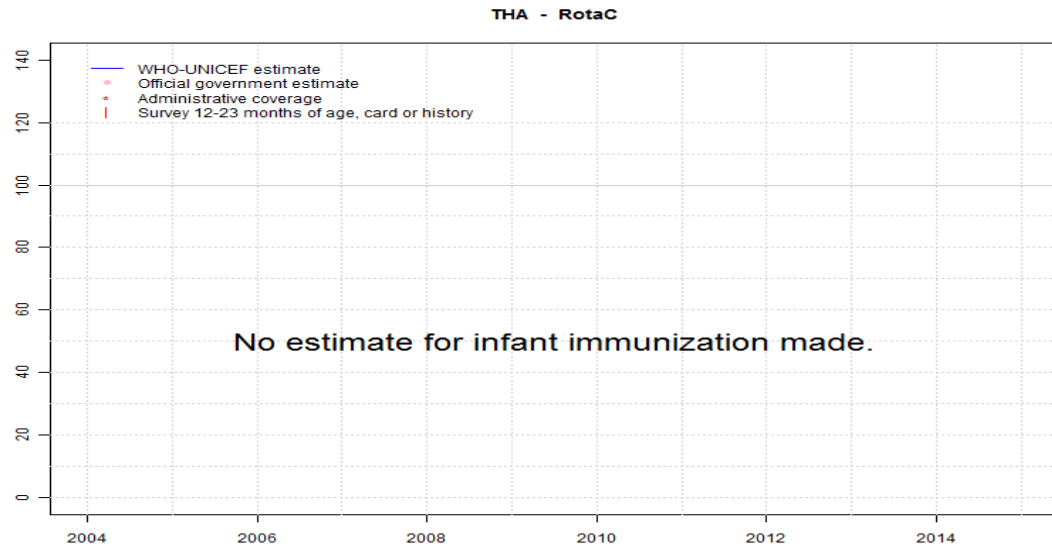
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

# Thailand - RotaC



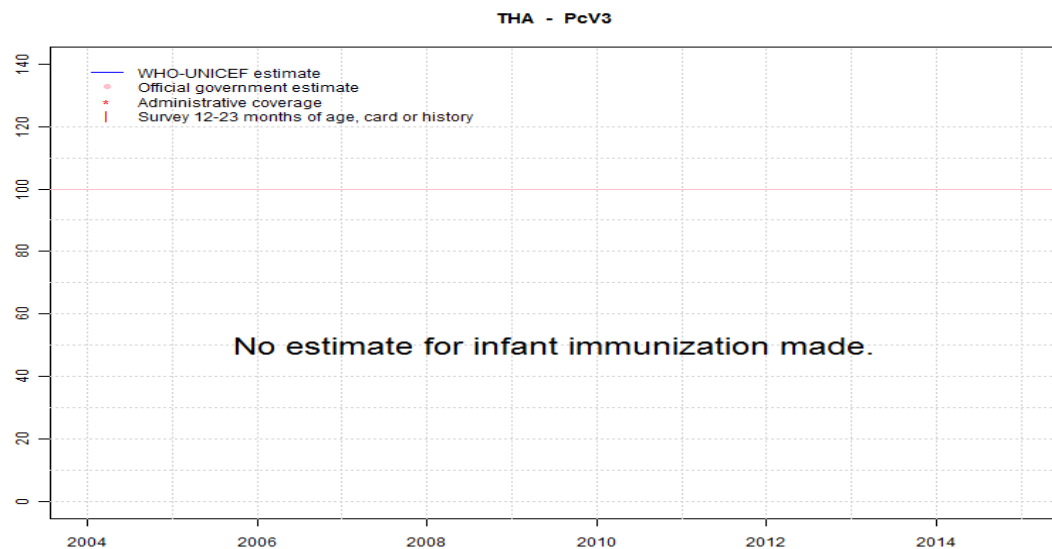
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

# Thailand - 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.

# Thailand - survey details

## 2012 Immunization Coverage Survey: Thailand 2013

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	100	12-23 m	2700	-
DTP3	Card or History	99	12-23 m	2700	-
HepB3	Card or History	99	12-23 m	2700	-
MCV1	Card or History	99	12-23 m	2700	-
Pol3	Card or History	99	12-23 m	2700	-

## 2011 Thailand Multiple Indicator Cluster Survey 2012

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	98	12-23 m	1827	82
BCG	Card	82	12-23 m	-	82
BCG	Card or History	98	12-23 m	1827	82
BCG	History	16	12-23 m	-	82
DTP1	C or H <12 months	96	12-23 m	1827	82
DTP1	Card	82	12-23 m	-	82
DTP1	Card or History	97	12-23 m	1827	82
DTP1	History	15	12-23 m	-	82
DTP3	C or H <12 months	88	12-23 m	1827	82
DTP3	Card	80	12-23 m	-	82
DTP3	Card or History	90	12-23 m	1827	82
DTP3	History	10	12-23 m	-	82
HepB1	C or H <12 months	93	12-23 m	1827	82
HepB1	Card	82	12-23 m	-	82
HepB1	Card or History	93	12-23 m	1827	82
HepB1	History	11	12-23 m	-	82
HepB3	C or H <12 months	81	12-23 m	1827	82
HepB3	Card	81	12-23 m	-	82
HepB3	Card or History	84	12-23 m	1827	82
HepB3	History	3	12-23 m	-	82
HepBB	C or H <12 months	96	12-23 m	1827	82
HepBB	Card	83	12-23 m	-	82
HepBB	Card or History	96	12-23 m	1827	82
HepBB	History	13	12-23 m	-	82
MCV1	C or H <12 months	92	12-23 m	1827	82
MCV1	Card	81	12-23 m	-	82

MCV1	Card or History	95	12-23 m	1827	82
MCV1	History	14	12-23 m	-	82
Pol1	C or H <12 months	96	12-23 m	1827	82
Pol1	Card	81	12-23 m	-	82
Pol1	Card or History	96	12-23 m	1827	82
Pol1	History	16	12-23 m	-	82
Pol3	C or H <12 months	89	12-23 m	1827	82
Pol3	Card	80	12-23 m	-	82
Pol3	Card or History	91	12-23 m	1827	82
Pol3	History	11	12-23 m	-	82

## 2007 Immunization Coverage Survey: Thailand 2008

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	100	12-23 m	1800	97
DTP3	Card or History	99	12-23 m	1800	97
HepB3	Card or History	98	12-23 m	1800	97
MCV1	Card or History	98	12-23 m	1800	97
Pol3	Card or History	99	12-23 m	1800	97

## 2005 Thailand Multiple Indicator Cluster Survey, December 2005 – February 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	98	12-23 m	1895	88
BCG	Card	88	12-23 m	1895	88
BCG	Card or History	98	12-23 m	1895	88
BCG	History	10	12-23 m	1895	88
DTP1	C or H <12 months	98	12-23 m	1895	88
DTP1	Card	89	12-23 m	1895	88
DTP1	Card or History	98	12-23 m	1895	88
DTP1	History	9	12-23 m	1895	88
DTP3	C or H <12 months	92	12-23 m	1895	88
DTP3	Card	89	12-23 m	1895	88
DTP3	Card or History	94	12-23 m	1895	88
DTP3	History	5	12-23 m	1895	88
HepB1	C or H <12 months	98	12-23 m	1895	88
HepB1	Card	89	12-23 m	1895	88

# Thailand - survey details

HepB1	Card or History	98	12-23 m	1895	88
HepB1	History	9	12-23 m	1895	88
HepB3	C or H <12 months	92	12-23 m	1895	88
HepB3	Card	88	12-23 m	1895	88
HepB3	Card or History	94	12-23 m	1895	88
HepB3	History	6	12-23 m	1895	88
MCV1	C or H <12 months	92	12-23 m	1895	88
MCV1	Card	86	12-23 m	1895	88
MCV1	Card or History	97	12-23 m	1895	88
MCV1	History	10	12-23 m	1895	88
Pol1	C or H <12 months	98	12-23 m	1895	88
Pol1	Card	88	12-23 m	1895	88
Pol1	Card or History	98	12-23 m	1895	88
Pol1	History	10	12-23 m	1895	88
Pol3	C or H <12 months	92	12-23 m	1895	88
Pol3	Card	88	12-23 m	1895	88
Pol3	Card or History	94	12-23 m	1895	88
Pol3	History	5	12-23 m	1895	88

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	100	12-23 m	2520	98
DTP3	Card or History	98	12-23 m	2520	98
HepB3	Card or History	96	12-23 m	2520	98
MCV1	Card or History	96	12-23 m	2520	98
Pol3	Card or History	98	12-23 m	2520	98

## 1998 Immunization Coverage Survey: Thailand 1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	99	12-23 m	3369	94
DTP1	Card or History	98	12-23 m	3369	94
DTP3	Card or History	96	12-23 m	3369	94
HepB3	Card or History	95	12-23 m	3369	94
MCV1	Card or History	94	12-23 m	3369	94
Pol3	Card or History	97	12-23 m	3369	94

## 2002 Immunization Coverage Survey: Thailand 2003

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



## Thailand

### 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 (%)
2004	88
2005	88
2006	88
2007	89
2008	91
2009	91
2010	91
2011	91
2012	91
2013	91
2014	95
2015	95

<sup>1</sup> 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.