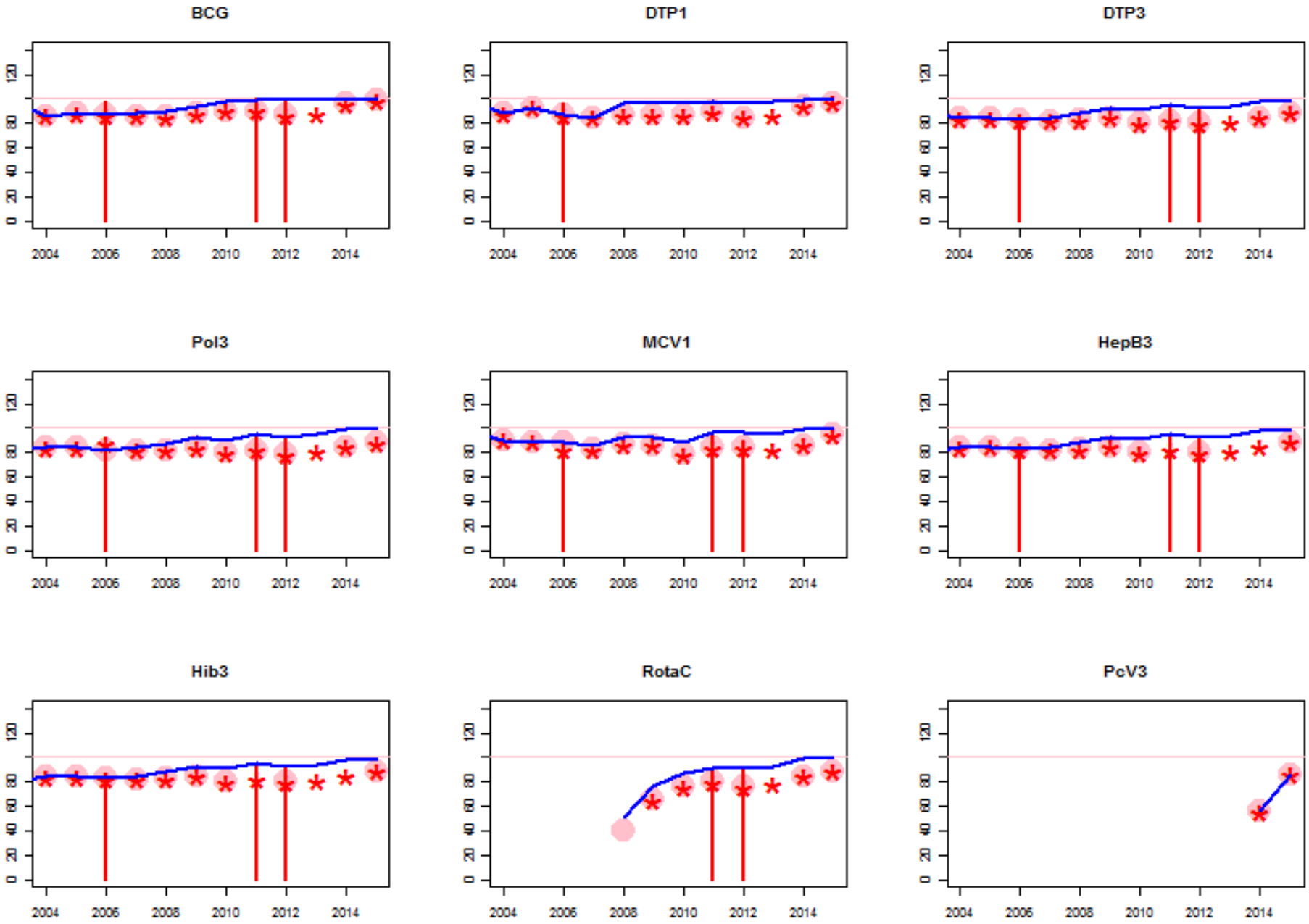
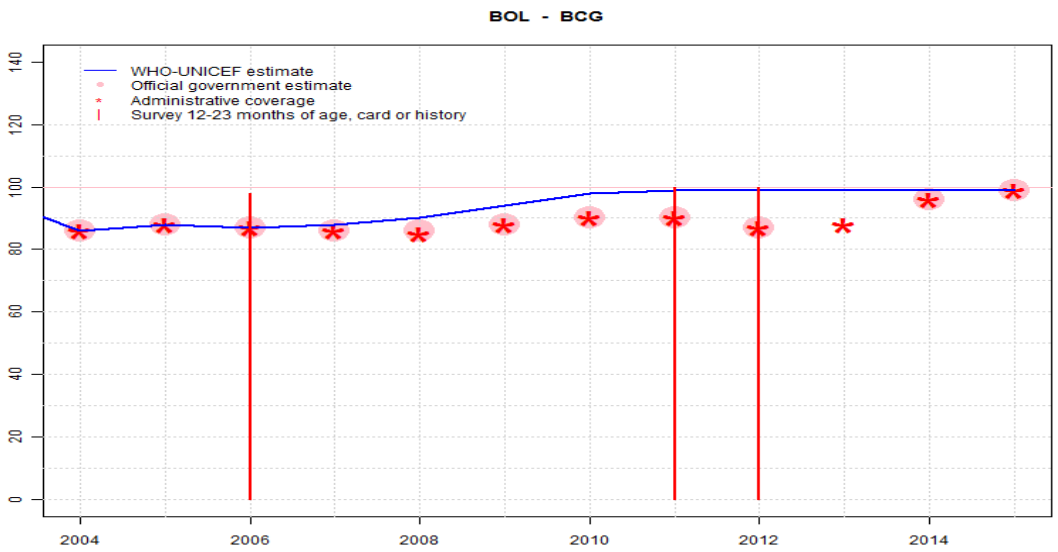

BCG
DTP1
DTP3
Pol3
MCV1
HepB3
Hib3
RotaC
PcV3
0
20
40
60
80
120
2004
2006
2008
2010
2012
2014

Bolivia (Plurinational State of) - BCG



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	86	88	87	88	90	94	98	99	99	99	99	99
Estimate GoC	●●●	●●●	●●	●●	●●	●●	●●	●	●	●●	●	●
Official	86	88	87	86	86	88	90	90	87	NA	96	99
Administrative	86	88	87	86	85	88	90	90	87	88	96	99
Survey	NA	NA	98	NA	NA	NA	NA	100	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.

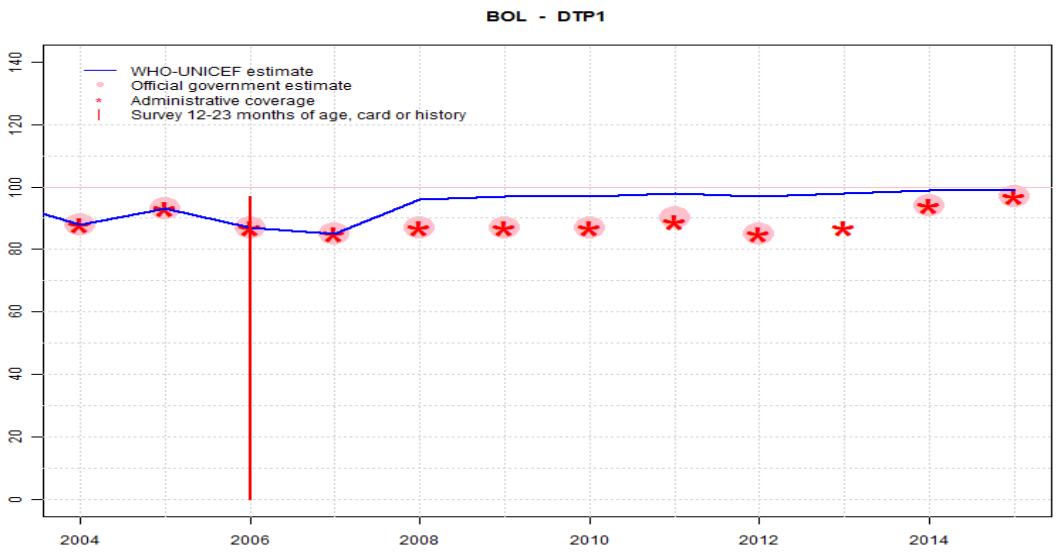
● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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 nationally reported data. GoC=R+ S+ D+
2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
2006: Estimate based on nationally reported data. GoC=R+ D+
2007: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+
2008: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+
2009: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+
2010: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+
2011: . Estimate challenged by: R-
2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 100 percent based on 1 survey(s). Estimate challenged by: R-
2013: Reported data calibrated to 2012 levels. GoC=S+ D+
2014: Reported data calibrated to 2012 levels. Reported data excluded. Programme reported a revised target population. Programme also reported a decrease in the number of children vaccinated compared to 2013 due in part to the ongoing implementation of a new information system. WHO and UNICEF recommend a revision of the coverage data time series with a consistent target population. Programme notes that 2014 data remain preliminary. Estimate challenged by: D-
2015: Reported data calibrated to 2012 levels. Estimate challenged by: D-

Bolivia (Plurinational State of) - DTP1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	88	93	87	85	96	97	97	98	97	98	99	99
Estimate GoC	●●●	●●●	●●●	●●	●	●	●	●	●	●	●	●
Official	88	93	87	85	87	87	87	90	85	NA	94	97
Administrative	88	93	87	85	87	87	87	89	85	87	94	97
Survey	NA	NA	97	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.

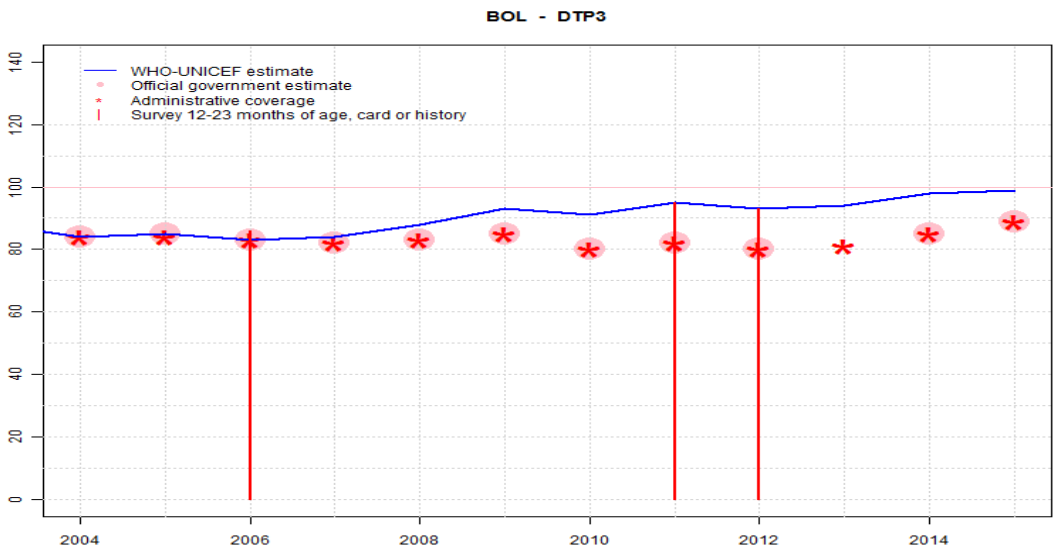
● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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:

2004: Estimate based on nationally reported data. GoC=R+ S+ D+
2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
2006: Estimate based on nationally reported data. GoC=R+ S+ D+
2007: Estimate based on coverage reported by national government. GoC=R+ D+
2008: DTP1 coverage estimated based on DTP3 coverage of 88. Estimate challenged by: R-
2009: DTP1 coverage estimated based on DTP3 coverage of 93. Estimate challenged by: R-
2010: DTP1 coverage estimated based on DTP3 coverage of 91. Estimate challenged by: R-
2011: DTP1 coverage estimated based on DTP3 coverage of 95. Estimate challenged by: R-
2012: DTP1 coverage estimated based on DTP3 coverage of 93. Estimate challenged by: R-
2013: DTP1 coverage estimated based on DTP3 coverage of 94. Estimate challenged by: R-
2014: DTP1 coverage estimated based on DTP3 coverage of 98. Reported data excluded. Programme reported a revised target population. Programme also reported a decrease in the number of children vaccinated compared to 2013 due in part to the ongoing implementation of a new information system. WHO and UNICEF recommend a revision of the coverage data time series with a consistent target population. Programme notes that 2014 data remain preliminary. Estimate of 99 percent changed from previous revision value of 98 percent. Estimate challenged by: R-
2015: DTP1 coverage estimated based on DTP3 coverage of 102. Estimate challenged by: R-

Bolivia (Plurinational State of) - DTP3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	84	85	83	84	88	93	91	95	93	94	98	99
Estimate GoC	●●●	●●●	●●●	●●	●●	●●	●●	●	●	●●	●	●
Official	84	85	83	82	83	85	80	82	80	NA	85	89
Administrative	84	84	83	82	83	85	80	82	80	81	85	89
Survey	NA	NA	86	NA	NA	NA	NA	95	93	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 nationally reported data. GoC=R+ S+ D+

2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2006: Estimate based on nationally reported data. Bolivia Demographic and Health Survey 2008 card or history results of 86 percent modifed for recall bias to 91 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 70 percent. GoC=R+ S+ D+

2007: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2008: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2009: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2010: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2011: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 95 percent based on 1 survey(s). Estimate challenged by: R-

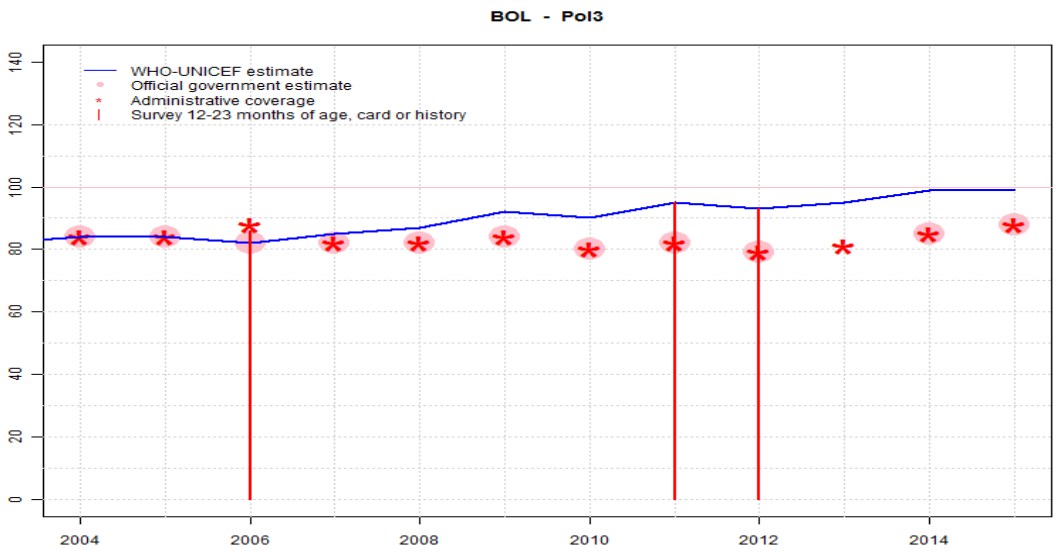
2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 93 percent based on 1 survey(s). Estimate challenged by: R-

2013: Reported data calibrated to 2012 levels. GoC=S+ D+

2014: Reported data calibrated to 2012 levels. Reported data excluded. Programme reported a revised target population. Programme also reported a decrease in the number of children vaccinated compared to 2013 due in part to the ongoing implementation of a new information system. WHO and UNICEF recommend a revision of the coverage data time series with a consistent target population. Programme notes that 2014 data remain preliminary. Estimate of 98 percent changed from previous revision value of 94 percent. Estimate challenged by: D-

2015: Reported data calibrated to 2012 levels. Estimate challenged by: D-

Bolivia (Plurinational State of) - Pol3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	84	84	82	85	87	92	90	95	93	95	99	99
Estimate GoC	●●●	●●●	●●●	●●	●●	●●	●●	●	●	●●	●	●
Official	84	84	82	82	82	84	80	82	79	NA	85	88
Administrative	84	84	88	82	82	84	80	82	79	81	85	88
Survey	NA	NA	86	NA	NA	NA	NA	95	93	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 nationally reported data. GoC=R+ S+ D+

2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2006: Estimate based on nationally reported data. Bolivia Demographic and Health Survey 2008 card or history results of 86 percent modifed for recall bias to 91 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 70 percent. GoC=R+ S+ D+

2007: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2008: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2009: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2010: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2011: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 95 percent based on 1 survey(s). Estimate challenged by: R-

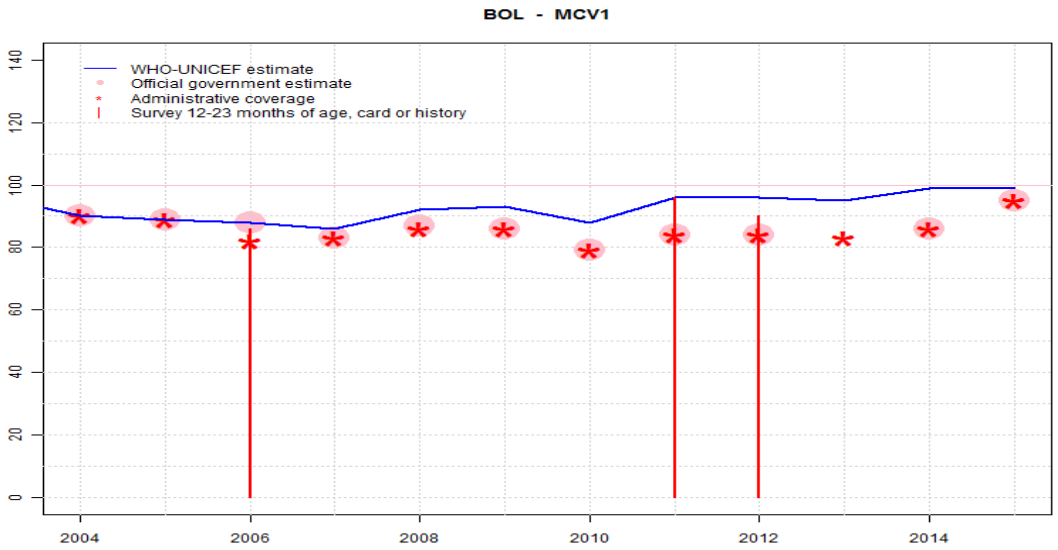
2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 93 percent based on 1 survey(s). Estimate challenged by: R-

2013: Reported data calibrated to 2012 levels. GoC=S+ D+

2014: Reported data calibrated to 2012 levels. Reported data excluded. Programme reported a revised target population. Programme also reported a decrease in the number of children vaccinated compared to 2013 due in part to the ongoing implementation of a new information system. WHO and UNICEF recommend a revision of the coverage data time series with a consistent target population. Programme notes that 2014 data remain preliminary. Estimate of 99 percent changed from previous revision value of 95 percent. Estimate challenged by: D-

2015: Reported data calibrated to 2012 levels. Estimate challenged by: D-

Bolivia (Plurinational State of) - MCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	90	89	88	86	92	93	88	96	96	95	99	99
Estimate GoC	•	•••	•••	••	••	••	•	•	•	•	•	•
Official	90	89	88	83	87	86	79	84	84	NA	86	95
Administrative	90	89	82	83	86	86	79	84	84	83	86	95
Survey	NA	NA	86	NA	NA	NA	NA	96	90	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 nationally reported data. Estimate challenged by: S-

2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 86 percent based on 1 survey(s). GoC=R+ S+ D+

2007: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2008: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2009: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2010: Reported data calibrated to 2006 and 2011 levels. Estimate challenged by: S-

2011: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 96 percent based on 1 survey(s). Estimate challenged by: R-S-

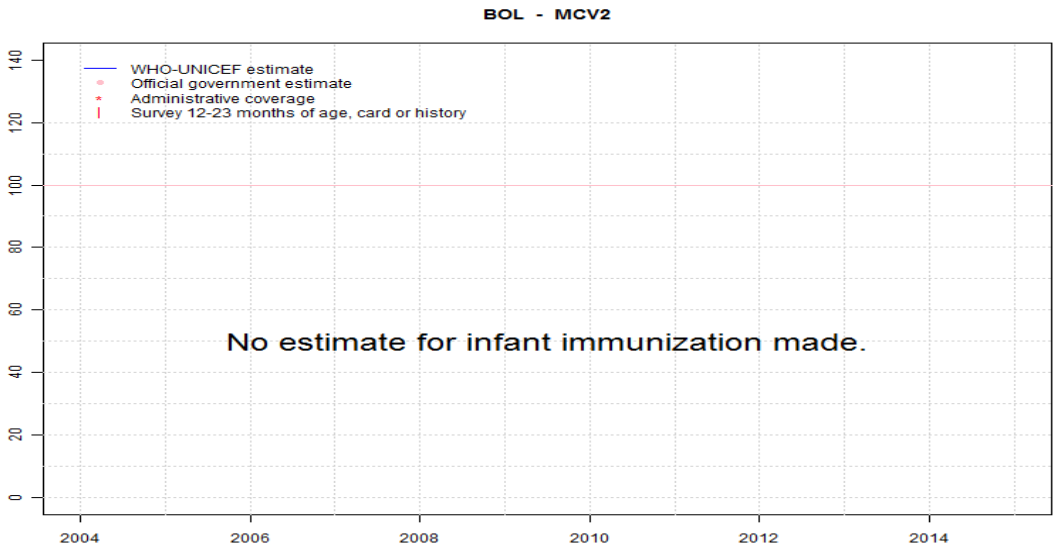
2012: Reported data calibrated to 2011 levels. Bolivia National Immunization Coverage Survey 2013 results ignored by working group. First dose of MCV is recommended at 12-23 months and therefore the survey result may not reflect doses received during the second year of life. Estimate challenged by: S-

2013: Reported data calibrated to 2011 levels. Estimate challenged by: S-

2014: Reported data calibrated to 2011 levels. Reported data excluded. Programme reported a revised target population. Programme also reported a decrease in the number of children vaccinated compared to 2013 due in part to the ongoing implementation of a new information system. WHO and UNICEF recommend a revision of the coverage data time series with a consistent target population. Programme notes that 2014 data remain preliminary. Estimate of 99 percent changed from previous revision value of 95 percent. Estimate challenged by: D-S-

2015: Reported data calibrated to 2011 levels. Estimate challenged by: D-

Bolivia (Plurinational State of) - MCV2



	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.

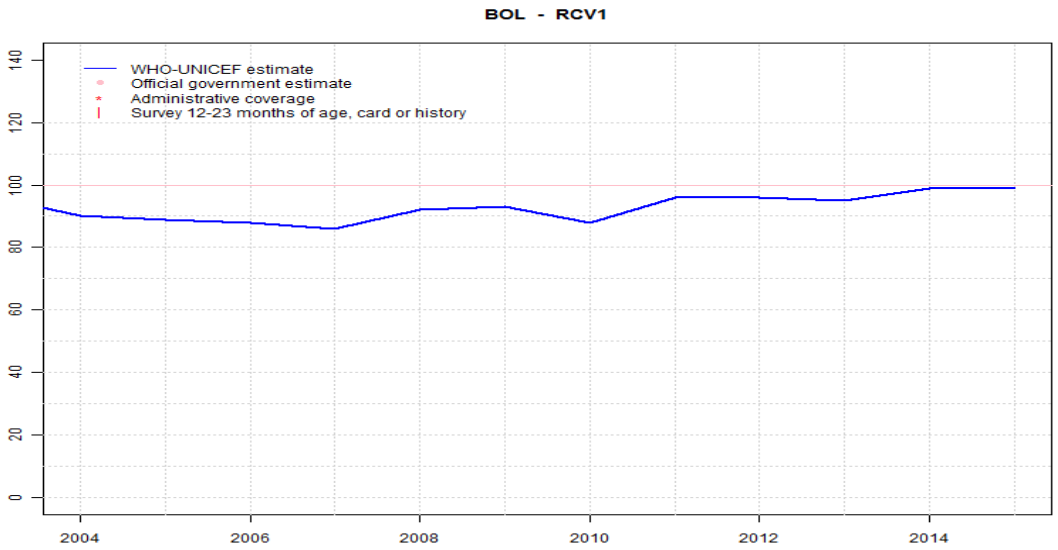
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

Bolivia (Plurinational State of) - RCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	90	89	88	86	92	93	88	96	96	95	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.

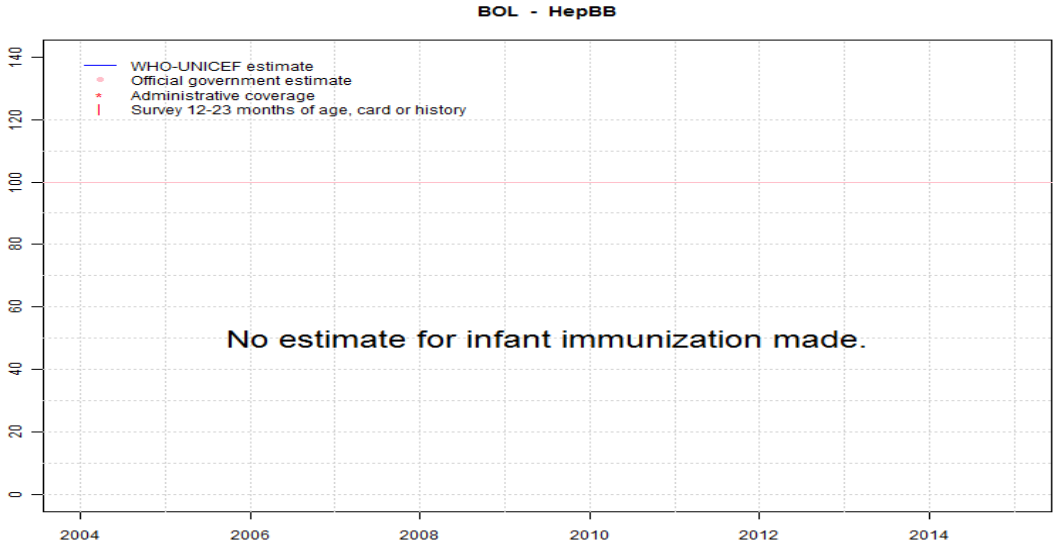
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

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. Estimate challenged by: S-
2005: Estimate based on estimated MCV1. GoC=R+ S+ D+
2006: Estimate based on estimated MCV1. GoC=R+ S+ D+
2007: Estimate based on estimated MCV1. GoC=S+ D+
2008: Estimate based on estimated MCV1. GoC=S+ D+
2009: Estimate based on estimated MCV1. GoC=S+ D+
2010: Estimate based on estimated MCV1. Estimate challenged by: S-
2011: Estimate based on estimated MCV1. Estimate challenged by: R-S-
2012: Estimate based on estimated MCV1. Estimate challenged by: S-
2013: Estimate based on estimated MCV1. Estimate challenged by: S-
2014: Estimate based on estimated MCV1. Programme notes that 2014 data remain preliminary. Estimate challenged by: D-S-
2015: Estimate based on estimated MCV1. Estimate challenged by: D-

Bolivia (Plurinational State of) - HepBB



	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.

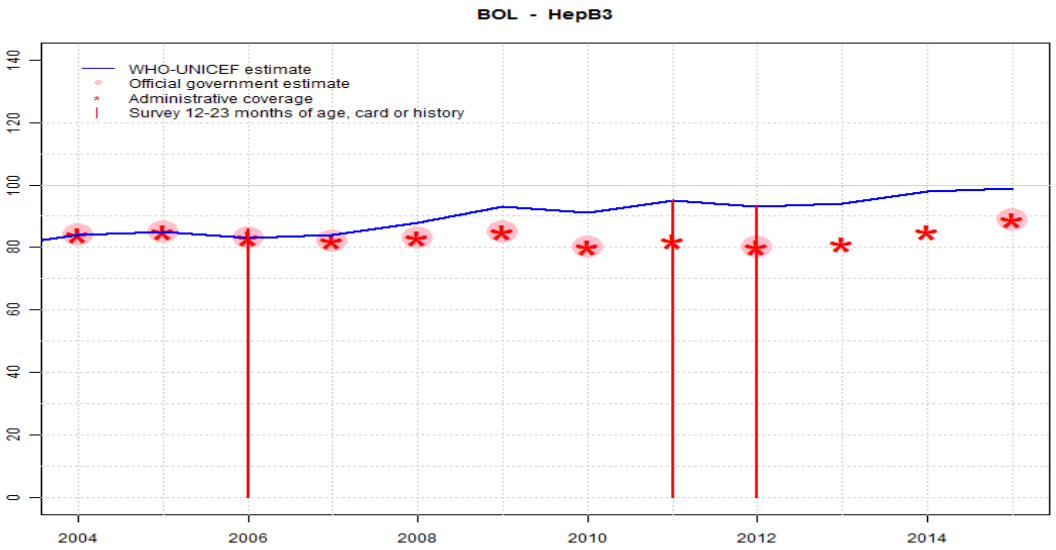
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

Bolivia (Plurinational State of) - HepB3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	84	85	83	84	88	93	91	95	93	94	98	99
Estimate GoC	●●●	●●●	●●●	●●	●●	●●	●●	●	●	●●	●	●
Official	84	85	83	82	83	85	80	NA	80	NA	NA	89
Administrative	84	85	83	82	83	85	80	82	80	81	85	89
Survey	NA	NA	86	NA	NA	NA	NA	95	93	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 follows nationally reported data. GoC=R+ S+ D+

2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 91 percent based on 1 survey(s). Bolivia Demographic and Health Survey 2008 card or history results of 86 percent modifed for recall bias to 91 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 70 percent. GoC=R+ S+ D+

2007: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2008: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2009: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2010: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2011: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 95 percent based on 1 survey(s). Estimate challenged by: R-

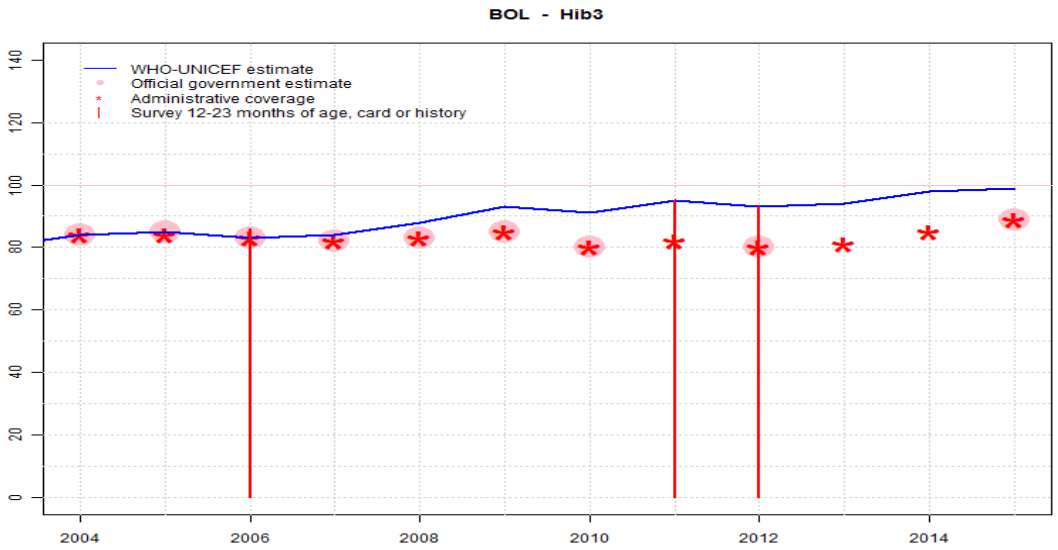
2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 93 percent based on 1 survey(s). Estimate challenged by: R-

2013: Reported data calibrated to 2012 levels. GoC=S+ D+

2014: Reported data calibrated to 2012 levels. Reported data excluded. Programme reported a revised target population. Programme also reported a decrease in the number of children vaccinated compared to 2013 due in part to the ongoing implementation of a new information system. WHO and UNICEF recommend a revision of the coverage data time series with a consistent target population. Programme notes that 2014 data remain preliminary. Estimate of 98 percent changed from previous revision value of 94 percent. Estimate challenged by: D-

2015: Reported data calibrated to 2012 levels. Estimate challenged by: D-

Bolivia (Plurinational State of) - Hib3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	84	85	83	84	88	93	91	95	93	94	98	99
Estimate GoC	●●●	●●●	●●●	●●	●●	●●	●●	●	●	●●	●	●
Official	84	85	83	82	83	85	80	NA	80	NA	NA	89
Administrative	84	84	83	82	83	85	80	82	80	81	85	89
Survey	NA	NA	86	NA	NA	NA	NA	95	93	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 follows nationally reported data. GoC=R+ S+ D+

2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 91 percent based on 1 survey(s). Bolivia Demographic and Health Survey 2008 card or history results of 86 percent modifed for recall bias to 91 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 70 percent. GoC=R+ S+ D+

2007: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2008: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2009: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2010: Reported data calibrated to 2006 and 2011 levels. GoC=S+ D+

2011: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 95 percent based on 1 survey(s). Estimate challenged by: R-

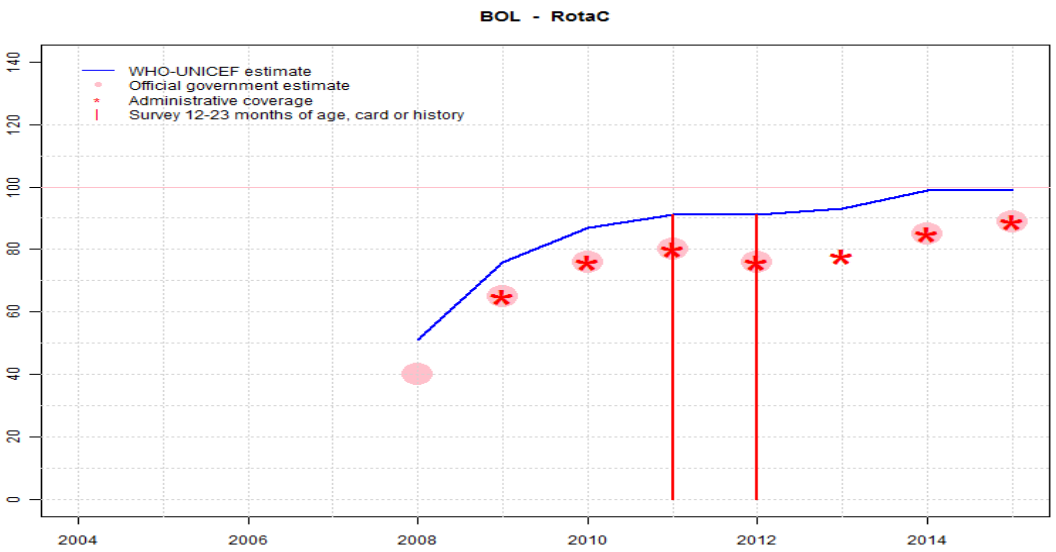
2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 93 percent based on 1 survey(s). Estimate challenged by: R-

2013: Reported data calibrated to 2012 levels. GoC=S+ D+

2014: Reported data calibrated to 2012 levels. Reported data excluded. Programme reported a revised target population. Programme also reported a decrease in the number of children vaccinated compared to 2013 due in part to the ongoing implementation of a new information system. WHO and UNICEF recommend a revision of the coverage data time series with a consistent target population. Programme notes that 2014 data remain preliminary. Estimate of 98 percent changed from previous revision value of 94 percent. Estimate challenged by: D-

2015: Reported data calibrated to 2012 levels. Estimate challenged by: D-

Bolivia (Plurinational State of) - RotaC



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	51	76	87	91	91	93	99	99
Estimate GoC	NA	NA	NA	NA	•	••	••	•	•	••	•	•
Official	NA	NA	NA	NA	40	65	76	80	76	NA	85	89
Administrative	NA	NA	NA	NA	NA	65	76	80	76	78	85	89
Survey	NA	NA	NA	NA	NA	NA	NA	91	91	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:

2008: Reported data calibrated to 2011 levels. Rotavirus vaccine introduced in 2008 Estimate challenged by: D-

2009: Reported data calibrated to 2011 levels. Rotavirus vaccine introduced in 2008; reporting started in 2009. GoC=D+

2010: Reported data calibrated to 2011 levels. GoC=S+ D+

2011: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 91 percent based on 1 survey(s). Estimate challenged by: R-

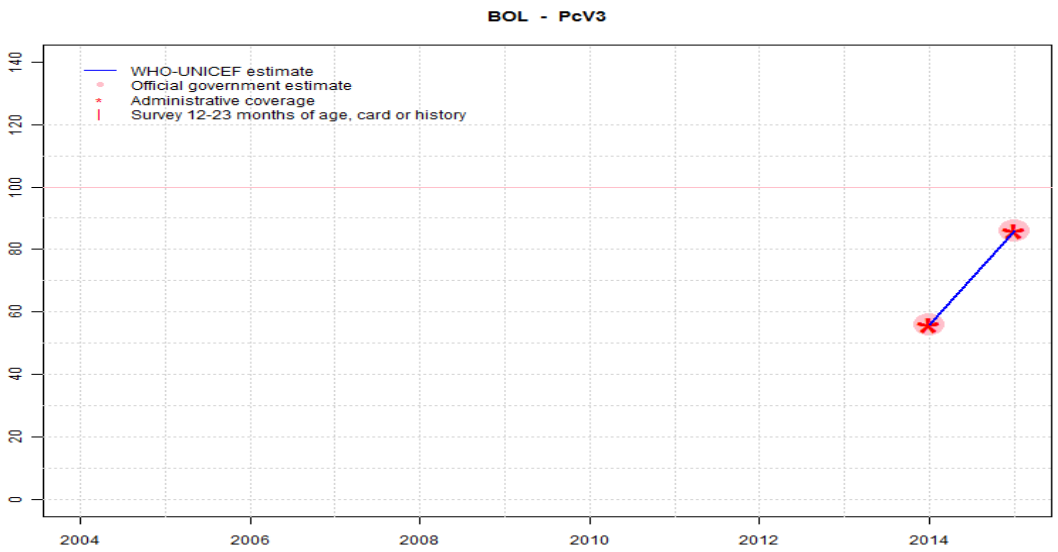
2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 91 percent based on 1 survey(s). Estimate challenged by: R-

2013: Reported data calibrated to 2012 levels. Programme reports a one month stockout at the national level and in 10 districts. GoC=S+ D+

2014: Reported data calibrated to 2012 levels. Programme notes that 2014 data remain preliminary. Estimate challenged by: D-

2015: Reported data calibrated to 2012 levels. Estimate challenged by: D-

Bolivia (Plurinational State of) - PcV3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	56	86
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●●	●●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	56	86
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	56	86
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.

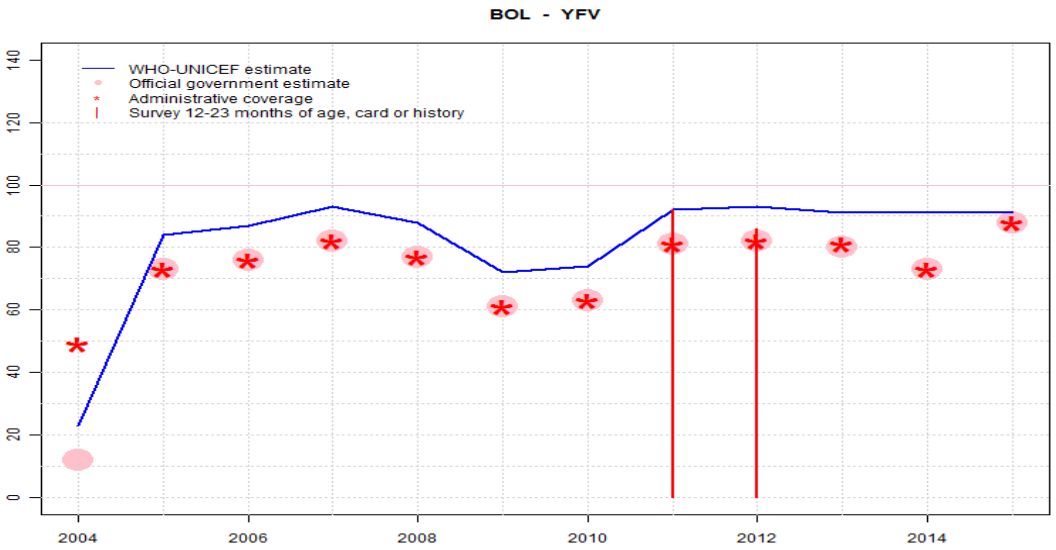
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2014: Pneumoccoal conjugate vaccine introduced during 2014. Estimate is based on reported data. Programme notes that 2014 data remain preliminary. GoC=R+ D+

2015: Estimate based on coverage reported by national government. GoC=R+ D+

Bolivia (Plurinational State of) - YFV



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	23	84	87	93	88	72	74	92	93	91	91	91
Estimate GoC	•	••	••	••	••	••	•	•	•	•	•	••
Official	12	73	76	82	77	61	63	81	82	80	73	88
Administrative	49	73	76	82	77	61	63	81	82	81	73	88
Survey	NA	NA	NA	NA	NA	NA	NA	92	86	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: Reported data calibrated to 2011 levels. YFV partially introduced nationally in 2003; reporting started in 2004. Estimate challenged by: D-

2005: Reported data calibrated to 2011 levels. GoC=D+

2006: Reported data calibrated to 2011 levels. GoC=D+

2007: Reported data calibrated to 2011 levels. GoC=D+

2008: Reported data calibrated to 2011 levels. GoC=D+

2009: Reported data calibrated to 2011 levels. Decline attributed to 2 months vaccine shortage. GoC=D+

2010: Reported data calibrated to 2011 levels. Estimate challenged by: S-

2011: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 92 percent based on 1 survey(s). Full vaccine supply available. Estimate challenged by: R-S-

2012: Reported data calibrated to 2011 levels. Bolivia National Immunization Coverage Survey 2013 results ignored by working group. YFV is recommended at 12-23 months and therefore the survey result may not reflect doses received during the second year of life. Estimate challenged by: S-

2013: Reported data calibrated to 2011 levels. Estimate challenged by: S-

2014: Reported data calibrated to 2011 levels. Reported data excluded. Programme reported a revised target population. Programme also reported a decrease in the number of children vaccinated compared to 2013 due in part to the ongoing implementation of a new information system. WHO and UNICEF recommend a revision of the coverage data time series with a consistent target population. Programme notes that 2014 data remain preliminary. Estimate challenged by: D-S-

2015: Reported data calibrated to 2011 levels. Reported data excluded. Change in reported coverage from 73 level to 88 percent. GoC=D+

Bolivia (Plurinational State of) - survey details

2012 Bolivia Encuesta Nacional de Cobertura de Vacunacion ENCOVA 2013

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	100	12-23 m	1069	-
DTP3	Card or History	93	12-23 m	1069	-
HepB3	Card or History	93	12-23 m	1069	-
Hib3	Card or History	93	12-23 m	1069	-
MCV1	Card or History	90	12-23 m	1069	-
Pol3	Card or History	93	12-23 m	1069	-
RotaC	Card or History	91	12-23 m	1069	-
YFV	Card or History	86	12-23 m	1069	-

2011 Bolivia Encuesta Nacional de Cobertura de Vacunacion ENCOVA 2013

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	100	18-29 m	1060	-
DTP3	Card or History	95	18-29 m	1060	-
HepB3	Card or History	95	18-29 m	1060	-
Hib3	Card or History	95	18-29 m	1060	-
MCV1	Card or History	96	18-29 m	1060	-
Pol3	Card or History	95	18-29 m	1060	-
RotaC	Card or History	91	18-29 m	1060	-
YFV	Card or History	92	18-29 m	1060	-

2006 Bolivia Encuesta Nacional de Demografía y Salud 2008

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	76	18-29 m	1689	76
BCG	Card or History	98	18-29 m	1689	76
BCG	History	22	18-29 m	1689	76
DTP1	Card	75	18-29 m	1689	76
DTP1	Card or History	97	18-29 m	1689	76
DTP1	History	22	18-29 m	1689	76
DTP3	Card	70	18-29 m	1689	76
DTP3	Card or History	86	18-29 m	1689	76
DTP3	History	16	18-29 m	1689	76
HepB1	Card	75	18-29 m	1689	76
HepB1	Card or History	97	18-29 m	1689	76
HepB1	History	22	18-29 m	1689	76
HepB3	Card	70	18-29 m	1689	76
HepB3	Card or History	86	18-29 m	1689	76
HepB3	History	16	18-29 m	1689	76
Hib1	Card	75	18-29 m	1689	76
Hib1	Card or History	97	18-29 m	1689	76
Hib1	History	22	18-29 m	1689	76
Hib3	Card	70	18-29 m	1689	76
Hib3	Card or History	86	18-29 m	1689	76
Hib3	History	16	18-29 m	1689	76
MCV1	Card	68	18-29 m	1689	76
MCV1	Card or History	86	18-29 m	1689	76
MCV1	History	18	18-29 m	1689	76
Pol1	Card	75	18-29 m	1689	76
Pol1	Card or History	97	18-29 m	1689	76
Pol1	History	22	18-29 m	1689	76
Pol3	Card	70	18-29 m	1689	76
Pol3	Card or History	86	18-29 m	1689	76
Pol3	History	16	18-29 m	1689	76

2006 Encuesta de cobertura vacunal de SR 15-39 años y SRP en niños de 12-23 meses

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
MCV1	C or H <24 months	81	0-24 m	597	65

2005 Encuesta de cobertura vacunal de SR 15-39 años y SRP en niños de 12-23 meses

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
MCV1	Card	52	12-59 m	597	65
MCV1	Card or History	92	12-59 m	597	65
MCV1	History	40	12-59 m	597	65

Bolivia (Plurinational State of) - survey details

2002 Encuesta Nacional de Demografía y Salud, ENDSA 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	76	12-23 m	1861	79
BCG	Card or History	93	12-23 m	1861	79
BCG	History	17	12-23 m	1861	79
DTP1	Card	77	12-23 m	1861	79
DTP1	Card or History	94	12-23 m	1861	79
DTP1	History	17	12-23 m	1861	79
DTP3	Card	63	12-23 m	1861	79
DTP3	Card or History	72	12-23 m	1861	79
DTP3	History	9	12-23 m	1861	79
MCV1	Card	54	12-23 m	1861	79
MCV1	Card or History	64	12-23 m	1861	79
MCV1	History	10	12-23 m	1861	79
Pol1	Card	77	12-23 m	1861	79
Pol1	Card or History	94	12-23 m	1861	79
Pol1	History	16	12-23 m	1861	79
Pol3	Card	63	12-23 m	1861	79
Pol3	Card or History	68	12-23 m	1861	79
Pol3	History	5	12-23 m	1861	79

1999 Bolivia, Encuesta de múltiples indicadores por conglomerados 2000 (MICS 2000), 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	49	12-23 m	642	54
BCG	Card or History	92	12-23 m	642	54
BCG	History	44	12-23 m	642	54
DTP1	Card	49	12-23 m	642	54
DTP1	Card or History	92	12-23 m	642	54
DTP1	History	43	12-23 m	642	54
DTP3	Card	41	12-23 m	642	54
DTP3	Card or History	72	12-23 m	642	54
DTP3	History	30	12-23 m	642	54
MCV1	Card	42	12-23 m	642	54
MCV1	Card or History	79	12-23 m	642	54
MCV1	History	37	12-23 m	642	54
Pol1	Card	49	12-23 m	642	54
Pol1	Card or History	92	12-23 m	642	54
Pol1	History	43	12-23 m	642	54
Pol3	Card	42	12-23 m	642	54
Pol3	Card or History	57	12-23 m	642	54
Pol3	History	15	12-23 m	642	54

1997 República de Bolivia, Encuesta Nacional de Demografía y Salud 1998

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	85	12-23 m	1275	40
BCG	Card	39	12-23 m	1275	40
BCG	Card or History	87	12-23 m	1275	40
BCG	History	49	12-23 m	1275	40
DTP1	C or H <12 months	78	12-23 m	1275	40
DTP1	Card	39	12-23 m	1275	40
DTP1	Card or History	82	12-23 m	1275	40
DTP1	History	43	12-23 m	1275	40
DTP3	C or H <12 months	41	12-23 m	1275	40
DTP3	Card	28	12-23 m	1275	40
DTP3	Card or History	49	12-23 m	1275	40
DTP3	History	21	12-23 m	1275	40
MCV1	C or H <12 months	12	12-23 m	1275	40
MCV1	Card	22	12-23 m	1275	40
MCV1	Card or History	51	12-23 m	1275	40
MCV1	History	29	12-23 m	1275	40
Pol1	C or H <12 months	81	12-23 m	1275	40
Pol1	Card	39	12-23 m	1275	40
Pol1	Card or History	84	12-23 m	1275	40
Pol1	History	46	12-23 m	1275	40
Pol3	C or H <12 months	32	12-23 m	1275	40
Pol3	Card	28	12-23 m	1275	40
Pol3	Card or History	39	12-23 m	1275	40
Pol3	History	12	12-23 m	1275	40

Bolivia (Plurinational State of) - survey details

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

Bolivia (Plurinational State of)

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	70
2005	70
2006	71
2007	71
2008	74
2009	74
2010	74
2011	74
2012	76
2013	76
2014	87
2015	87

[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.