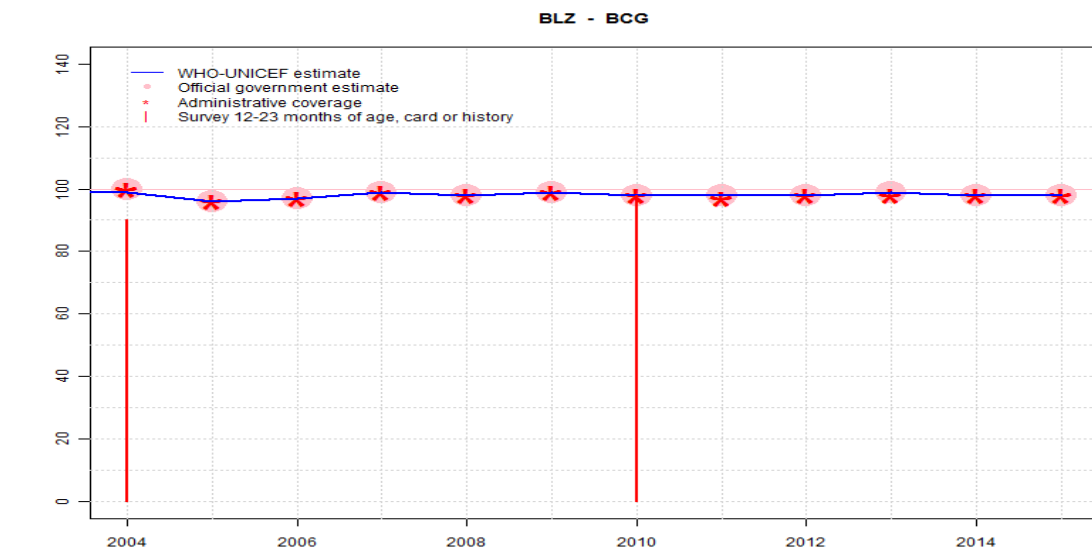


Belize - BCG



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	96	97	99	98	99	98	98	98	99	98	98
Estimate GoC	••	••	••	••	•••	•••	•••	•••	•	•	•	•
Official	100	96	97	99	98	99	98	98	98	99	98	98
Administrative	100	96	97	99	98	99	98	97	98	98	98	98
Survey	90.2	NA	NA	NA	NA	NA	98	NA	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

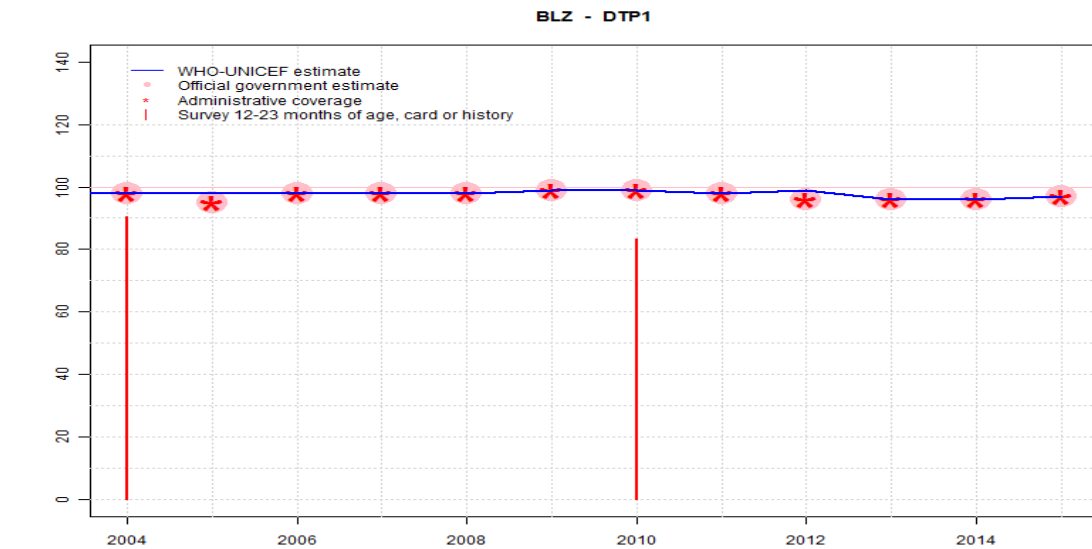
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2004: Estimate based on coverage reported by national government. Survey results ignored. Sample size 169 less than 300. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). 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. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the conduct of Multiple Indicator Cluster Survey during 2015 and await the final results. Estimate challenged by: D-

Belize - DTP1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	98	98	98	98	98	99	99	98	99	96	96	97
Estimate GoC	••	•	••	••	•	•	•	•	•	•	•	•
Official	98	95	98	98	98	99	99	98	96	96	96	97
Administrative	98	95	98	98	98	99	99	98	96	96	96	97
Survey	90.6	NA	NA	NA	NA	NA	83.4	NA	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

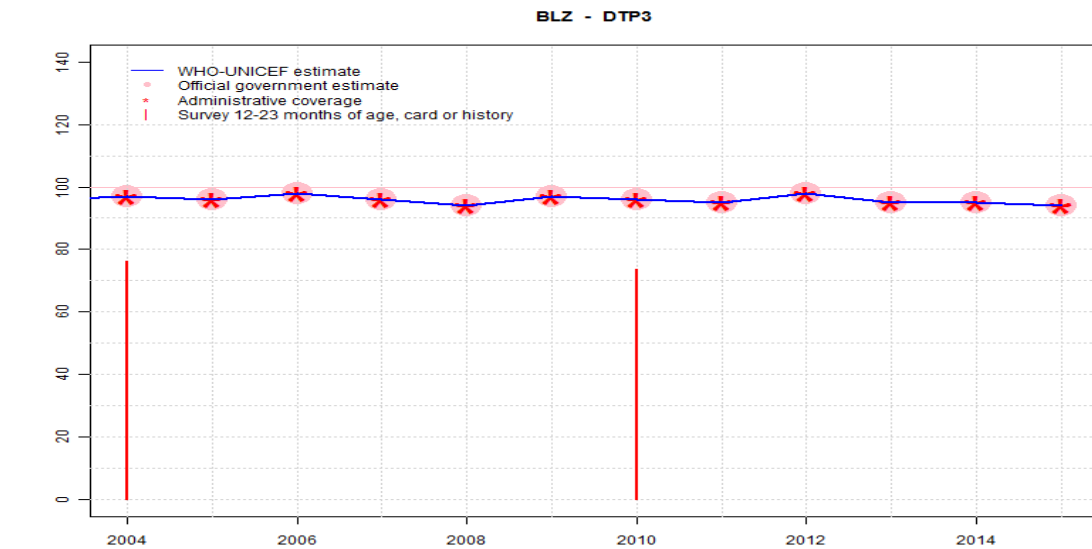
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2004: Estimate based on reported data Survey results ignored. Sample size 169 less than 300. GoC=R+ D+
- 2005: DTP1 coverage estimated based on DTP3 coverage of 96. Card only coverage for 3d dose of DTP-HepB-Hib and polio vaccine is higher than 1st dose. Estimate challenged by: R-
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2010: Estimate based on coverage reported by national government. Belize Multiple Indicator Cluster Survey 2011 results ignored by working group. Multiple vaccine presentations may have compromised the quality of maternal recall. Estimate challenged by: S-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2012: DTP1 coverage estimated based on DTP3 coverage of 98. Estimate challenged by: R-S-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the conduct of Multiple Indicator Cluster Survey during 2015 and await the final results. Estimate challenged by: D-

Belize - DTP3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	97	96	98	96	94	97	96	95	98	95	95	94
Estimate GoC	••	••	••	••	•	•	•	•	•	••	•	•
Official	97	96	98	96	94	97	96	95	98	95	95	94
Administrative	97	96	98	96	94	97	96	95	98	95	95	94
Survey	76.1	NA	NA	NA	NA	NA	73.5	NA	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

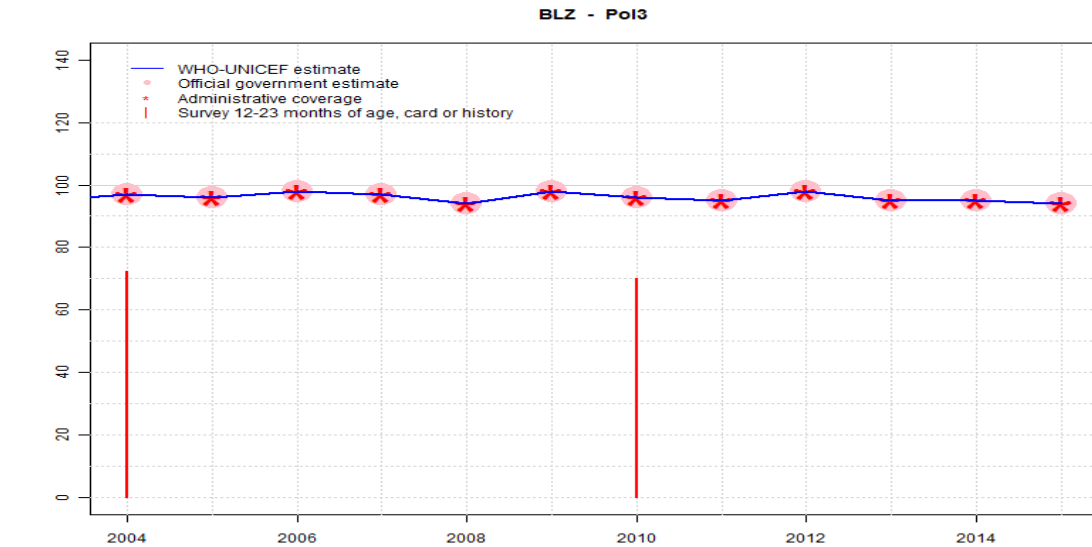
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2004: Estimate based on coverage reported by national government. Survey results ignored. Sample size 169 less than 300. Belize Multiple Indicator Cluster Survey 2006 card or history results of 76 percent modified for recall bias to 92 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 67 percent. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. Card only coverage for 3d dose of DTP-HepB-Hib and polio vaccine is higher than 1st dose. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2010: Estimate based on coverage reported by national government. Belize Multiple Indicator Cluster Survey 2011 results ignored by working group. Multiple vaccine presentations may have compromised a quality of maternal recall. Belize Multiple Indicator Cluster Survey 2011 card or history results of 74 percent modified for recall bias to 78 percent based on 1st dose card or history coverage of 83 percent, 1st dose card only coverage of 78 percent and 3d dose card only coverage of 72 percent. Estimate challenged by: S-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the conduct of Multiple Indicator Cluster Survey during 2015 and await the final results. Estimate challenged by: D-

Belize - Pol3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	97	96	98	97	94	98	96	95	98	95	95	94
Estimate GoC	••	••	••	••	•••	•••	•••	•••	•••	••	•	•
Official	97	96	98	97	94	98	96	95	98	95	95	94
Administrative	97	96	98	97	94	98	96	95	98	95	95	94
Survey	72.3	NA	NA	NA	NA	NA	70	NA	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

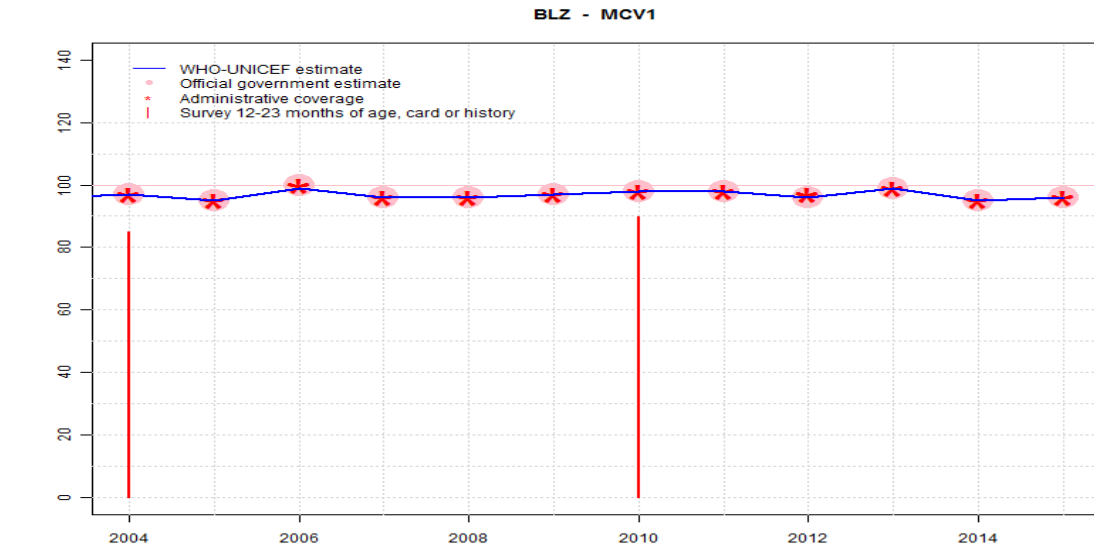
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2004: Estimate based on coverage reported by national government. Survey results ignored. Sample size 169 less than 300. Belize Multiple Indicator Cluster Survey 2006 card or history results of 72 percent modified for recall bias to 91 percent based on 1st dose card or history coverage of 89 percent, 1st dose card only coverage of 65 percent and 3d dose card only coverage of 67 percent. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. Card only coverage for 3d dose of DTP-HepB-Hib and polio vaccine is higher than 1st dose. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 90 percent based on 1 survey(s). Belize Multiple Indicator Cluster Survey 2011 card or history results of 70 percent modified for recall bias to 90 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 75 percent and 3d dose card only coverage of 69 percent. 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+ S+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the conduct of Multiple Indicator Cluster Survey during 2015 and await the final results. Estimate challenged by: D-

Belize - MCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	97	95	99	96	96	97	98	98	96	99	95	96
Estimate GoC	●●	●●	●●	●●	●●●	●●●	●●●	●●●	●●●	●	●	●
Official	97	95	100	96	96	97	98	98	96	99	95	96
Administrative	97	95	100	96	96	97	98	98	97	99	95	96
Survey	85	NA	NA	NA	NA	NA	89.8	NA	NA	NA	NA	NA

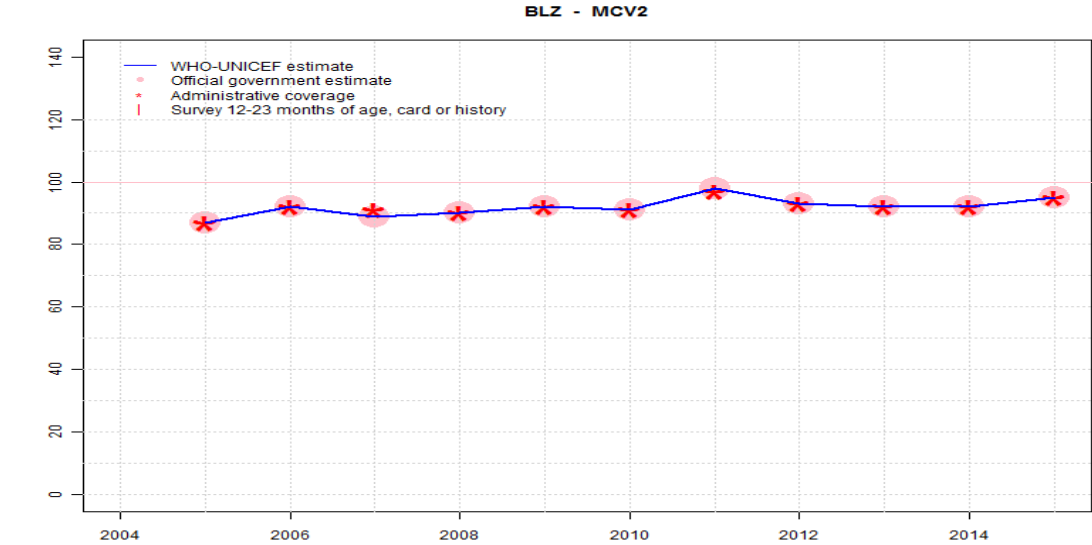
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2004: Estimate based on coverage reported by national government. Survey results ignored. Sample size 169 less than 300. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 90 percent based on 1 survey(s). 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+ S+ D+
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the conduct of Multiple Indicator Cluster Survey during 2015 and await the final results. Estimate challenged by: D-



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	87	92	89	90	92	91	98	93	92	92	95
Estimate GoC	NA	••	••	••	••	••	••	••	••	••	•	•
Official	NA	87	92	89	90	92	91	98	93	92	92	95
Administrative	NA	87	92	91	90	92	91	97	93	92	92	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: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

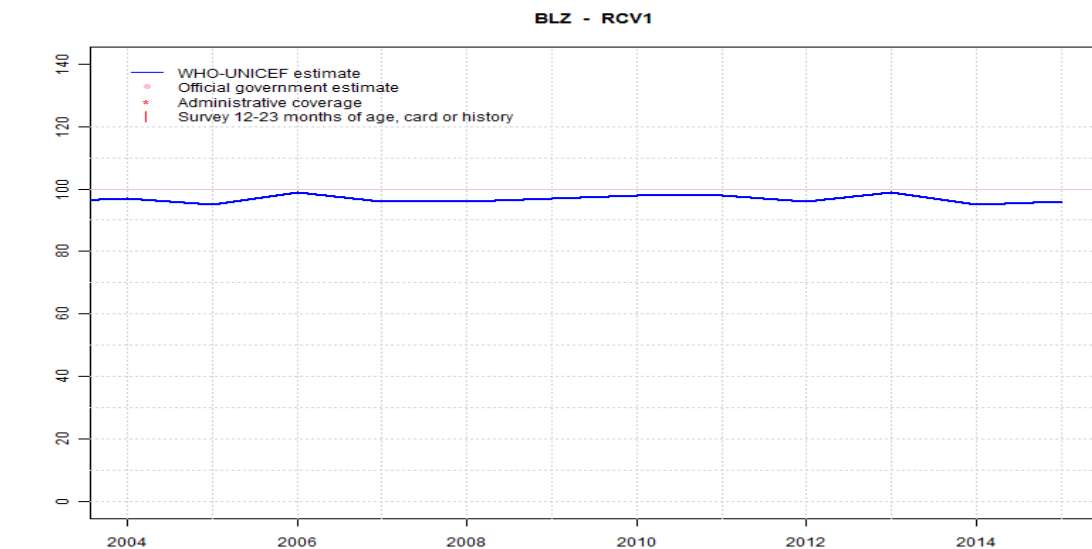
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

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

- 2005: Estimate based on coverage reported by national government. GoC=R+D+
- 2006: Estimate based on coverage reported by national government. GoC=R+D+
- 2007: Estimate based on coverage reported by national government. GoC=R+D+
- 2008: Estimate based on coverage reported by national government. GoC=R+D+
- 2009: Estimate based on coverage reported by national government. GoC=R+D+
- 2010: Estimate based on coverage reported by national government. Estimate of 91 percent changed from previous revision value of 89 percent. GoC=R+D+
- 2011: Estimate based on coverage reported by national government. GoC=R+D+
- 2012: Estimate based on coverage reported by national government. GoC=R+D+
- 2013: Estimate based on coverage reported by national government. GoC=R+D+
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the conduct of Multiple Indicator Cluster Survey during 2015 and await the final results. Estimate challenged by: D-

Belize - RCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	97	95	99	96	96	97	98	98	96	99	95	96
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.

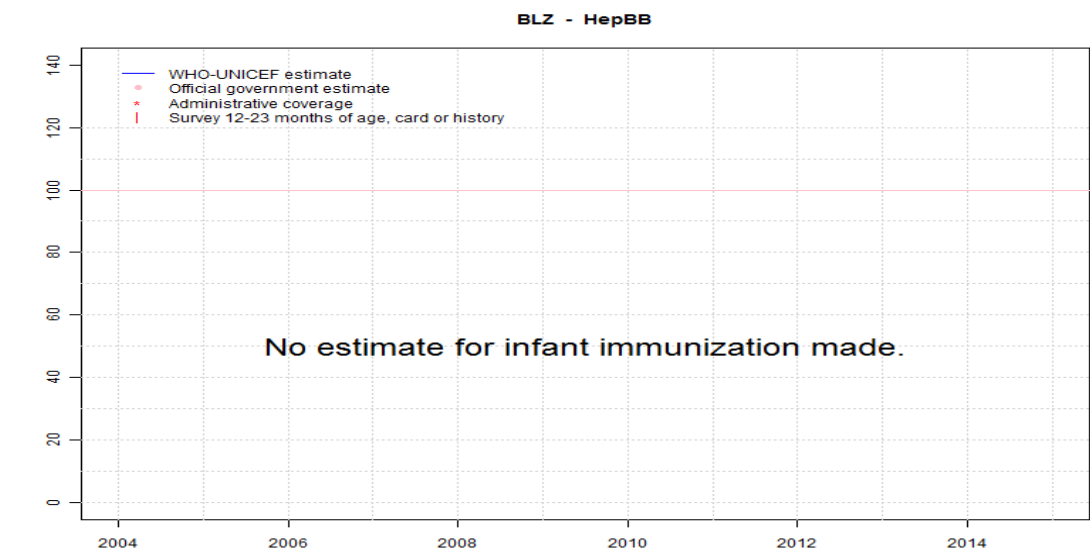
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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+ D+
 2005: Estimate based on estimated MCV1. GoC=R+ D+
 2006: Estimate based on estimated MCV1. GoC=R+ D+
 2007: Estimate based on estimated MCV1. GoC=R+ D+
 2008: Estimate based on estimated MCV1. GoC=R+ S+ D+
 2009: Estimate based on estimated MCV1. GoC=R+ S+ D+
 2010: Estimate based on estimated MCV1. GoC=R+ S+ D+
 2011: Estimate based on estimated MCV1. GoC=R+ S+ D+
 2012: Estimate based on estimated MCV1. GoC=R+ S+ D+
 2013: Estimate based on estimated MCV1. Estimate challenged by: D-
 2014: Estimate based on estimated MCV1. Estimate challenged by: D-
 2015: Estimate based on estimated MCV1. WHO and UNICEF are aware of the conduct of Multiple Indicator Cluster Survey during 2015 and await the final results. Estimate challenged by: D-



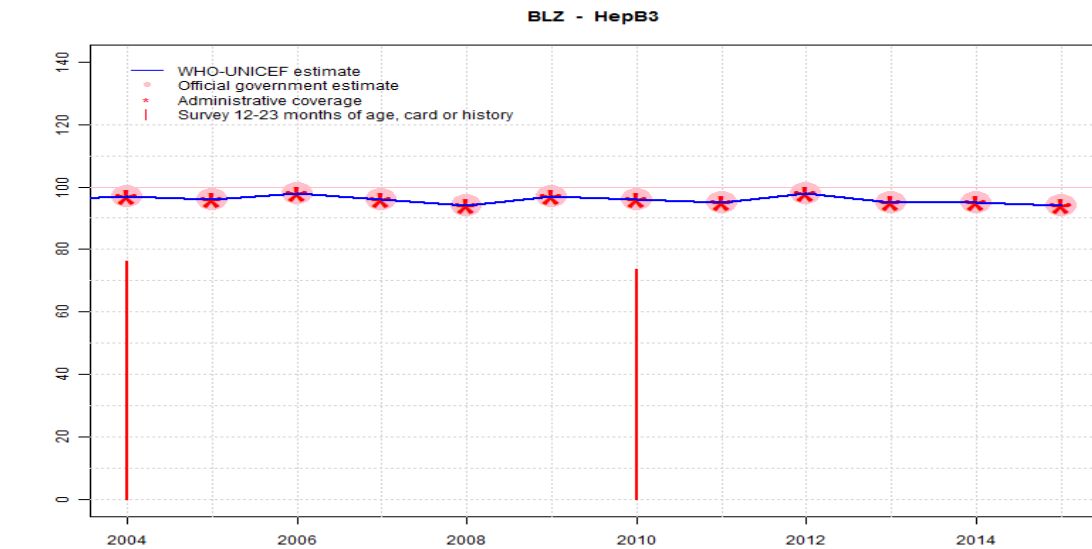
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

Belize - HepB3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	97	96	98	96	94	97	96	95	98	95	95	94
Estimate GoC	••	••	••	••	•	•	•	•	•	••	•	•
Official	97	96	98	96	94	97	96	95	98	95	95	94
Administrative	97	96	98	96	94	97	96	95	98	95	95	94
Survey	76.1	NA	NA	NA	NA	NA	73.7	NA	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

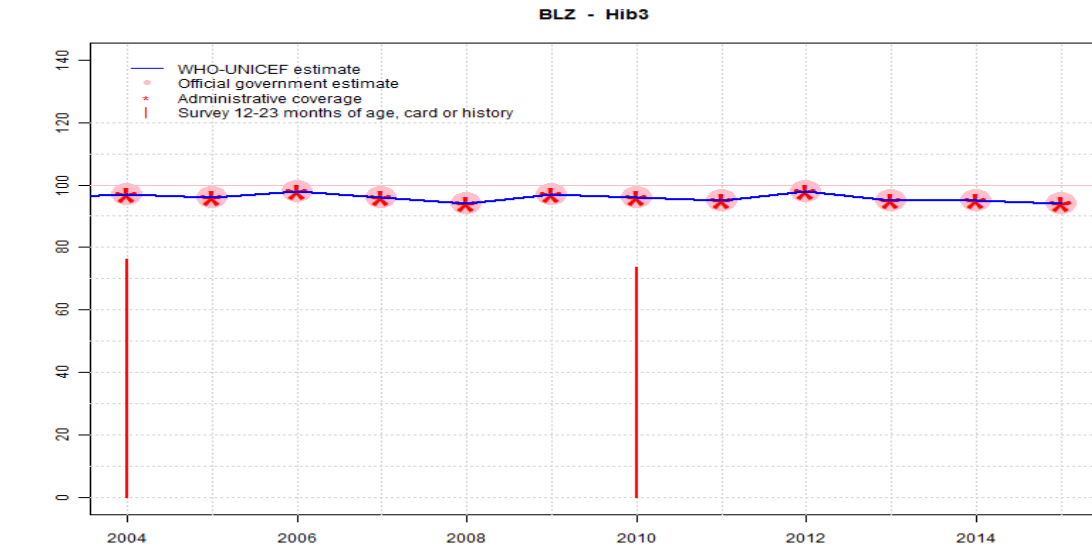
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2004: Estimate based on coverage reported by national government. Survey results ignored. Sample size 169 less than 300. Belize Multiple Indicator Cluster Survey 2006 card or history results of 76 percent modified for recall bias to 92 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 67 percent. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. Card only coverage for 3d dose of DTP-HepB-Hib and polio vaccine is higher than 1st dose. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2010: Estimate based on coverage reported by national government. Belize Multiple Indicator Cluster Survey 2011 results ignored by working group. Multiple vaccine presentations may have compromised a quality of maternal recall. Belize Multiple Indicator Cluster Survey 2011 card or history results of 74 percent modified for recall bias to 78 percent based on 1st dose card or history coverage of 84 percent, 1st dose card only coverage of 77 percent and 3d dose card only coverage of 72 percent. Estimate challenged by: S-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the conduct of Multiple Indicator Cluster Survey during 2015 and await the final results. Estimate challenged by: D-

Belize - Hib3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	97	96	98	96	94	97	96	95	98	95	95	94
Estimate GoC	••	••	••	••	•	•	•	•	•	••	•	•
Official	97	96	98	96	94	97	96	95	98	95	95	94
Administrative	97	96	98	96	94	97	96	95	98	95	95	94
Survey	76.1	NA	NA	NA	NA	NA	73.5	NA	NA	NA	NA	NA

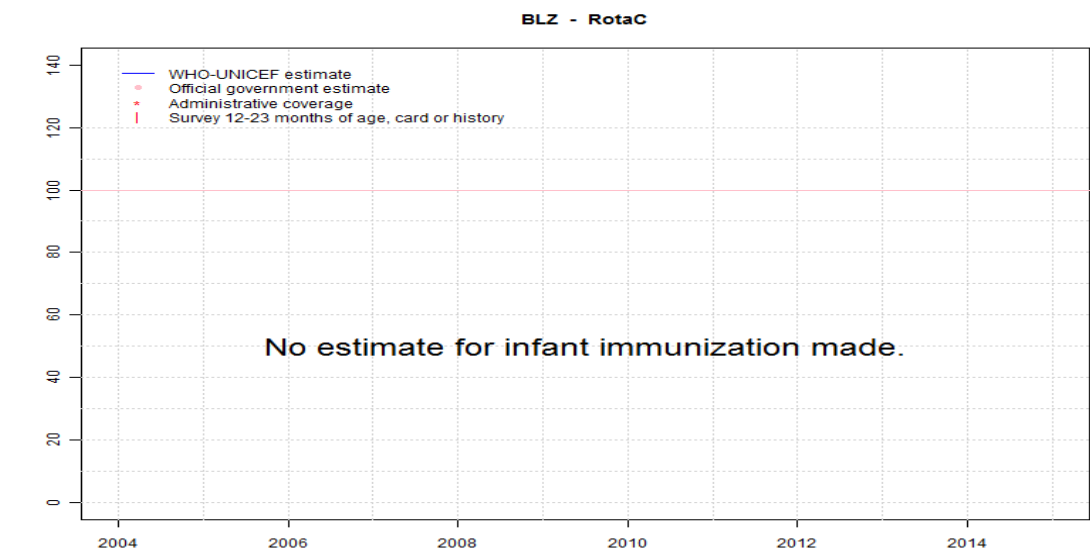
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2004: Estimate based on coverage reported by national government. Survey results ignored. Sample size 169 less than 300. Belize Multiple Indicator Cluster Survey 2006 card or history results of 76 percent modified for recall bias to 92 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 67 percent. GoC=R+
- 2005: Estimate based on coverage reported by national government. Card only coverage for 3d dose of DTP-HepB-Hib and polio vaccine is higher than 1st dose. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2010: Estimate based on coverage reported by national government. Belize Multiple Indicator Cluster Survey 2011 results ignored by working group. Multiple vaccine presentations may have compromised a quality of maternal recall. Belize Multiple Indicator Cluster Survey 2011 card or history results of 74 percent modified for recall bias to 78 percent based on 1st dose card or history coverage of 84 percent, 1st dose card only coverage of 78 percent and 3d dose card only coverage of 72 percent. Estimate challenged by: S-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF are aware of the conduct of Multiple Indicator Cluster Survey during 2015 and await the final results. Estimate challenged by: D-



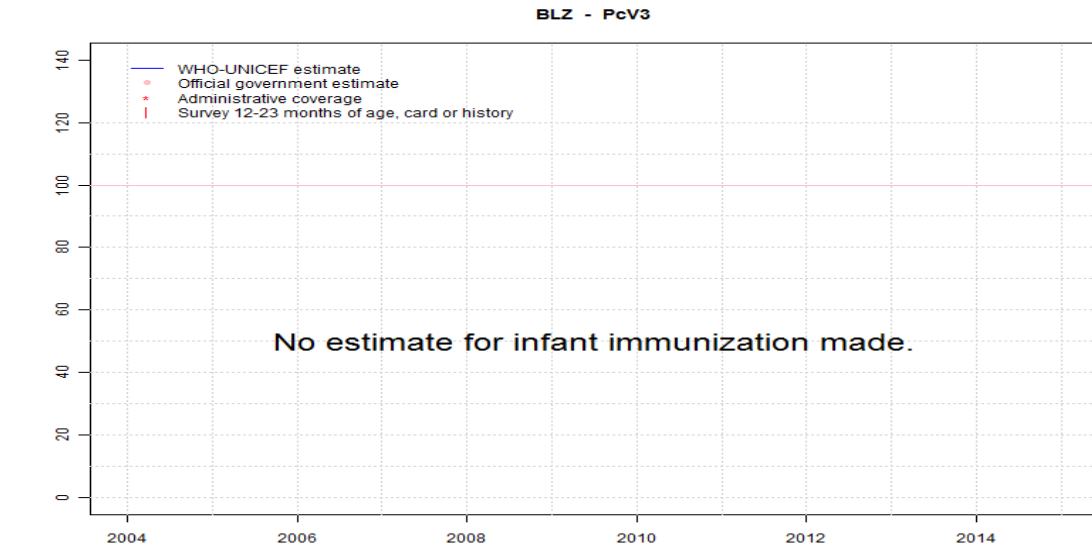
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

Belize - 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.

Belize - survey details

2010 Belize Multiple Indicator Cluster Survey 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	97.5	18-29 m	-	75
BCG	Card	75.5	18-29 m	-	75
BCG	Card or History	98	18-29 m	405	75
BCG	History	22.5	18-29 m	-	75
DTP1	C or H <12 months	81.7	18-29 m	-	75
DTP1	Card	77.7	18-29 m	-	75
DTP1	Card or History	83.4	18-29 m	405	75
DTP1	History	5.8	18-29 m	-	75
DTP3	C or H <12 months	67.8	18-29 m	-	75
DTP3	Card	72.3	18-29 m	-	75
DTP3	Card or History	73.5	18-29 m	405	75
DTP3	History	1.2	18-29 m	-	75
HepB1	C or H <12 months	83.5	18-29 m	-	75
HepB1	Card	77.4	18-29 m	-	75
HepB1	Card or History	83.5	18-29 m	405	75
HepB1	History	6.1	18-29 m	-	75
HepB3	C or H <12 months	73.7	18-29 m	-	75
HepB3	Card	72.2	18-29 m	-	75
HepB3	Card or History	73.7	18-29 m	405	75
HepB3	History	1.5	18-29 m	-	75
Hib1	C or H <12 months	83.5	18-29 m	-	75
Hib1	Card	77.5	18-29 m	-	75
Hib1	Card or History	83.5	18-29 m	405	75
Hib1	History	6	18-29 m	-	75
Hib3	C or H <12 months	73.5	18-29 m	-	75
Hib3	Card	72.3	18-29 m	-	75
Hib3	Card or History	73.5	18-29 m	405	75
Hib3	History	1.2	18-29 m	-	75
MCV1	C or H <18 months	84.9	18-29 m	-	75
MCV1	Card	72.2	18-29 m	-	75
MCV1	Card or History	89.8	18-29 m	405	75
MCV1	History	17.5	18-29 m	-	75
Pol1	C or H <12 months	95.6	18-29 m	-	75
Pol1	Card	75	18-29 m	-	75
Pol1	Card or History	97.3	18-29 m	405	75
Pol1	History	22.4	18-29 m	-	75
Pol3	C or H <12 months	65.3	18-29 m	-	75

Pol3	Card	69.2	18-29 m	-	75
Pol3	Card or History	70	18-29 m	405	75
Pol3	History	0.8	18-29 m	-	75

2004 Belize Multiple Indicator Cluster Survey 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	90.2	18-29 m	169	64
BCG	Card	64.3	18-29 m	169	64
BCG	Card or History	90.2	18-29 m	169	64
BCG	History	25.9	18-29 m	169	64
DTP1	C or H <12 months	89	18-29 m	169	64
DTP1	Card	65.5	18-29 m	169	64
DTP1	Card or History	90.6	18-29 m	169	64
DTP1	History	25.1	18-29 m	169	64
DTP3	C or H <12 months	74.6	18-29 m	169	64
DTP3	Card	66.8	18-29 m	169	64
DTP3	Card or History	76.1	18-29 m	169	64
DTP3	History	9.4	18-29 m	169	64
HepB1	C or H <12 months	89	18-29 m	169	64
HepB1	Card	65.5	18-29 m	169	64
HepB1	Card or History	90.6	18-29 m	169	64
HepB1	History	25.1	18-29 m	169	64
HepB3	C or H <12 months	74.6	18-29 m	169	64
HepB3	Card	66.8	18-29 m	169	64
HepB3	Card or History	76.1	18-29 m	169	64
HepB3	History	9.4	18-29 m	169	64
Hib1	C or H <12 months	89	18-29 m	169	64
Hib1	Card	65.5	18-29 m	169	64
Hib1	Card or History	90.6	18-29 m	169	64
Hib1	History	25.1	18-29 m	169	64
Hib3	C or H <12 months	74.6	18-29 m	169	64
Hib3	Card	66.8	18-29 m	169	64
Hib3	Card or History	76.1	18-29 m	169	64
Hib3	History	9.4	18-29 m	169	64
MCV1	C or H <12 months	81.9	18-29 m	169	64
MCV1	Card	60.5	18-29 m	169	64
MCV1	Card or History	85	18-29 m	169	64
MCV1	History	24.4	18-29 m	169	64

Belize - survey details

Pol1	C or H <12 months	88.3	18-29 m	169	64
Pol1	Card	64.9	18-29 m	169	64
Pol1	Card or History	89	18-29 m	169	64
Pol1	History	24.1	18-29 m	169	64
Pol3	C or H <12 months	68.6	18-29 m	169	64

Pol3	Card	66.6	18-29 m	169	64
Pol3	Card or History	72.3	18-29 m	169	64
Pol3	History	5.7	18-29 m	169	64

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

Belize

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	86
2005	87
2006	85
2007	87
2008	88
2009	88
2010	88
2011	88
2012	88
2013	88
2014	91
2015	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.