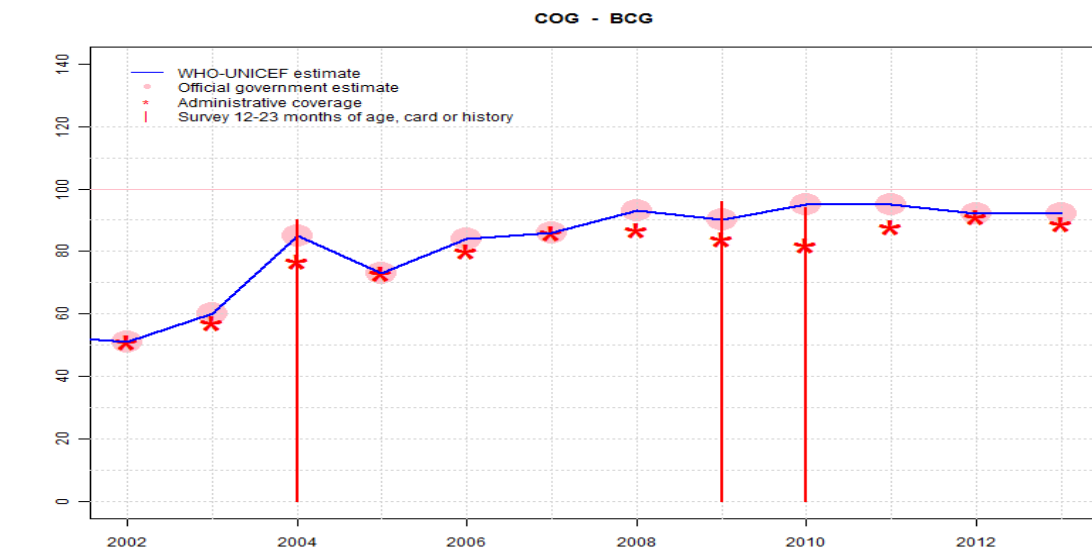


Congo - BCG



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	51	60	85	73	84	86	93	90	95	95	92	92
Estimate GoC	••	••	•••	•	•	•	•	•••	•••	•••	•••	••
Official	51	60	85	73	84	86	93	90	95	95	92	92
Administrative	51	57	77	73	80	86	87	84	82	88	91	89
Survey	NA	NA	90	NA	NA	NA	NA	96	94	NA	NA	NA

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

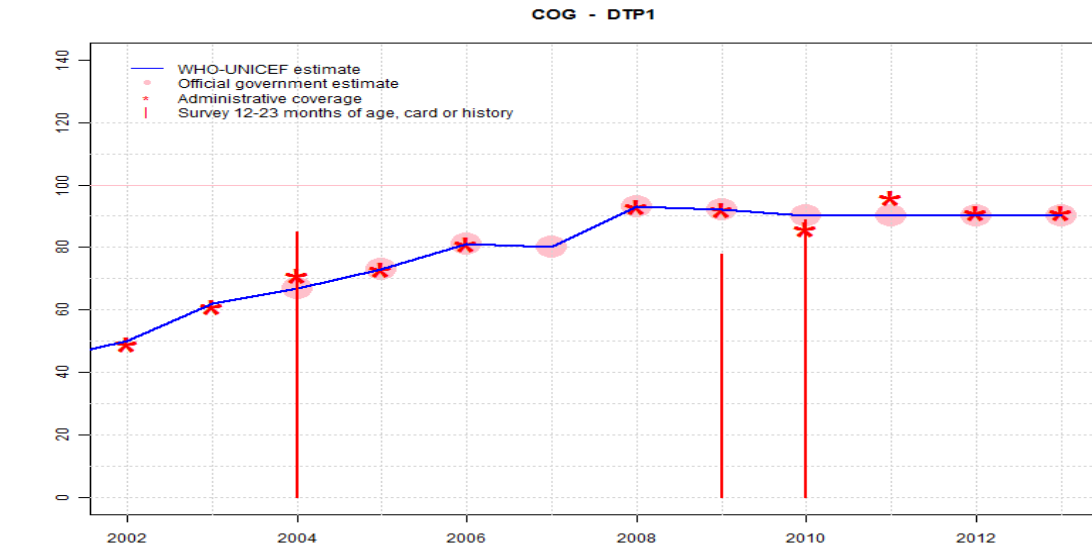
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2002: Estimate based on coverage reported by national government. GoC=R+ D+
- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 90 percent based on 1 survey(s). Survey supports reported for all other antigens. GoC=R+ S+ 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. 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. Survey results ignored. Sample size 0 less than 300. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). The government estimate includes immunizations delivered in both the public and private sector. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2012: Estimate based on coverage reported by national government. Official government estimate reflects DHS survey results. GoC=R+ S+ D+
- 2013: Estimate based on coverage reported by national government. Official government estimate reflects DHS survey results. GoC=R+ D+

Congo - DTP1



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	50	62	67	73	81	80	93	92	90	90	90	90
Estimate GoC	••	••	•	•	•	••	•	•••	•••	•	•	•
Official	NA	NA	67	73	81	80	93	92	90	90	90	90
Administrative	49	61	71	73	81	NA	93	92	86	96	91	91
Survey	NA	NA	85	NA	NA	NA	NA	78	89	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

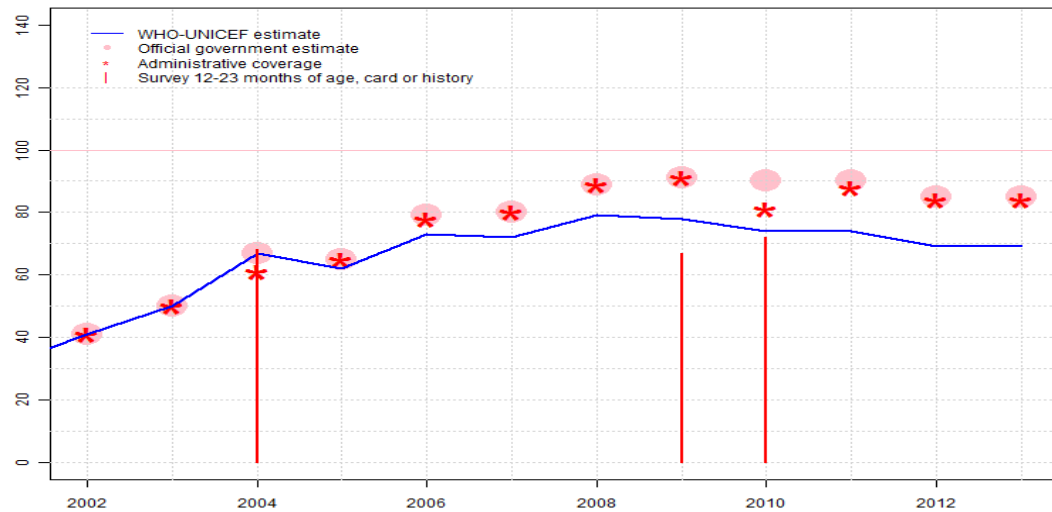
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2002: Reported data calibrated to 1997 and 2004 levels. GoC=D+
- 2003: Reported data calibrated to 1997 and 2004 levels. GoC=D+
- 2004: Survey suggests higher level of coverage than nationally reported coverage. Survey supports reported data for other antigens. 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. GoC=R+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Survey results ignored. Sample size 0 less than 300. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). The government estimate includes immunizations delivered in both the public and private sector. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Official government estimate reflects DHS survey results. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Official government estimate reflects DHS survey results. Estimate challenged by: D-

Congo - DTP3

COG - DTP3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	41	50	67	62	73	72	79	78	74	74	69	69
Estimate GoC	••	••	•••	•	•	•	•	•	•	•	•	•
Official	41	50	67	65	79	80	89	91	90	90	85	85
Administrative	41	50	61	65	78	80	89	91	81	88	84	84
Survey	NA	NA	68	NA	NA	NA	NA	67	72	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

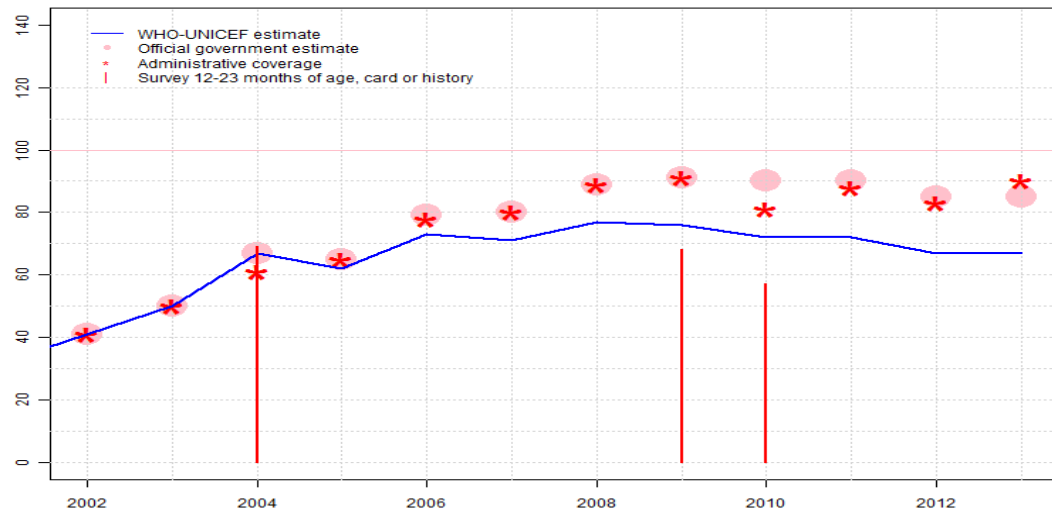
- 2002: Estimate based on coverage reported by national government. GoC=R+ D+
- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 75 percent based on 1 survey(s). Congo Demographic and Health Survey 2005 card or history results of 68 percent modified for recall bias to 75 percent based on 1st dose card or history coverage of 85 percent, 1st dose card only coverage of 59 percent and 3d dose card only coverage of 52 percent. GoC=R+ S+ D+
- 2005: Reported data calibrated to 2004 and 2010 levels. Estimate of 62 percent changed from previous revision value of 65 percent. Estimate challenged by: D-
- 2006: Reported data calibrated to 2004 and 2010 levels. Estimate of 73 percent changed from previous revision value of 79 percent. Estimate challenged by: D-
- 2007: Reported data calibrated to 2004 and 2010 levels. Estimate of 72 percent changed from previous revision value of 80 percent. Estimate challenged by: D-
- 2008: Reported data calibrated to 2004 and 2010 levels. Estimate of 79 percent changed from previous revision value of 89 percent. Estimate challenged by: D-
- 2009: Reported data calibrated to 2004 and 2010 levels. Survey results ignored. Sample size 0 less than 300. Congo External EPI Review 2010 card or history results of 67 percent modified for recall bias to 66 percent based on 1st dose card or history coverage of 78 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 61 percent. Estimate of 78 percent changed from previous revision value of 91 percent. Estimate challenged by: D-
- 2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 74 percent based on 1 survey(s). Congo Demographic and Health Survey 2011-2012 card or history results of 72 percent modified for recall bias to 74 percent based on 1st dose card or history coverage of 89 percent, 1st dose card only coverage of 55 percent and 3d dose card only coverage of 46 percent. The government estimate includes immunizations delivered in both the public and private sector. Estimate of 74 percent changed from previous revision value of 90 percent. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 levels. Estimate of 74 percent changed from previous revision value of 90 percent. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 levels. Official government estimate re-

Congo - DTP3

reflects DHS survey results. Estimate of 69 percent changed from previous revision value of 85 percent. Estimate challenged by: D-
2013: Reported data calibrated to 2010 levels. Official government estimate reflects DHS survey results. Estimate challenged by: D-

Congo - Pol3

COG - Pol3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	41	50	67	62	73	71	77	76	72	72	67	67
Estimate GoC	••	••	••	•	•	•	•	•	•	•	•	•
Official	41	50	67	65	79	80	89	91	90	90	85	85
Administrative	41	50	61	65	78	80	89	91	81	88	83	90
Survey	NA	NA	69	NA	NA	NA	NA	68	57	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

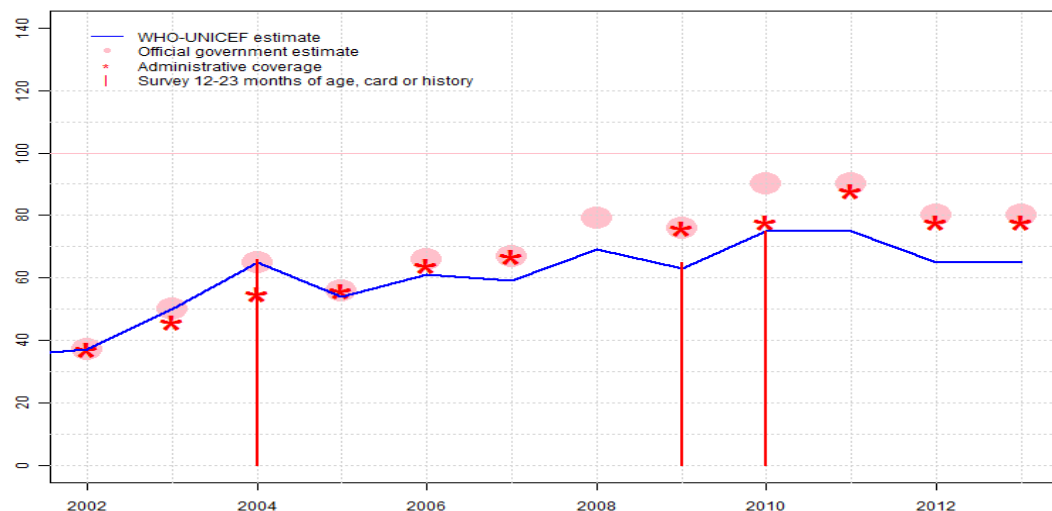
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2002: Estimate based on coverage reported by national government. GoC=R+ D+
- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Survey suggests higher level of coverage than nationally reported coverage. Survey supports reported data for other antigens. Congo Demographic and Health Survey 2005 card or history results of 69 percent modified for recall bias to 80 percent based on 1st dose card or history coverage of 93 percent, 1st dose card only coverage of 59 percent and 3d dose card only coverage of 51 percent. GoC=R+ D+
- 2005: Reported data calibrated to 2004 and 2010 levels. Estimate of 62 percent changed from previous revision value of 65 percent. Estimate challenged by: D-
- 2006: Reported data calibrated to 2004 and 2010 levels. Estimate of 73 percent changed from previous revision value of 79 percent. Estimate challenged by: D-
- 2007: Reported data calibrated to 2004 and 2010 levels. Estimate of 71 percent changed from previous revision value of 80 percent. Estimate challenged by: D-
- 2008: Reported data calibrated to 2004 and 2010 levels. Estimate of 77 percent changed from previous revision value of 89 percent. Estimate challenged by: D-
- 2009: Reported data calibrated to 2004 and 2010 levels. Survey results ignored. Sample size 0 less than 300. Estimate of 76 percent changed from previous revision value of 91 percent. Estimate challenged by: D-
- 2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 72 percent based on 1 survey(s). Congo Demographic and Health Survey 2011-2012 card or history results of 57 percent modified for recall bias to 72 percent based on 1st dose card or history coverage of 87 percent, 1st dose card only coverage of 51 percent and 3d dose card only coverage of 42 percent. The government estimate includes immunizations delivered in both the public and private sector. Estimate of 72 percent changed from previous revision value of 90 percent. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 levels. Estimate of 72 percent changed from previous revision value of 90 percent. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 levels. Official government estimate reflects DHS survey results. Estimate of 67 percent changed from previous revision value of 85 percent. Estimate challenged by: D-
- 2013: Reported data calibrated to 2010 levels. Official government estimate reflects DHS survey results. Estimate challenged by: D-

Congo - MCV

COG - MCV



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	37	50	65	54	61	59	69	63	75	75	65	65
Estimate GoC	••	••	•••	•	•	•	•	•	•	•	•	•
Official	37	50	65	56	66	67	79	76	90	90	80	80
Administrative	37	46	55	56	64	67	NA	76	78	88	78	78
Survey	NA	NA	66	NA	NA	NA	NA	65	75	NA	NA	NA

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

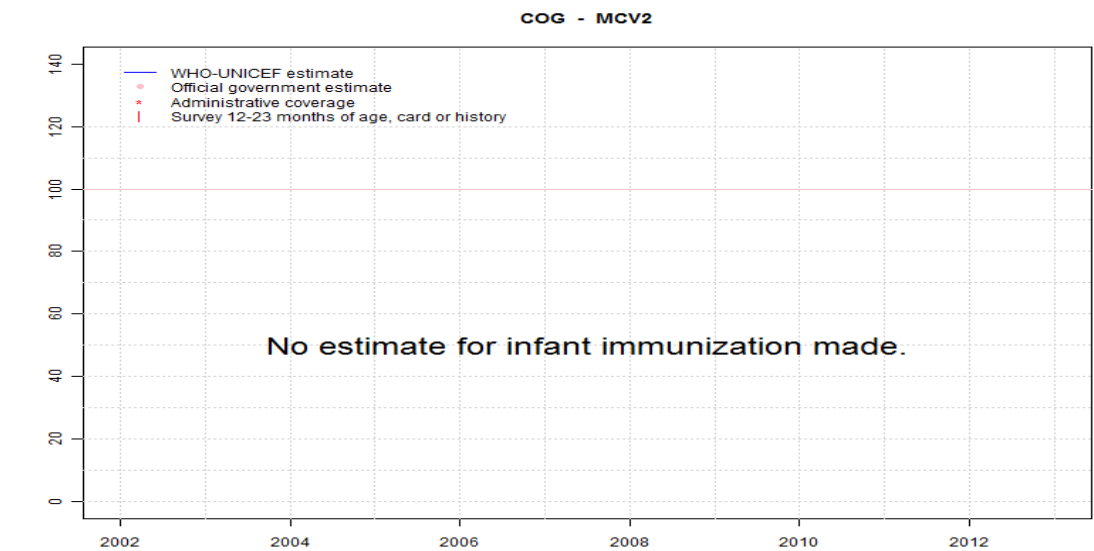
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2002: Estimate based on coverage reported by national government. GoC=R+ D+
- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 66 percent based on 1 survey(s). GoC=R+ S+ D+
- 2005: Reported data calibrated to 2004 and 2010 levels. Estimate of 54 percent changed from previous revision value of 56 percent. Estimate challenged by: D-
- 2006: Reported data calibrated to 2004 and 2010 levels. Estimate of 61 percent changed from previous revision value of 66 percent. Estimate challenged by: D-
- 2007: Reported data calibrated to 2004 and 2010 levels. Estimate of 59 percent changed from previous revision value of 67 percent. Estimate challenged by: D-
- 2008: Reported data calibrated to 2004 and 2010 levels. All other antigens show significant increase. Estimate of 69 percent changed from previous revision value of 79 percent. Estimate challenged by: D-
- 2009: Reported data calibrated to 2004 and 2010 levels. Survey results ignored. Sample size 0 less than 300. Estimate of 63 percent changed from previous revision value of 76 percent. Estimate challenged by: D-
- 2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 75 percent based on 1 survey(s). The government estimate includes immunizations delivered in both the public and private sector. Estimate of 75 percent changed from previous revision value of 90 percent. Estimate challenged by: R-
- 2011: Reported data calibrated to 2010 levels. Estimate of 75 percent changed from previous revision value of 90 percent. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 levels. Official government estimate reflects DHS survey results. Estimate of 65 percent changed from previous revision value of 80 percent. Estimate challenged by: D-
- 2013: Reported data calibrated to 2010 levels. Official government estimate reflects DHS survey results. Estimate challenged by: D-

Congo - MCV2

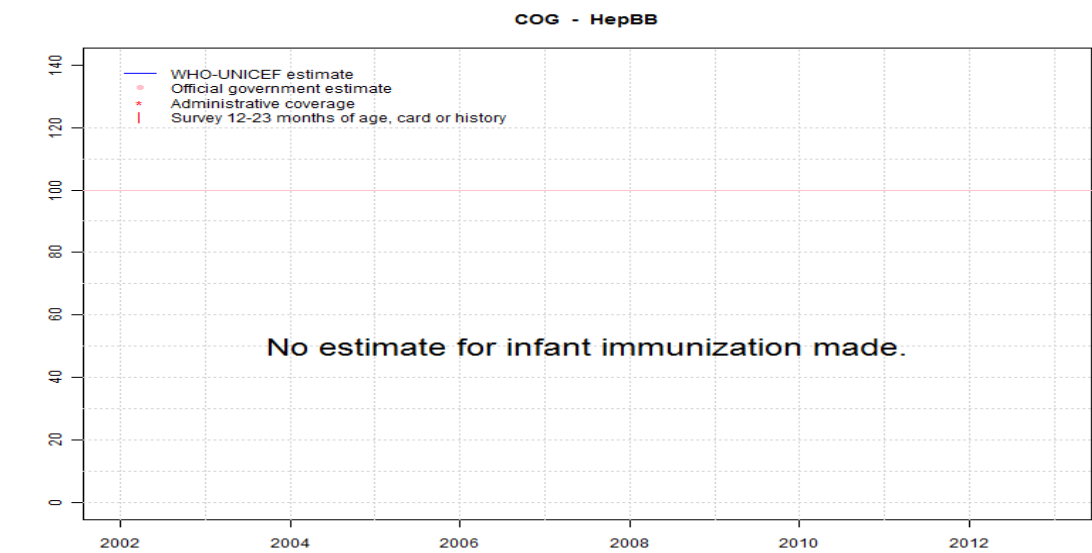


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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



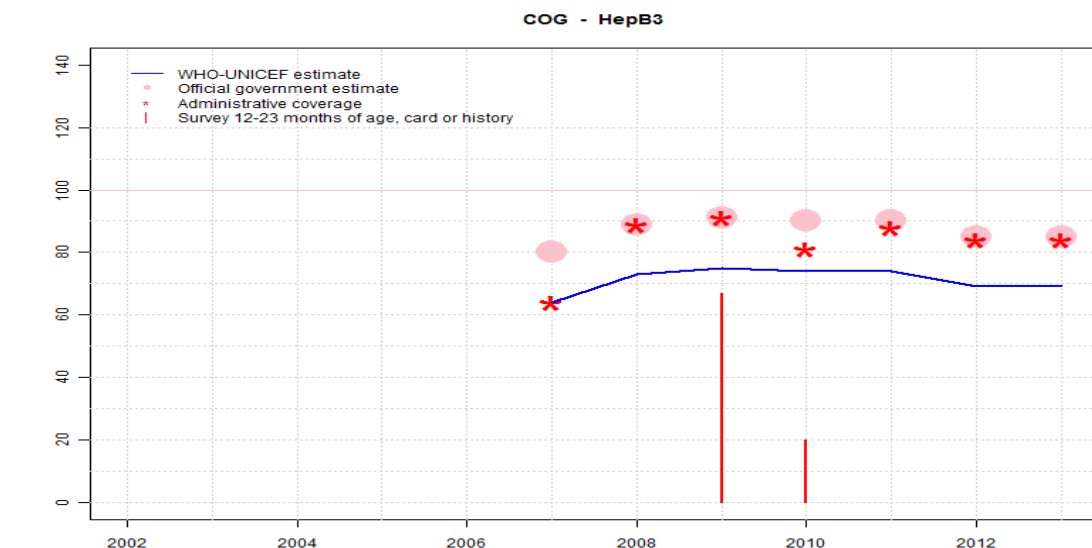
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Congo - HepB3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	64	73	75	74	74	69	69
Estimate GoC	NA	NA	NA	NA	NA	•	•	•	•	•	•	•
Official	NA	NA	NA	NA	NA	80	89	91	90	90	85	85
Administrative	NA	NA	NA	NA	NA	64	89	91	81	88	84	84
Survey	NA	NA	NA	NA	NA	NA	NA	67	20	NA	NA	NA

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

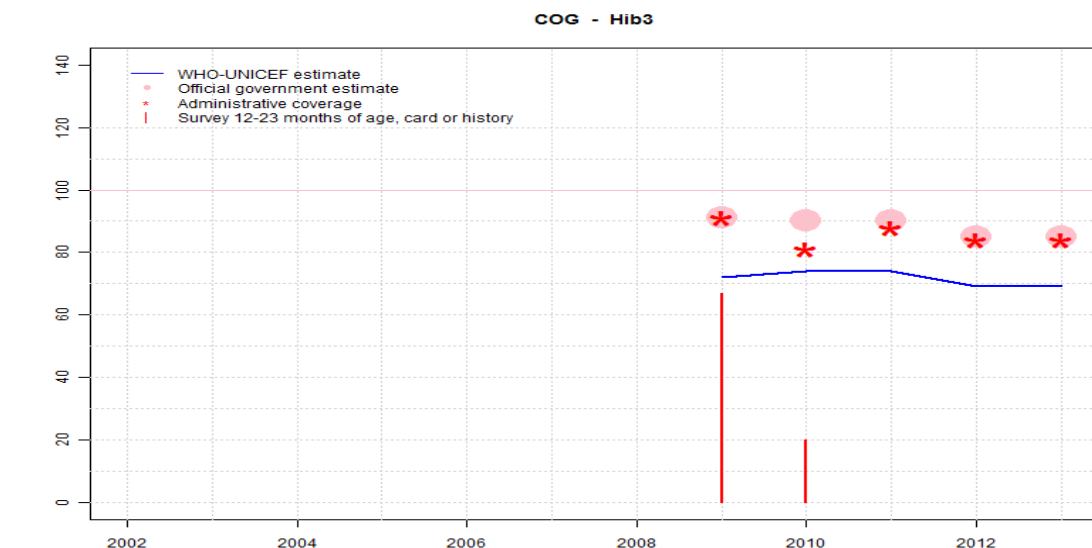
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2007: Reported data calibrated to 2010 levels. HepB vaccine introduced in 2007. Estimate of 64 percent changed from previous revision value of 80 percent. Estimate challenged by: D-
- 2008: Reported data calibrated to 2010 levels. Estimate of 73 percent changed from previous revision value of 89 percent. Estimate challenged by: D-
- 2009: Reported data calibrated to 2010 levels. Survey results ignored. Sample size 0 less than 300. Congo External EPI Review 2010 card or history results of 67 percent modified for recall bias to 66 percent based on 1st dose card or history coverage of 78 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 61 percent. Estimate of 75 percent changed from previous revision value of 91 percent. Estimate challenged by: D-
- 2010: Estimate based on DTP3 coverage level. Congo Demographic and Health Survey 2011-2012 card or history results of 20 percent modified for recall bias to 25 percent based on 1st dose card or history coverage of 36 percent, 1st dose card only coverage of 20 percent and 3d dose card only coverage of 14 percent. The government estimate includes immunizations delivered in both the public and private sector. Estimate of 74 percent changed from previous revision value of 90 percent. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 levels. Estimate of 74 percent changed from previous revision value of 90 percent. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 levels. Official government estimate reflects DHS survey results. Estimate of 69 percent changed from previous revision value of 85 percent. Estimate challenged by: D-
- 2013: Reported data calibrated to 2010 levels. Official government estimate reflects DHS survey results. Estimate challenged by: D-

Congo - Hib3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	72	74	74	69	69
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	•	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	91	90	90	85	85
Administrative	NA	NA	NA	NA	NA	NA	NA	91	81	88	84	84
Survey	NA	NA	NA	NA	NA	NA	NA	67	20	NA	NA	NA

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

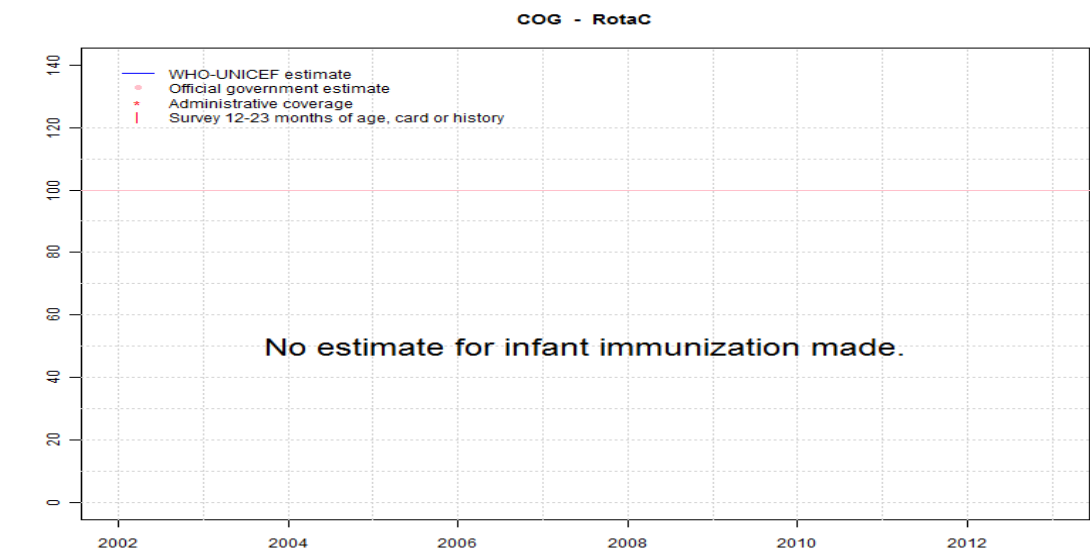
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2009: Estimate based on DTP3 level. Survey results ignored. Sample size 0 less than 300. Congo External EPI Review 2010 card or history results of 67 percent modified for recall bias to 66 percent based on 1st dose card or history coverage of 78 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 61 percent. Hib vaccine introduced in 2009. Vaccine presentation is DTP-HepB-Hib. Estimate of 72 percent changed from previous revision value of 91 percent. Estimate challenged by: D-R-
- 2010: Estimate based on DTP3 level. Congo Demographic and Health Survey 2011-2012 card or history results of 20 percent modified for recall bias to 25 percent based on 1st dose card or history coverage of 36 percent, 1st dose card only coverage of 20 percent and 3d dose card only coverage of 14 percent. The government estimate includes immunizations delivered in both the public and private sector. Estimate of 74 percent changed from previous revision value of 90 percent. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 levels. Estimate of 74 percent changed from previous revision value of 90 percent. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 levels. Official government estimate reflects DHS survey results. Estimate of 69 percent changed from previous revision value of 85 percent. Estimate challenged by: D-
- 2013: Reported data calibrated to 2010 levels. Official government estimate reflects DHS survey results. Estimate challenged by: D-

Congo - RotaC



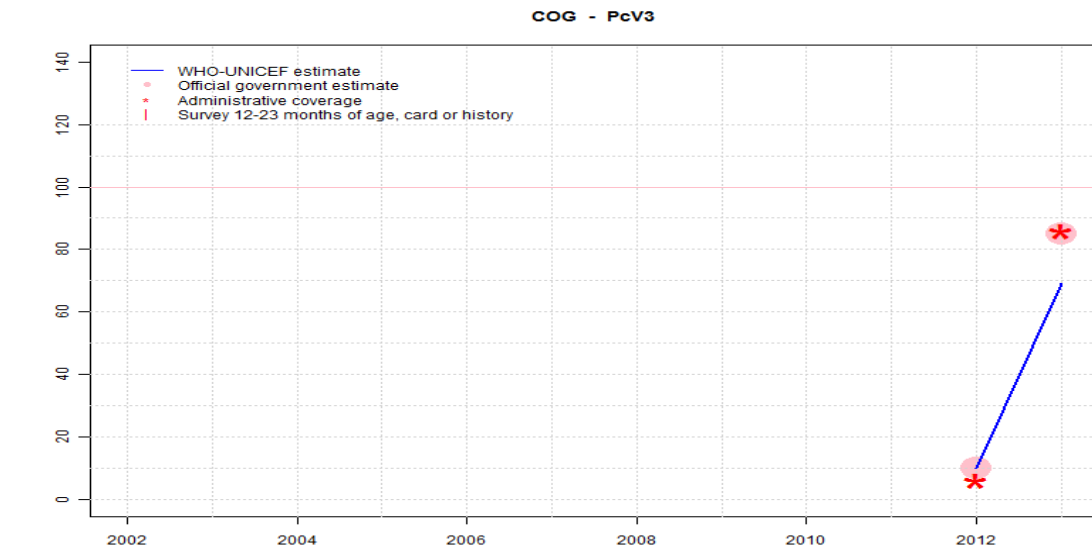
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Congo - PcV3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	69
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	85
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6	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: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

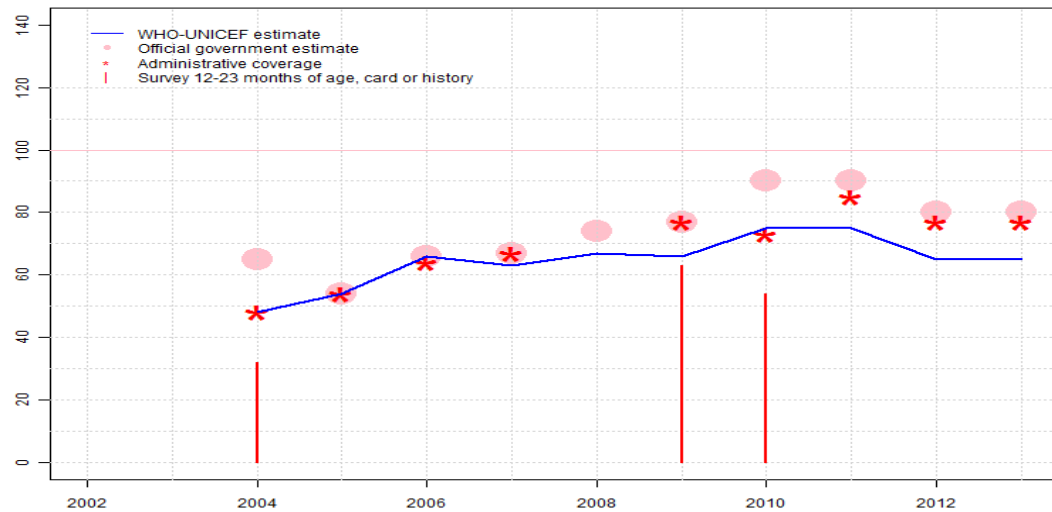
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2012: Estimate is based on official government estimate. Official government estimate reflects DHS survey results. Pneumococcal conjugate vaccine was introduced in October 2012. GoC=R+ D+
- 2013: Estimate based on DTP3 level. Official government estimate reflects DHS survey results. Estimate challenged by: D-R-

Congo - YFV

COG - YFV



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	48	54	66	63	67	66	75	75	65	65
Estimate GoC	NA	NA	•	•	•	•	•	•	•	•	•	•
Official	NA	NA	65	54	66	67	74	77	90	90	80	80
Administrative	NA	NA	48	54	64	67	NA	77	73	85	77	77
Survey	NA	NA	32	NA	NA	NA	NA	63	54	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2004: YFV introduced in 2004 Estimate challenged by: R-
- 2005: Estimate based on nationally reported data. Reported data excluded. Decline in reported coverage from 65 percent to 54 percent with increase to 66 percent. Estimate challenged by: D-R-
- 2006: Estimate based on nationally reported data. Estimate challenged by: D-
- 2007: Reported data calibrated to 2006 and 2010 levels. Estimate of 63 percent changed from previous revision value of 67 percent. Estimate challenged by: D-
- 2008: Reported data calibrated to 2006 and 2010 levels. Estimate of 67 percent changed from previous revision value of 74 percent. Estimate challenged by: D-
- 2009: Reported data calibrated to 2006 and 2010 levels. Survey results ignored. Sample size 0 less than 300. Estimate of 66 percent changed from previous revision value of 77 percent. Estimate challenged by: D-
- 2010: Estimate follows survey result for MCV. The government estimate includes immunizations delivered in both the public and private sector. Estimate of 75 percent changed from previous revision value of 90 percent. Estimate challenged by: R-
- 2011: Reported data calibrated to 2010 levels. Estimate of 75 percent changed from previous revision value of 90 percent. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 levels. Official government estimate reflects DHS survey results. Estimate of 65 percent changed from previous revision value of 80 percent. Estimate challenged by: D-
- 2013: Reported data calibrated to 2010 levels. Official government estimate reflects DHS survey results. Estimate challenged by: D-

Congo - survey details

2010 Enquête Démographique et de Santé du Congo (EDSC-ii) 2011-2012

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	93	12-23 m	1678	57
BCG	Card	56	12-23 m	959	57
BCG	Card or History	94	12-23 m	1678	57
BCG	History	38	12-23 m	719	57
DTP1	C or H <12 months	88	12-23 m	1678	57
DTP1	Card	55	12-23 m	959	57
DTP1	Card or History	89	12-23 m	1678	57
DTP1	History	34	12-23 m	719	57
DTP3	C or H <12 months	71	12-23 m	1678	57
DTP3	Card	46	12-23 m	959	57
DTP3	Card or History	72	12-23 m	1678	57
DTP3	History	25	12-23 m	719	57
HepB1	C or H <12 months	34	12-23 m	1678	57
HepB1	Card	20	12-23 m	959	57
HepB1	Card or History	36	12-23 m	1678	57
HepB1	History	16	12-23 m	719	57
HepB3	C or H <12 months	19	12-23 m	1678	57
HepB3	Card	14	12-23 m	959	57
HepB3	Card or History	20	12-23 m	1678	57
HepB3	History	6	12-23 m	719	57
Hib1	C or H <12 months	34	12-23 m	1678	57
Hib1	Card	20	12-23 m	959	57
Hib1	Card or History	36	12-23 m	1678	57
Hib1	History	16	12-23 m	719	57
Hib3	C or H <12 months	19	12-23 m	1678	57
Hib3	Card	14	12-23 m	959	57
Hib3	Card or History	20	12-23 m	1678	57
Hib3	History	6	12-23 m	719	57
MCV	C or H <12 months	68	12-23 m	1678	57
MCV	Card	47	12-23 m	959	57
MCV	Card or History	75	12-23 m	1678	57
MCV	History	28	12-23 m	719	57
Pol1	C or H <12 months	86	12-23 m	1678	57
Pol1	Card	51	12-23 m	959	57
Pol1	Card or History	87	12-23 m	1678	57

Pol1	History	36	12-23 m	719	57
Pol3	C or H <12 months	56	12-23 m	1678	57
Pol3	Card	42	12-23 m	959	57
Pol3	Card or History	57	12-23 m	1678	57
Pol3	History	15	12-23 m	719	57
YFV	C or H <12 months	49	12-23 m	1678	57
YFV	Card	30	12-23 m	959	57
YFV	Card or History	54	12-23 m	1678	57
YFV	History	24	12-23 m	719	57

2009 Revue Externe du Programme Elargi de Vaccination au Congo, 2010

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	95	12-23 m	-	88
BCG	Card or History	96	12-23 m	-	88
DTP1	Card	72	12-23 m	-	88
DTP1	Card or History	78	12-23 m	-	88
DTP3	Card	61	12-23 m	-	88
DTP3	Card or History	67	12-23 m	-	88
HepB1	Card	72	12-23 m	-	88
HepB1	Card or History	78	12-23 m	-	88
HepB3	Card	61	12-23 m	-	88
HepB3	Card or History	67	12-23 m	-	88
Hib1	Card	72	12-23 m	-	88
Hib1	Card or History	78	12-23 m	-	88
Hib3	Card	61	12-23 m	-	88
Hib3	Card or History	67	12-23 m	-	88
MCV	Card	59	12-23 m	-	88
MCV	Card or History	65	12-23 m	-	88
Pol1	Card	77	12-23 m	-	88
Pol1	Card or History	84	12-23 m	-	88
Pol3	Card	62	12-23 m	-	88
Pol3	Card or History	68	12-23 m	-	88
YFV	Card	58	12-23 m	-	88
YFV	Card or History	63	12-23 m	-	88

2004 Enquête démographique and de santé du Congo, 2005

Congo - survey details

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen	MCV	Card or History	66	12-23 m	899	60
BCG	C or H <12 months	90	12-23 m	899	60	MCV	History	20	12-23 m	899	60
BCG	Card	59	12-23 m	899	60	Pol1	C or H <12 months	92	12-23 m	899	60
BCG	Card or History	90	12-23 m	899	60	Pol1	Card	59	12-23 m	899	60
BCG	History	31	12-23 m	899	60	Pol1	Card or History	93	12-23 m	899	60
DTP1	C or H <12 months	84	12-23 m	899	60	Pol1	History	34	12-23 m	899	60
DTP1	Card	59	12-23 m	899	60	Pol3	C or H <12 months	66	12-23 m	899	60
DTP1	Card or History	85	12-23 m	899	60	Pol3	Card	51	12-23 m	899	60
DTP1	History	26	12-23 m	899	60	Pol3	Card or History	69	12-23 m	899	60
DTP3	C or H <12 months	66	12-23 m	899	60	Pol3	History	18	12-23 m	899	60
DTP3	Card	52	12-23 m	899	60	YFV	C or H <12 months	26	12-23 m	899	60
DTP3	Card or History	68	12-23 m	899	60	YFV	Card	21	12-23 m	899	60
DTP3	History	16	12-23 m	899	60	YFV	Card or History	32	12-23 m	899	60
MCV	C or H <12 months	58	12-23 m	899	60	YFV	History	11	12-23 m	899	60
MCV	Card	47	12-23 m	899	60						

Further information and estimates prior to 2002 are available at:

<http://www.data.unicef.org/child-health/immunization>

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

Congo

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 receive 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.

Year	PAB coverage estimate (%)
2002	69
2003	79
2004	74
2005	75
2006	81
2007	82
2008	82
2009	82
2010	83
2011	83
2012	83
2013	83

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.