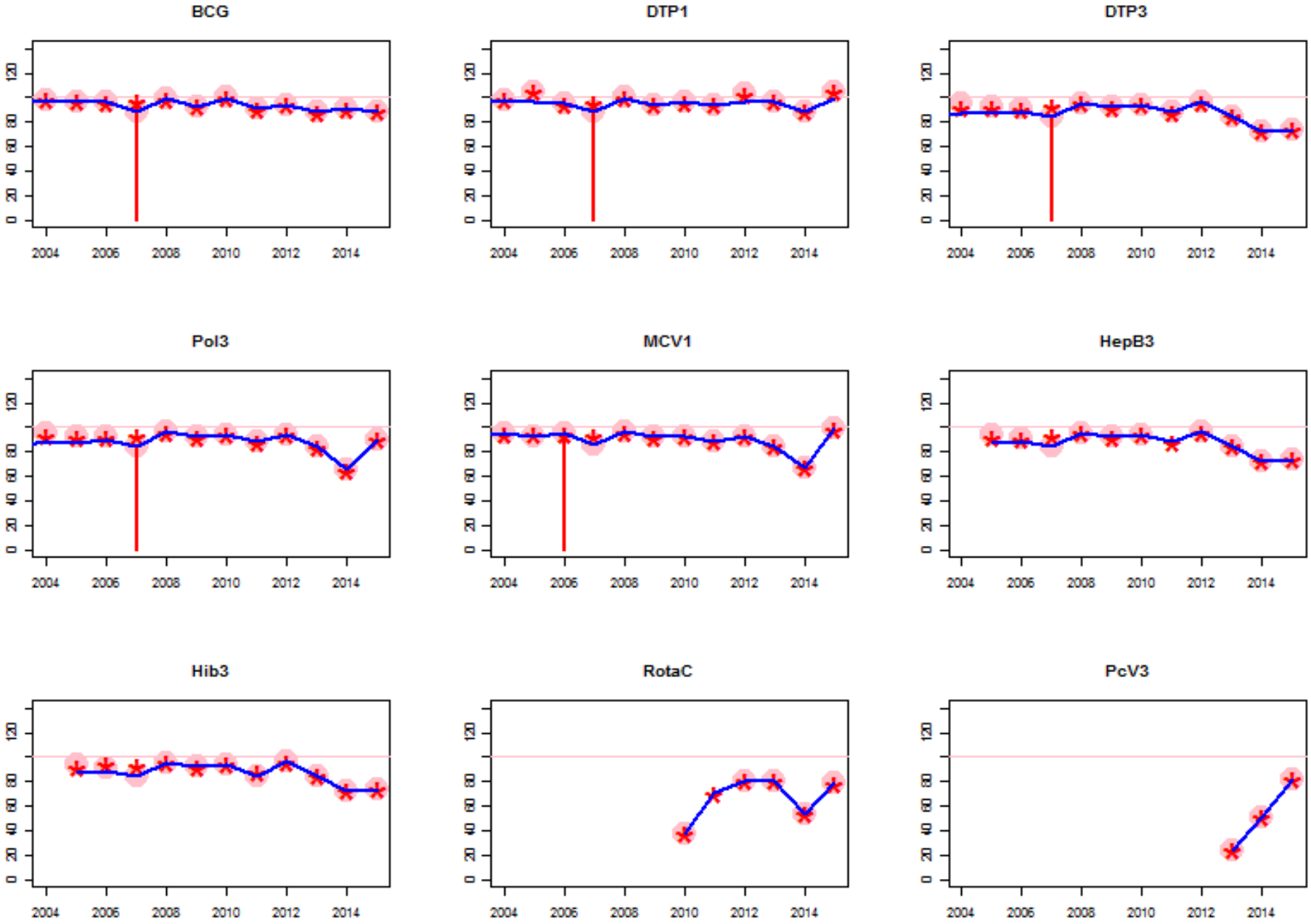
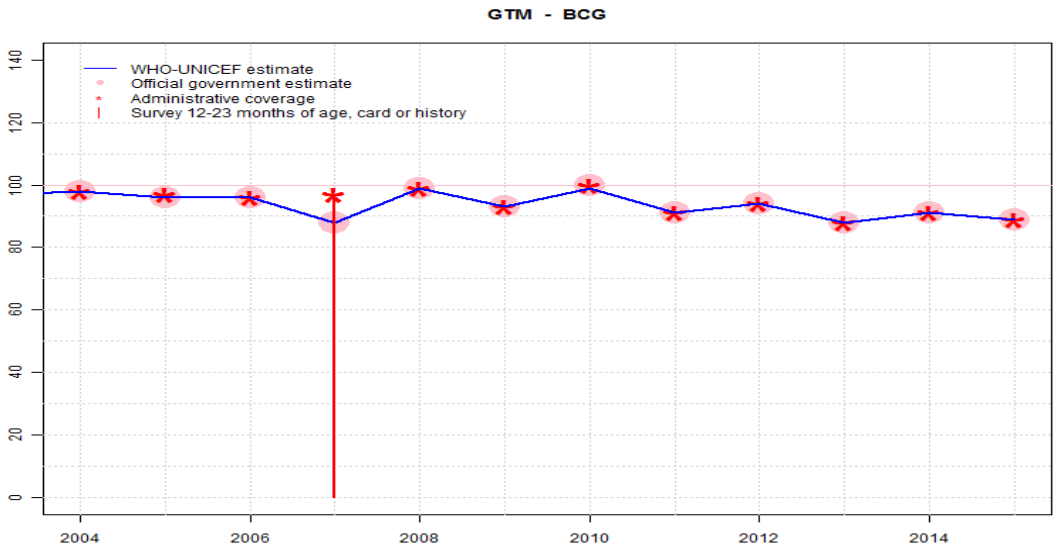

BCG
DTP1
DTP3
Pol3
MCV1
HepB3
Hib3
RotaC
PcV3
0
20
40
60
80
120
2004
2006
2008
2010
2012
2014

Guatemala - BCG



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	98	96	96	88	99	93	99	91	94	88	91	89
Estimate GoC	•	•	•	•	•	•	•	•	•	••	•	•
Official	98	96	96	88	99	93	100	91	94	88	91	89
Administrative	98	97	96	97	99	93	100	91	94	88	91	89
Survey	NA	NA	NA	97	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 coverage reported by national government. Estimate challenged by: D-

2005: Estimate based on coverage reported by national government. Estimate challenged by: D-

2006: Estimate based on coverage reported by national government. Estimate challenged by: D-

2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). Estimate challenged by: D-

2008: Estimate based on coverage reported by national government. Estimate challenged by: D-

2009: Estimate based on coverage reported by national government. Estimate challenged by: D-

2010: Estimate based on coverage reported by national government. Estimate challenged by: D-

2011: Estimate based on coverage reported by national government. Decline in coverage is consistent with patterns in coverage for other antigens. Estimate challenged by: D-

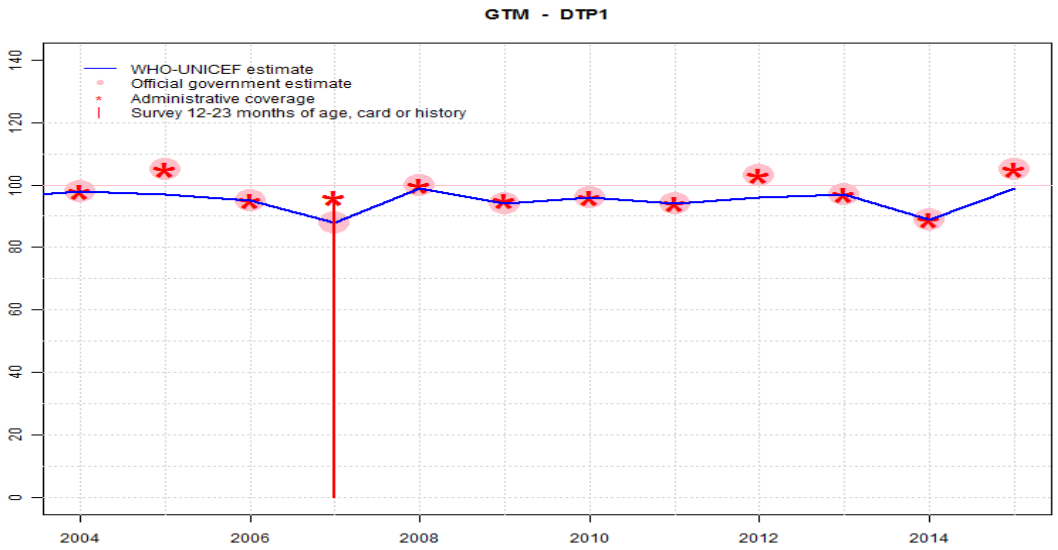
2012: Estimate based on coverage reported by national government. Estimate challenged by: D-

2013: Estimate based on coverage reported by national government. GoC=R+ D+

2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports five month stock-out of BCG vaccine at national level. Estimate is based on reported data. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. Programme reports one month stock-out. Reported data are provisional. Estimate challenged by: D-

Guatemala - DTP1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	98	97	95	88	99	94	96	94	96	97	89	99
Estimate GoC	•	••	•	•••	•	•••	•	•	••	••	••	•
Official	98	105	95	88	100	94	96	94	103	97	89	105
Administrative	98	105	95	96	100	95	96	94	103	97	89	105
Survey	NA	NA	NA	96	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 coverage reported by national government. Estimate challenged by: D-

2005: Estimate based on interpolation between coverage reported by national government. Reported data excluded. 105 percent greater than 100 percent. GoC=S+ D+

2006: Estimate based on coverage reported by national government. Estimate challenged by: D-

2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). GoC=R+ S+ D+

2008: Estimate based on coverage reported by national government. Estimate challenged by: D-

2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2010: Estimate based on coverage reported by national government. Estimate challenged by: D-

2011: Estimate based on coverage reported by national government. Estimate challenged by: D-

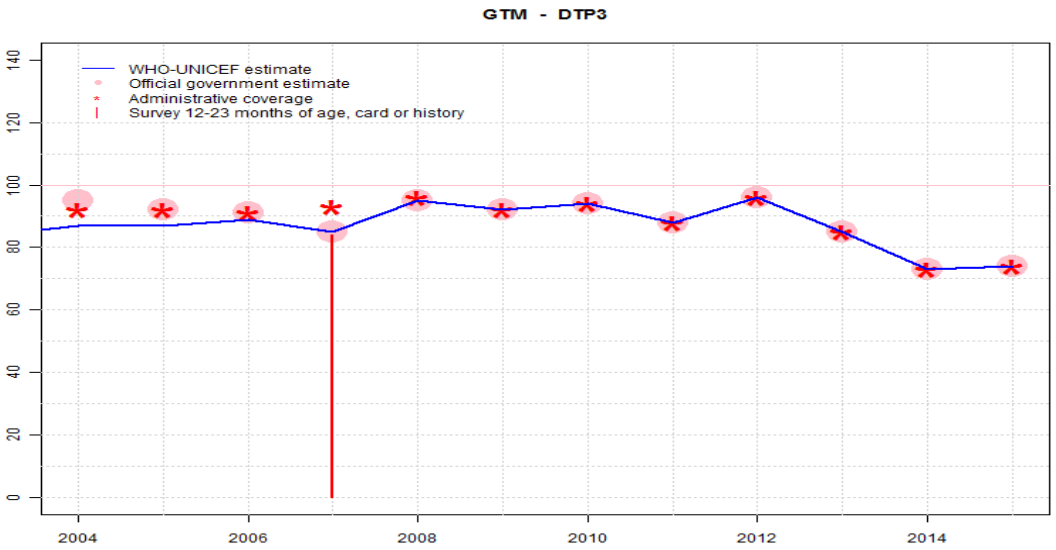
2012: Estimate based on interpolation between data reported by national government. Reported data excluded. 103 percent greater than 100 percent. GoC=D+

2013: Estimate based on coverage reported by national government. GoC=R+ D+

2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports nine month stock-out of DTP containing vaccine at national level. Estimate is based on reported data. GoC=R+ D+

2015: Estimate based on coverage reported by national government. Programme reports two month stock-out. Reported data are provisional and suggest recovery from the stock-out during 2014. Estimate challenged by: D-

Guatemala - DTP3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	87	87	89	85	95	92	94	88	96	85	73	74
Estimate GoC	●●	●●	●	●●●	●	●	●	●	●	●●	●●	●●
Official	95	92	91	85	95	92	94	88	96	85	73	74
Administrative	92	92	91	93	96	92	94	88	96	85	73	74
Survey	NA	NA	NA	84	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: Reported data calibrated to 2001 and 2007 levels. GoC=D+

2005: Reported data calibrated to 2001 and 2007 levels. GoC=S+ D+

2006: Reported data calibrated to 2001 and 2007 levels. Estimate challenged by: D-

2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 84 percent based on 1 survey(s). GoC=R+ S+ D+

2008: Estimate based on coverage reported by national government. Estimate challenged by: D-

2009: Estimate based on coverage reported by national government. Estimate challenged by: D-

2010: Estimate based on coverage reported by national government. Estimate challenged by: D-

2011: Estimate based on coverage reported by national government. Estimate challenged by: D-

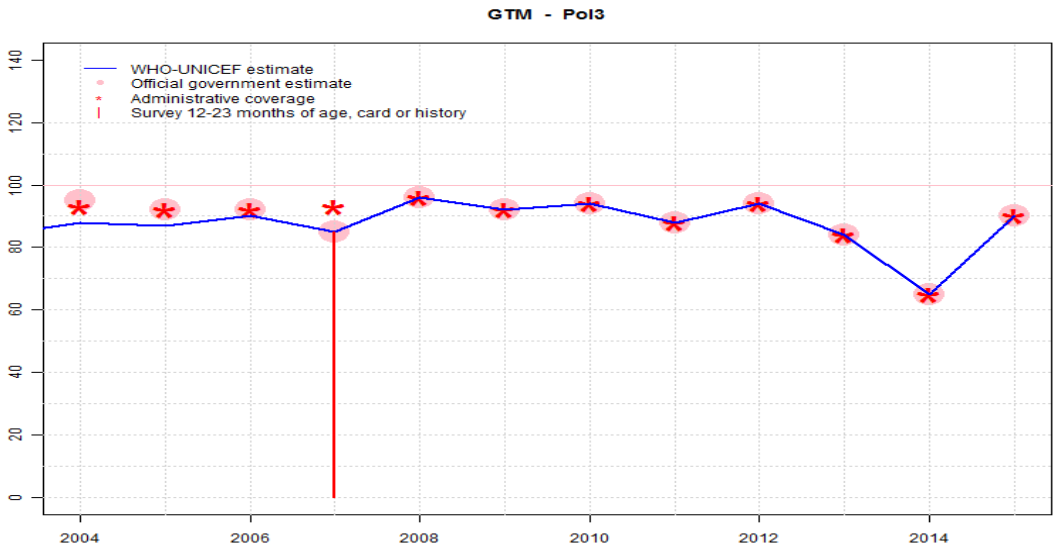
2012: Estimate based on coverage reported by national government. Estimate challenged by: D-

2013: Estimate based on coverage reported by national government. Estimate is based on reported data. GoC=R+ D+

2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports nine month stock-out of DTP containing vaccine at national level. Estimate is based on reported data. GoC=R+ D+

2015: Estimate based on coverage reported by national government. Programme reports two month stock-out. Reported data are provisional. GoC=R+ D+

Guatemala - Pol3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	88	87	90	85	96	92	94	88	94	84	65	90
Estimate GoC	●●	●●	●	●●●	●	●	●	●●	●	●●	●●	●
Official	95	92	92	85	96	92	94	88	94	84	65	90
Administrative	93	92	92	93	96	92	94	88	94	84	65	90
Survey	NA	NA	NA	85	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.

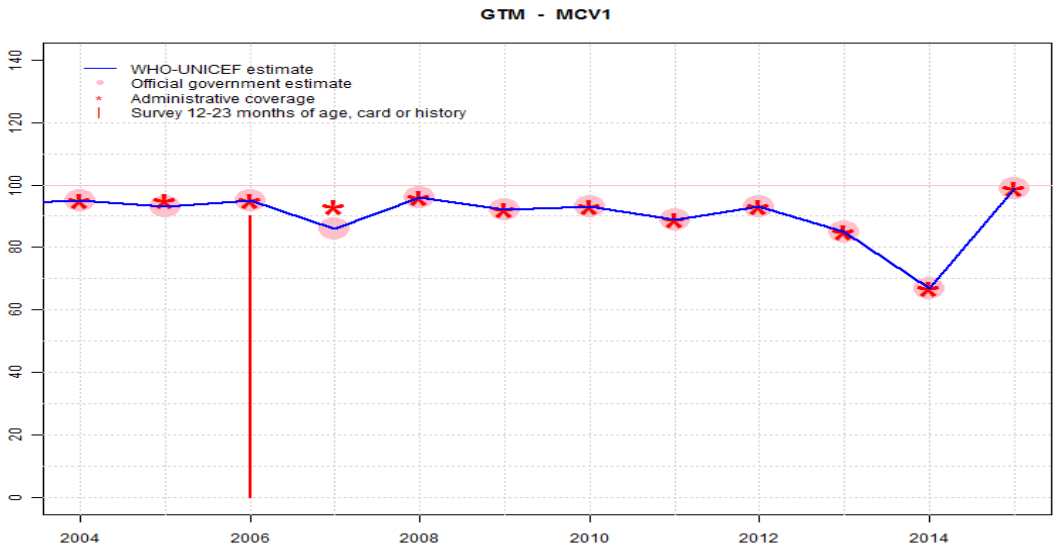
● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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: Reported data calibrated to 2001 and 2007 levels. GoC=D+
2005: Reported data calibrated to 2001 and 2007 levels. GoC=S+ D+
2006: Reported data calibrated to 2001 and 2007 levels. Estimate challenged by: D-
2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 85 percent based on 1 survey(s). GoC=R+ S+ D+
2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
2011: Estimate based on coverage reported by national government. GoC=R+ D+
2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
2013: Estimate based on coverage reported by national government. GoC=R+ D+
2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports six month stock-out of polio vaccine at national level. Estimate is based on reported data. GoC=R+ D+
2015: Estimate based on coverage reported by national government. Programme recovered from prior year stock-out. Reported data are provisional. Estimate challenged by: D-

Guatemala - MCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	95	93	95	86	96	92	93	89	93	85	67	99
Estimate GoC	•	•	•	•••	•	•	•	••	•	••	••	••
Official	95	93	95	86	96	92	93	89	93	85	67	99
Administrative	95	95	95	93	96	92	93	89	93	85	67	99
Survey	NA	NA	90	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 coverage reported by national government. Estimate challenged by: D-

2005: Estimate based on coverage reported by national government. Estimate challenged by: D-

2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 90 percent based on 1 survey(s). Estimate challenged by: D-

2007: Estimate based on coverage reported by national government. Survey result of 90 percent for age group 24-35 m supports reported data GoC=R+ S+ D+

2008: Estimate based on coverage reported by national government. Estimate challenged by: D-

2009: Estimate based on coverage reported by national government. Estimate challenged by: D-

2010: Estimate based on coverage reported by national government. Estimate challenged by: D-

2011: Estimate based on coverage reported by national government. GoC=R+ D+

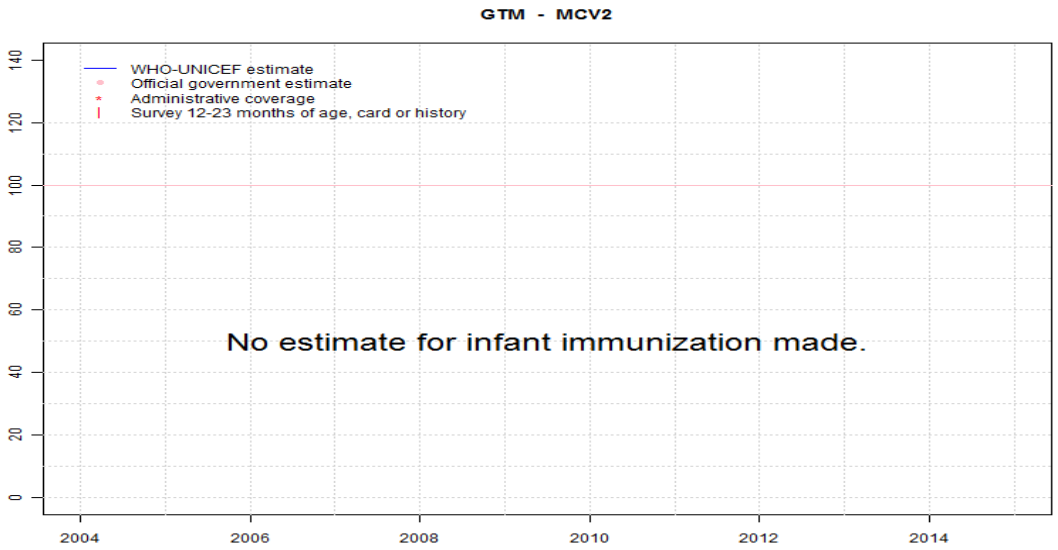
2012: Estimate based on coverage reported by national government. Estimate challenged by: D-

2013: Estimate based on coverage reported by national government. GoC=R+ D+

2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports seven month stock-out of measles containing vaccine at national level. Estimate is based on reported data. GoC=R+ D+

2015: Estimate based on coverage reported by national government. Reported data suggests increase in coverage despite report of two month national level stock-out. Reported data are provisional. GoC=R+ D+

Guatemala - 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.

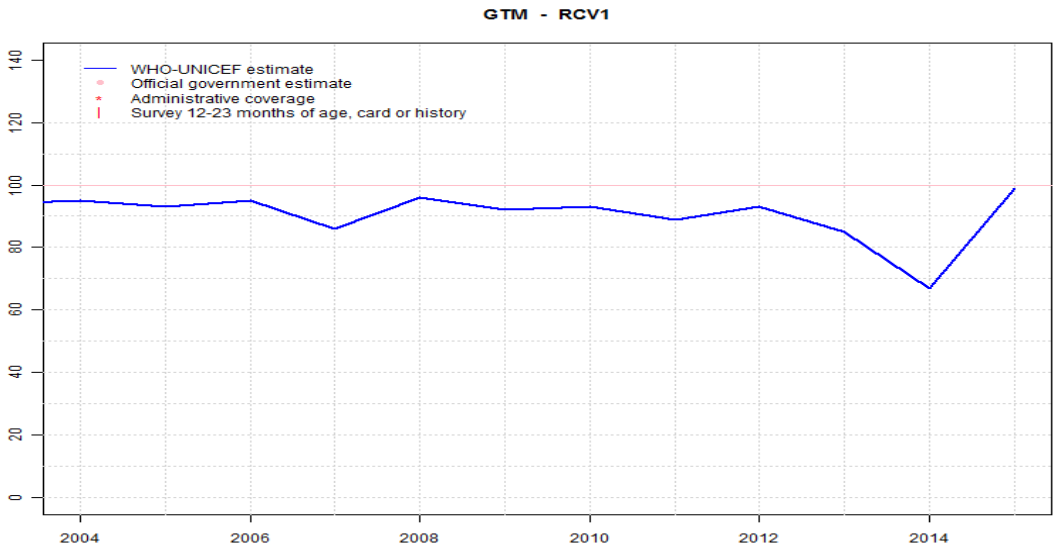
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

Guatemala - RCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	95	93	95	86	96	92	93	89	93	85	67	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.

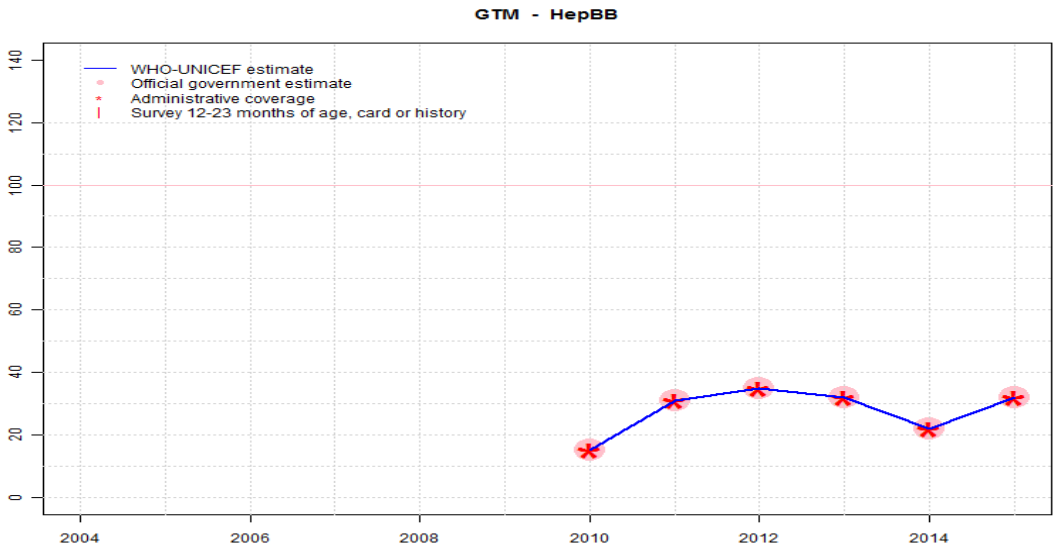
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

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: D-
2005: Estimate based on estimated MCV1. Estimate challenged by: D-
2006: Estimate based on estimated MCV1. Estimate challenged by: D-
2007: Estimate based on estimated MCV1. GoC=R+ S+ D+
2008: Estimate based on estimated MCV1. Estimate challenged by: D-
2009: Estimate based on estimated MCV1. Estimate challenged by: D-
2010: Estimate based on estimated MCV1. Estimate challenged by: D-
2011: Estimate based on estimated MCV1. GoC=R+ D+
2012: Estimate based on estimated MCV1. Estimate challenged by: D-
2013: Estimate based on estimated MCV1. GoC=R+ D+
2014: Estimate based on estimated MCV1. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Estimate is based on reported data. GoC=R+ D+
2015: Estimate based on estimated MCV1. GoC=R+ D+

Guatemala - HepBB



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	15	31	35	32	22	32
Estimate GoC	NA	NA	NA	NA	NA	NA	●●	●●	●●	●●	●●	●●
Official	NA	NA	NA	NA	NA	NA	15	31	35	32	22	32
Administrative	NA	NA	NA	NA	NA	NA	15	31	35	32	22	32
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:

2010: Estimate based on coverage reported by national government. GoC=R+ D+

2011: Estimate based on coverage reported by national government. GoC=R+ D+

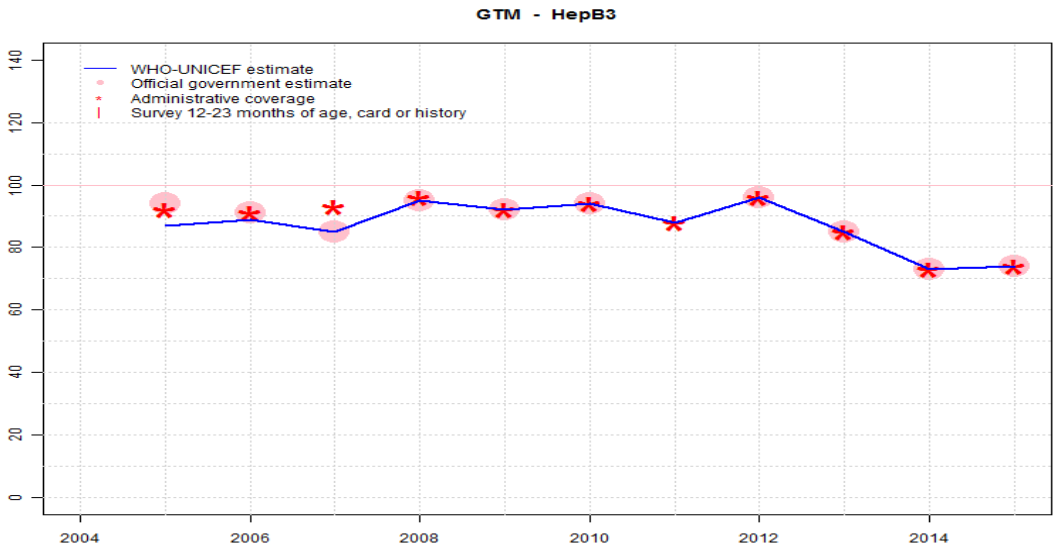
2012: Estimate based on coverage reported by national government. GoC=R+ D+

2013: Estimate based on coverage reported by national government. GoC=R+ D+

2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Estimate is based on reported data. GoC=R+ D+

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

Guatemala - HepB3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	87	89	85	95	92	94	88	96	85	73	74
Estimate GoC	NA	•	•	••	•	•	•	•	•	••	••	••
Official	NA	94	91	85	95	92	94	NA	96	85	73	74
Administrative	NA	92	91	93	96	92	94	88	96	85	73	74
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:

2005: Estimate adjusted to level of DTP3 estimate. HepB vaccine introduced in 2005. Vaccine presentation is DTP-HepB-Hib. Estimate challenged by: D-R-

2006: Estimate adjusted to level of DTP3 estimate. Estimate challenged by: D-R-

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

2008: Estimate based on coverage reported by national government. Estimate challenged by: D-

2009: Estimate based on coverage reported by national government. Estimate challenged by: D-

2010: Estimate based on coverage reported by national government. Estimate challenged by: D-

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

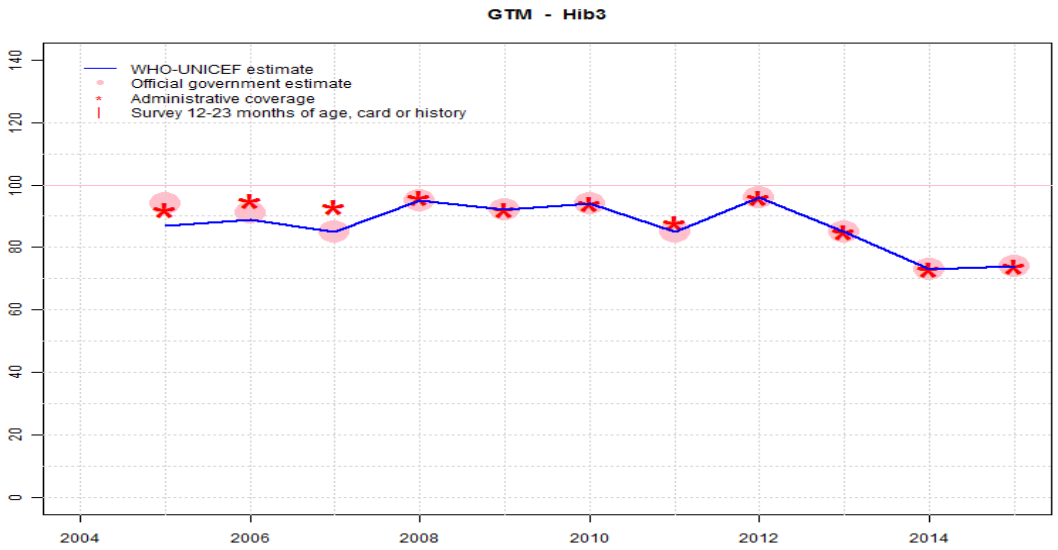
2012: Estimate based on coverage reported by national government. Estimate challenged by: D-

2013: Estimate based on coverage reported by national government. Estimate is based on reported data. Programme reports a five months stockout at national level. GoC=R+ D+

2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports nine month stock-out of DTP containing vaccine at national level. Estimate is based on reported data. GoC=R+ D+

2015: Estimate based on coverage reported by national government. Programme reports two month stock-out. Reported data are provisional. GoC=R+ D+

Guatemala - Hib3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	87	89	85	95	92	94	85	96	85	73	74
Estimate GoC	NA	•	•	••	•	•	•	••	•	••	••	••
Official	NA	94	91	85	95	92	94	85	96	85	73	74
Administrative	NA	92	95	93	96	92	94	88	96	85	73	74
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.

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

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

Description:

2005: Estimate adjusted to level of DTP3 estimate. Hib vaccine introduced in 2005 Vaccine presentation is DTP-HepB-Hib. Estimate challenged by: D-R-

2006: Estimate adjusted to level of DTP3 estimate. Estimate challenged by: D-R-

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

2008: Estimate based on coverage reported by national government. Estimate challenged by: D-

2009: Estimate based on coverage reported by national government. Estimate challenged by: D-

2010: Estimate based on coverage reported by national government. Estimate challenged by: D-

2011: Estimate based on coverage reported by national government. GoC=R+ D+

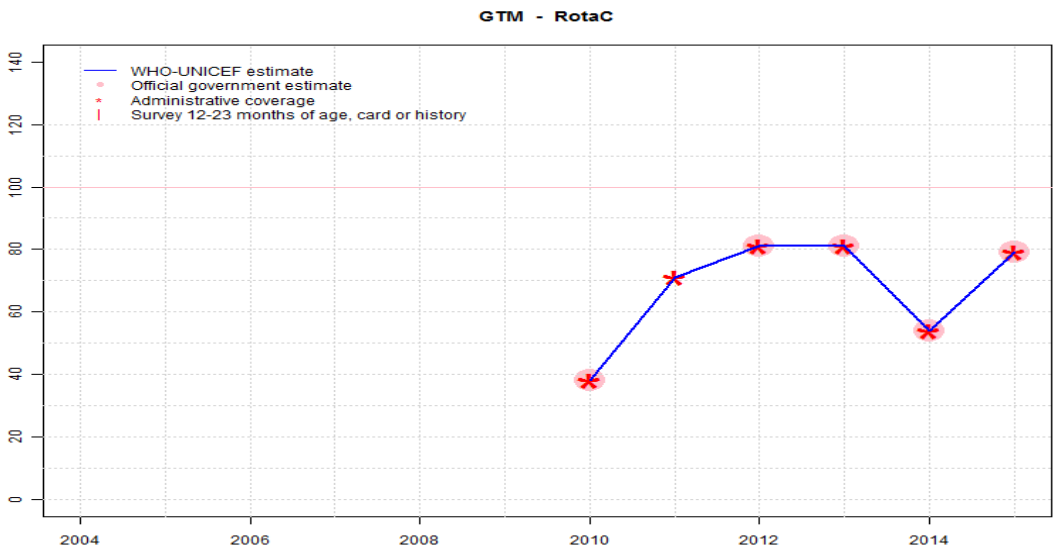
2012: Estimate based on coverage reported by national government. Estimate is based on reported data. Estimate challenged by: D-

2013: Estimate based on coverage reported by national government. Estimate is based on reported data. GoC=R+ D+

2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports nine month stock-out of DTP containing vaccine at national level. Estimate is based on reported data. GoC=R+ D+

2015: Estimate based on coverage reported by national government. Programme reports two month stock-out. Reported data are provisional. GoC=R+ D+

Guatemala - RotaC



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	38	71	81	81	54	79
Estimate GoC	NA	NA	NA	NA	NA	NA	●●	●	●●	●●	●●	●●
Official	NA	NA	NA	NA	NA	NA	38	NA	81	81	54	79
Administrative	NA	NA	NA	NA	NA	NA	38	71	81	81	54	79
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:

2010: Estimate based on coverage reported by national government. Rotavirus vaccine introduced in 2010. GoC=R+ D+

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

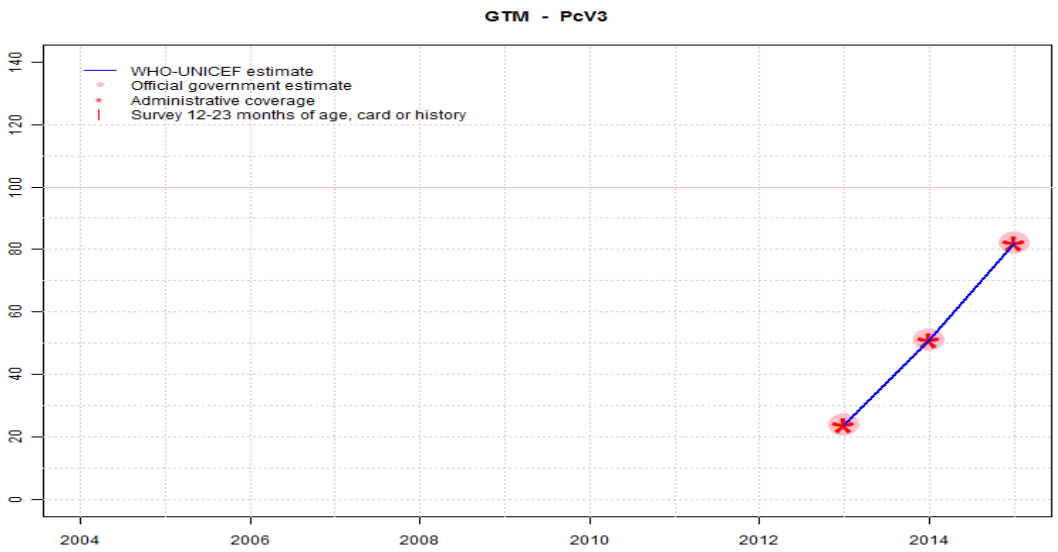
2012: Estimate based on coverage reported by national government. GoC=R+ D+

2013: Estimate based on coverage reported by national government. GoC=R+ D+

2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports three and a half month stock-out of rotavirus vaccine at national level. Estimate is based on reported data. GoC=R+ D+

2015: Estimate based on coverage reported by national government. Reported data suggests increase in coverage despite report of one month national level stock-out. Reported data are provisional. GoC=R+ D+

Guatemala - PcV3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	24	51	82
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	●●	●●	●●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	24	51	82
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	24	51	82
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:

2013: Estimate based on coverage reported by national government. Pneumococcal conjugate vaccine intorduced during November 2012. Reporting started during 2013. GoC=R+ D+

2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports five month stock-out of PcV vaccine at national level. Estimate is based on reported data. GoC=R+ D+

2015: Estimate based on coverage reported by national government. Programme reports two month stock-out. Reported data are provisional. GoC=R+ D+

Guatemala - survey details

2007 Guatemala, Encuesta Nacional de Salud Materno Infantil 2008-2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	97	12-23 m	1861	87
DTP1	Card or History	96	12-23 m	1861	87
DTP3	Card or History	84	12-23 m	1861	87
Pol1	Card or History	96	12-23 m	1861	87
Pol3	Card or History	85	12-23 m	1861	87

2006 Guatemala, Encuesta Nacional de Salud Materno Infantil 2008-2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
MCV1	Card or History	90	24-35 m	1861	87

2001 Guatemala, Encuesta Nacional de Salud Materno Infantil 2002

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	92	12-23 m	1487	69
DTP1	Card or History	93	12-23 m	1487	69
DTP3	Card or History	77	12-23 m	1487	69
MCV1	Card or History	75	12-23 m	1487	69
Pol1	Card or History	94	12-23 m	1487	69
Pol3	Card or History	78	12-23 m	1487	69

1998 Guatemala, Encuesta Nacional de Salud Materno Infantil 1998-1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	82	12-23 m	848	68
BCG	Card	65	12-23 m	848	68
BCG	Card or History	90	12-23 m	848	68
BCG	History	26	12-23 m	848	68
DTP1	C or H <12 months	88	12-23 m	848	68
DTP1	Card	66	12-23 m	848	68
DTP1	Card or History	92	12-23 m	848	68
DTP1	History	26	12-23 m	848	68
DTP3	C or H <12 months	54	12-23 m	848	68
DTP3	Card	56	12-23 m	848	68
DTP3	Card or History	70	12-23 m	848	68
DTP3	History	15	12-23 m	848	68
MCV1	C or H <12 months	53	12-23 m	848	68
MCV1	Card	59	12-23 m	848	68
MCV1	Card or History	81	12-23 m	848	68
MCV1	History	22	12-23 m	848	68
Pol1	C or H <12 months	59	12-23 m	848	68
Pol1	Card	67	12-23 m	848	68
Pol1	Card or History	92	12-23 m	848	68
Pol1	History	25	12-23 m	848	68
Pol3	C or H <12 months	52	12-23 m	848	68
Pol3	Card	56	12-23 m	848	68
Pol3	Card or History	67	12-23 m	848	68
Pol3	History	10	12-23 m	848	68

1997 Guatemala, Encuesta Nacional de Salud Materno Infantil 1998-1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	77	24-35 m	868	68
DTP1	C or H <12 months	80	24-35 m	868	68
DTP3	C or H <12 months	51	24-35 m	868	68
MCV1	C or H <12 months	48	24-35 m	868	68
Pol1	C or H <12 months	81	24-35 m	868	68
Pol3	C or H <12 months	49	24-35 m	868	68

Guatemala - 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

Guatemala

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	70
2007	71
2008	71
2009	71
2010	85
2011	85
2012	85
2013	85
2014	85
2015	90

[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.