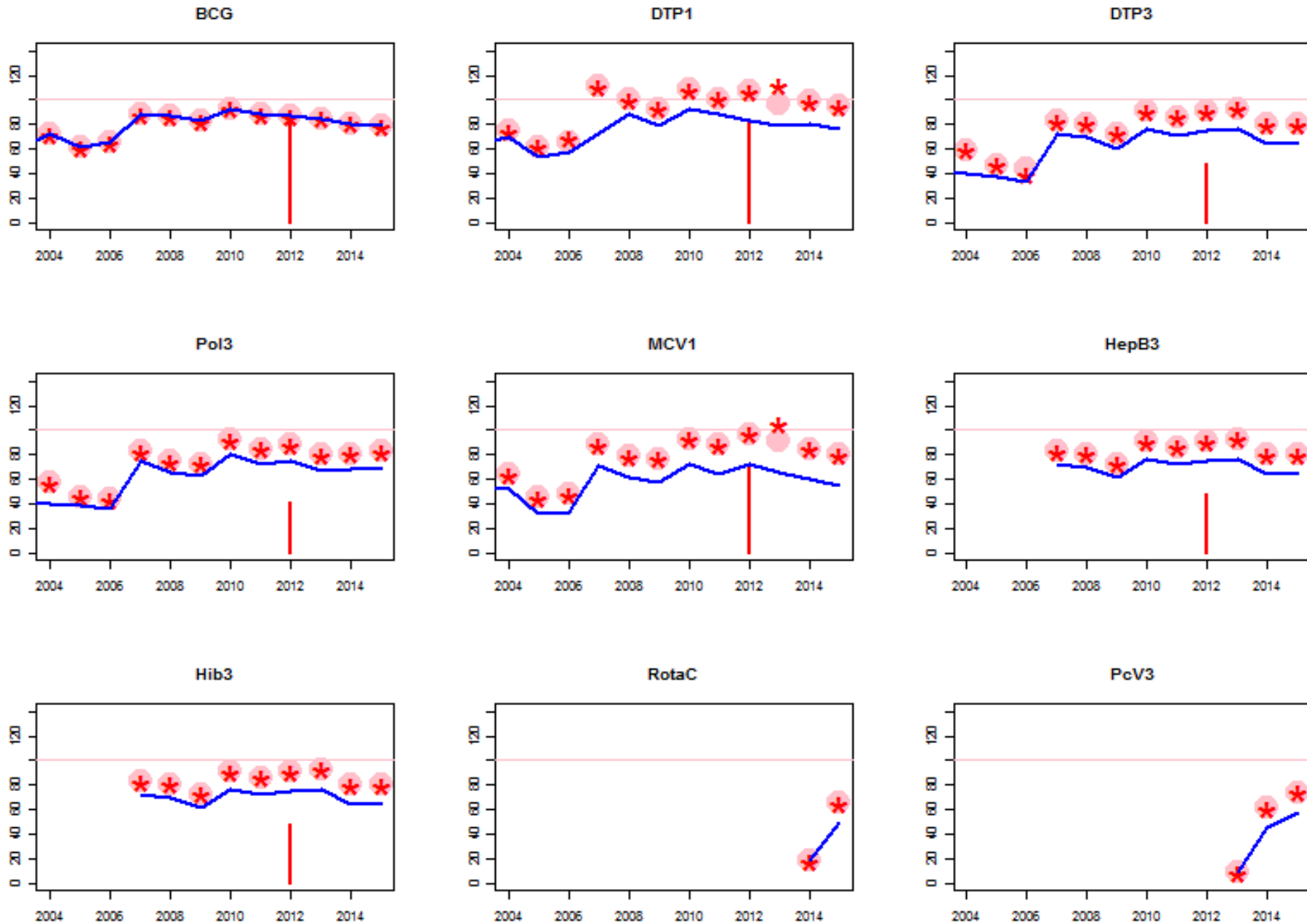
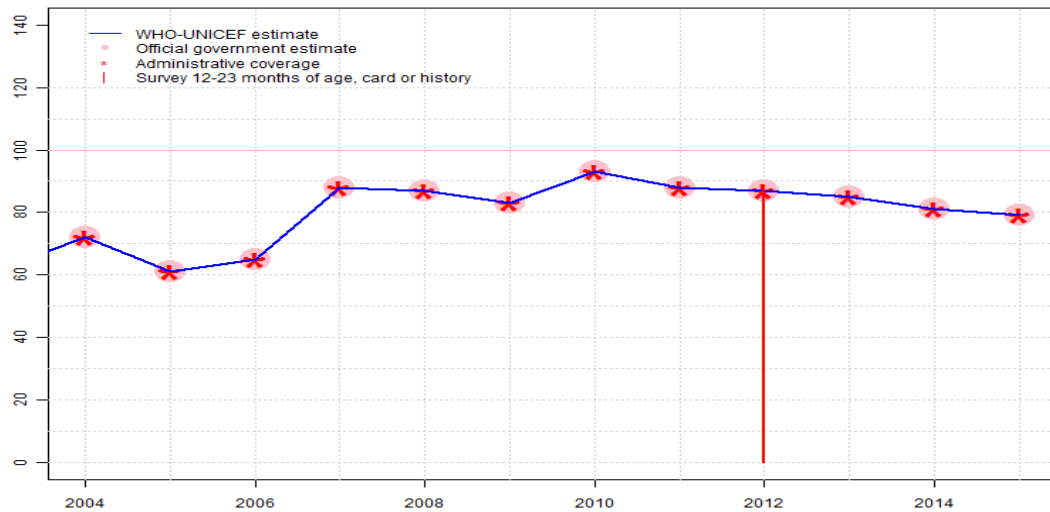


Angola: WHO and UNICEF estimates of immunization coverage: 2015 revision



# Angola - BCG

AGO - BCG



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	72	61	65	88	87	83	93	88	87	85	81	79
Estimate GoC	••	••	••	•	•	•	•	•	•	•	•	•
Official	72	61	65	88	87	83	93	88	87	85	81	79
Administrative	72	61	65	88	87	83	93	88	87	85	81	79
Survey	NA	NA	NA	NA	NA	NA	NA	NA	88	NA	NA	NA

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

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

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

## Description:

- 2004: Estimate based on coverage reported by national government. GoC=R+D+
- 2005: Estimate based on coverage reported by national government. GoC=R+D+
- 2006: Estimate based on coverage reported by national government. GoC=R+D+
- 2007: Estimate based on coverage reported by national government. The increase in 2007 is the result of intensive national efforts targeting districts with high levels of unvaccinated children through increased fixed post, outreach, and mobile teams during the second semester of 2007. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2008: Estimate based on coverage reported by national government. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2009: Estimate based on coverage reported by national government. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2010: Estimate based on coverage reported by national government. The increase in 2010 is the result of intensification of routine immunization through outreach, mobile team activities and increase in cold chain equipment supported by the private sector and international agencies in selected districts. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2011: Estimate based on coverage reported by national government. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). GoC=Assigned by working group. Consistency with other vaccines.
- 2013: Estimate based on coverage reported by national government. Programme reports a one month stockout at national level. GoC=Assigned by working group. Consistency with other vaccines.
- 2014: Estimate based on coverage reported by national government. Decline in reported administrative coverage due in part to change in target population following release of 2014 census results. As such, data suggest cover-

# Angola - BCG

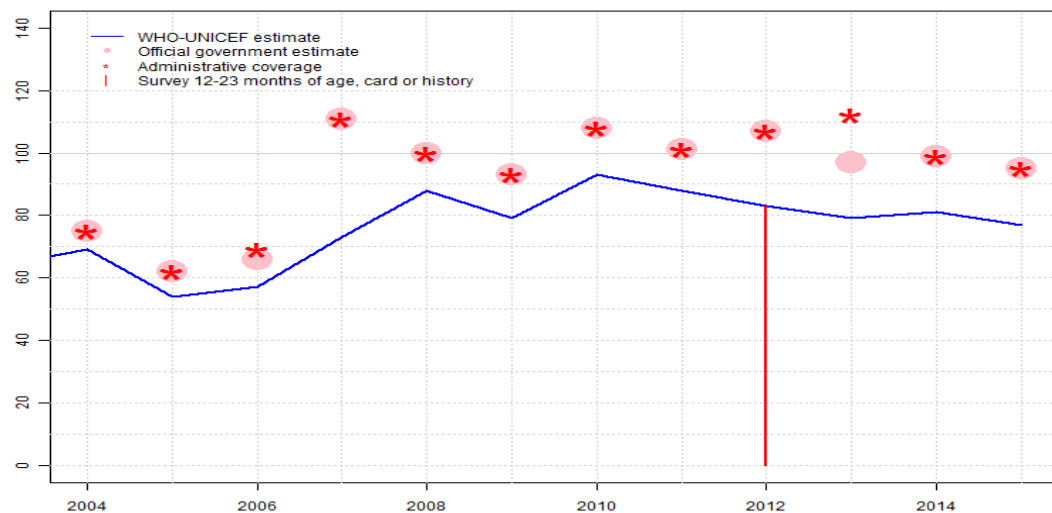
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age levels in prior years are overestimated. DQA conducted during 2014 suggests problems with recording and monitoring of vaccination services. GoC=Assigned by working group. Consistency with other vaccines.

2015: Estimate based on coverage reported by national government. WHO and UNICEF recommend assessment of the routine monitoring system. WHO and UNICEF are aware of the conduct of a Demographic and Health Survey (fieldwork between November 2015 and February 2016) and await the final results. Programme reports one month national stock-out due to financial short-falls. GoC=Assigned by working group. Consistency with other vaccines.

# Angola - DTP1

AGO - DTP1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	69	54	57	73	88	79	93	88	83	79	81	77
Estimate GoC	••	••	••	•	•	•	•	•	•	•	•	•
Official	75	62	66	111	100	93	108	101	107	97	99	95
Administrative	75	62	69	111	100	93	108	101	107	112	99	95
Survey	NA	NA	NA	NA	NA	NA	NA	NA	83	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 2000 and 2012 levels. Estimate of 69 percent changed from previous revision value of 75 percent. GoC=D+
- 2005: Reported data calibrated to 2000 and 2012 levels. Estimate of 54 percent changed from previous revision value of 62 percent. GoC=D+
- 2006: Reported data calibrated to 2000 and 2012 levels. Estimate of 57 percent changed from previous revision value of 66 percent. GoC=D+
- 2007: Reported data calibrated to 2000 and 2012 levels. Reported data excluded. 111 percent greater than 100 percent. Reported data excluded. Unexplained increase from 66 percent to 111 percent with decrease 100 percent. The increase in 2007 is the result of intensive national efforts targeting districts with high levels of unvaccinated children through increased fixed post, outreach, and mobile teams during the second semester of 2007. Estimate of 73 percent changed from previous revision value of 83 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2008: Reported data calibrated to 2000 and 2012 levels. Estimate of 88 percent changed from previous revision value of 99 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2009: Reported data calibrated to 2000 and 2012 levels. Estimate of 79 percent changed from previous revision value of 93 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2010: Reported data calibrated to 2000 and 2012 levels. The increase in 2010 is the result of intensification of routine immunization through outreach, mobile team activities and increase in cold chain equipment supported by the private sector and international agencies in selected districts. Estimate of 93 percent changed from previous revision value of 99 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2011: Reported data calibrated to 2000 and 2012 levels. Reported data excluded. 101 percent greater than 100 percent. Estimate of 88 percent changed from previous revision value of 99 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2012: Survey evidence does not support reported data. Estimate based on survey

# Angola - DTP1

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results. Survey evidence of 83 percent based on 1 survey(s). Reported data excluded. 107 percent greater than 100 percent. Estimate of 83 percent changed from previous revision value of 99 percent. Estimate challenged by: D-R-

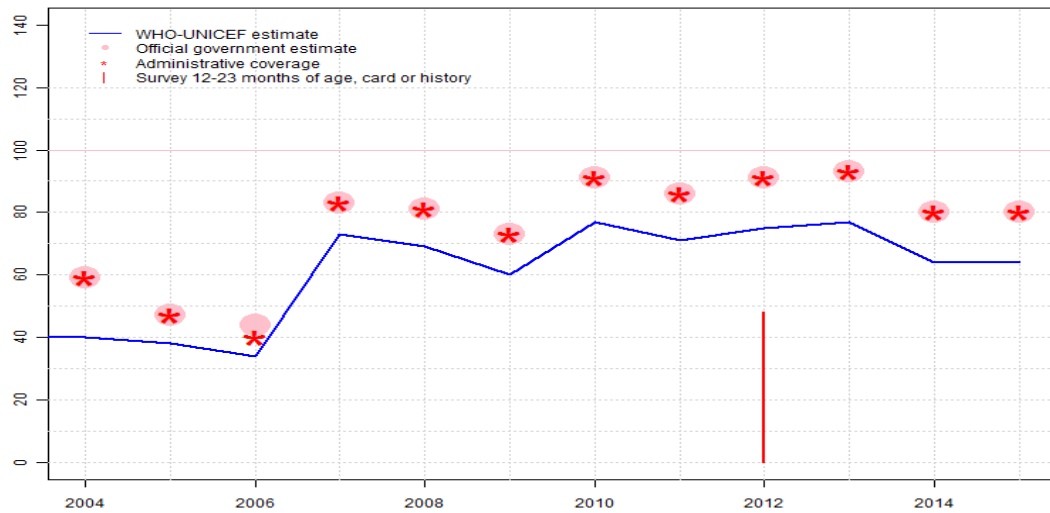
2013: Reported data calibrated to 2012 levels. Estimate of 79 percent changed from previous revision value of 97 percent. Estimate challenged by: D-

2014: Reported data calibrated to 2012 levels. Decline in reported administrative coverage due in part to change in target population following release of 2014 census results. As such, data suggest coverage levels in prior years are overestimated. DQA conducted during 2014 suggests problems with recording and monitoring of vaccination services. Estimate of 81 percent changed from previous revision value of 99 percent. Estimate challenged by: D-

2015: Reported data calibrated to 2012 levels. WHO and UNICEF recommend assessment of the routine monitoring system. WHO and UNICEF are aware of the conduct of a Demographic and Health Survey (fieldwork between November 2015 and February 2016) and await the final results. Programme reports one month national stock-out due to financial short-falls. Estimate challenged by: D-

# Angola - DTP3

AGO - DTP3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	40	38	34	73	69	60	77	71	75	77	64	64
Estimate GoC	•	••	••	•	•	•	•	•	•	•	•	•
Official	59	47	44	83	81	73	91	86	91	93	80	80
Administrative	59	47	40	83	81	73	91	86	91	93	80	80
Survey	NA	NA	NA	NA	NA	NA	NA	NA	48	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 1997 and 2012 levels. Reported data excluded. Unexplained increase from 46 percent to 59 percent with decrease 47 percent. Estimate of 40 percent changed from previous revision value of 47 percent. Estimate challenged by: D-
- 2005: Reported data calibrated to 1997 and 2012 levels. Estimate of 38 percent changed from previous revision value of 47 percent. GoC=D+
- 2006: Reported data calibrated to 1997 and 2012 levels. Estimate of 34 percent changed from previous revision value of 44 percent. GoC=D+
- 2007: Reported data calibrated to 1997 and 2012 levels. The increase in 2007 is the result of intensive national efforts targeting districts with high levels of unvaccinated children through increased fixed post, outreach, and mobile teams during the second semester of 2007. Estimate of 73 percent changed from previous revision value of 83 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2008: Reported data calibrated to 1997 and 2012 levels. Estimate of 69 percent changed from previous revision value of 81 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2009: Reported data calibrated to 1997 and 2012 levels. Estimate of 60 percent changed from previous revision value of 73 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2010: Reported data calibrated to 1997 and 2012 levels. The increase in 2010 is the result of intensification of routine immunization through outreach, mobile team activities and increase in cold chain equipment supported by the private sector and international agencies in selected districts. Estimate of 77 percent changed from previous revision value of 91 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2011: Reported data calibrated to 1997 and 2012 levels. Estimate of 71 percent changed from previous revision value of 86 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 75 percent based on 1 survey(s). EPI Coverage

# Angola - DTP3

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Evaluation Survey, Angola 2013 card or history results of 48 percent modified for recall bias to 75 percent based on 1st dose card or history coverage of 83 percent, 1st dose card only coverage of 30 percent and 3d dose card only coverage of 27 percent. Estimate of 75 percent changed from previous revision value of 91 percent. Estimate challenged by: D-R-

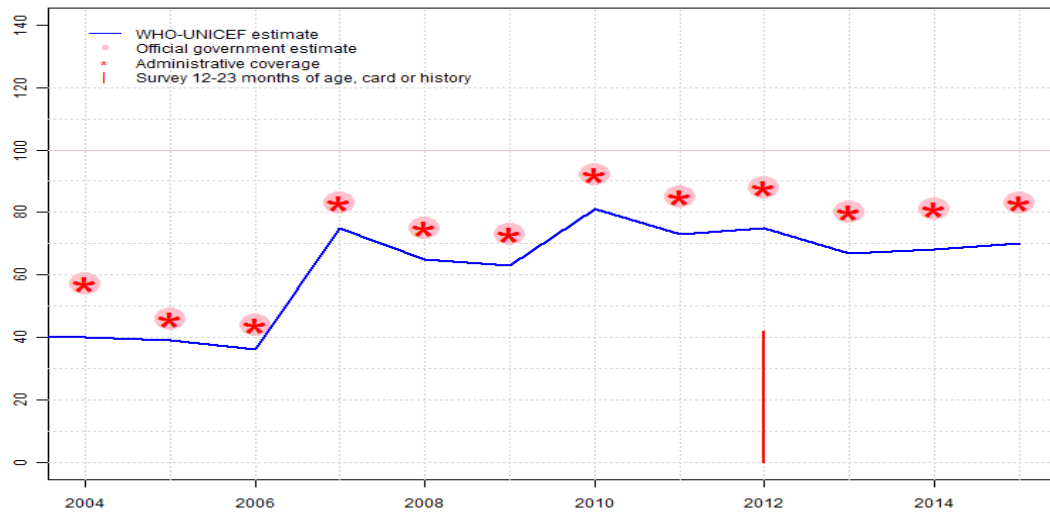
2013: Reported data calibrated to 2012 levels. Estimate of 77 percent changed from previous revision value of 93 percent. Estimate challenged by: D-

2014: Reported data calibrated to 2012 levels. Decline in reported administrative coverage due in part to change in target population following release of 2014 census results. As such, data suggest coverage levels in prior years are overestimated. DQA conducted during 2014 suggests problems with recording and monitoring of vaccination services. Estimate of 64 percent changed from previous revision value of 80 percent. Estimate challenged by: D-

2015: Reported data calibrated to 2012 levels. WHO and UNICEF recommend assessment of the routine monitoring system. WHO and UNICEF are aware of the conduct of a Demographic and Health Survey (fieldwork between November 2015 and February 2016) and await the final results. Programme reports one month national stock-out due to financial short-falls. Estimate challenged by: D-

# Angola - Pol3

AGO - Pol3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	40	39	36	75	65	63	81	73	75	67	68	70
Estimate GoC	•	••	••	•	•	•	•	•	•	•	•	•
Official	57	46	44	83	75	73	92	85	88	80	81	83
Administrative	57	46	44	83	75	73	92	85	88	80	81	83
Survey	NA	NA	NA	NA	NA	NA	NA	NA	42	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 1997 and 2012 levels. Reported data excluded. Unexplained increase from 45 percent to 57 percent with decrease 46 percent. Estimate of 40 percent changed from previous revision value of 46 percent. Estimate challenged by: D-
- 2005: Reported data calibrated to 1997 and 2012 levels. Estimate of 39 percent changed from previous revision value of 46 percent. GoC=D+
- 2006: Reported data calibrated to 1997 and 2012 levels. Estimate of 36 percent changed from previous revision value of 44 percent. GoC=D+
- 2007: Reported data calibrated to 1997 and 2012 levels. The increase in 2007 is the result of intensive national efforts targeting districts with high levels of unvaccinated children through increased fixed post, outreach, and mobile teams during the second semester of 2007. Estimate of 75 percent changed from previous revision value of 83 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2008: Reported data calibrated to 1997 and 2012 levels. Estimate of 65 percent changed from previous revision value of 75 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2009: Reported data calibrated to 1997 and 2012 levels. Estimate of 63 percent changed from previous revision value of 73 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2010: Reported data calibrated to 1997 and 2012 levels. The increase in 2010 is the result of intensification of routine immunization through outreach, mobile team activities and increase in cold chain equipment supported by the private sector and international agencies in selected districts. Estimate of 81 percent changed from previous revision value of 92 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2011: Reported data calibrated to 1997 and 2012 levels. Estimate of 73 percent changed from previous revision value of 85 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 75 percent based on 1 survey(s). EPI Coverage



# Angola - Pol3

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Evaluation Survey, Angola 2013 card or history results of 42 percent modified for recall bias to 75 percent based on 1st dose card or history coverage of 83 percent, 1st dose card only coverage of 30 percent and 3d dose card only coverage of 27 percent. Estimate of 75 percent changed from previous revision value of 88 percent. Estimate challenged by: R-

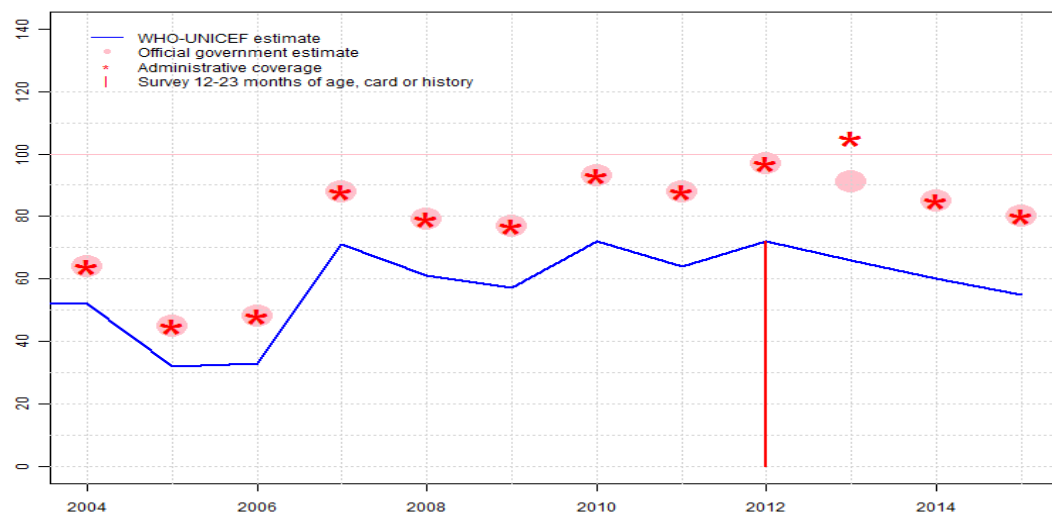
2013: Reported data calibrated to 2012 levels. Programme reports a two month stockout at national level. Estimate of 67 percent changed from previous revision value of 80 percent. GoC=Assigned by working group. Consistency with other vaccines.

2014: Reported data calibrated to 2012 levels. Estimate of 68 percent changed from previous revision value of 81 percent. Estimate challenged by: D-

2015: Reported data calibrated to 2012 levels. WHO and UNICEF recommend assessment of the routine monitoring system. WHO and UNICEF are aware of the conduct of a Demographic and Health Survey (fieldwork between November 2015 and February 2016) and await the final results. Estimate challenged by: D-

# Angola - MCV1

AGO - MCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	52	32	33	71	61	57	72	64	72	66	60	55
Estimate GoC	••		•	•	•	•	•	•	•	•	•	•
Official	64	45	48	88	79	77	93	88	97	91	85	80
Administrative	64	45	48	88	79	77	93	88	97	105	85	80
Survey	NA	NA	NA	NA	NA	NA	NA	NA	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: 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 1997 and 2012 levels. Estimate of 52 percent changed from previous revision value of 64 percent. GoC=D+
- 2005: Reported data calibrated to 1997 and 2012 levels. Estimate of 32 percent changed from previous revision value of 45 percent. Estimate challenged by: D-
- 2006: Reported data calibrated to 1997 and 2012 levels. Estimate of 33 percent changed from previous revision value of 48 percent. Estimate challenged by: D-
- 2007: Reported data calibrated to 1997 and 2012 levels. The increase in 2007 is the result of intensive national efforts targeting districts with high levels of unvaccinated children through increased fixed post, outreach, and mobile teams during the second semester of 2007. Estimate of 71 percent changed from previous revision value of 88 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2008: Reported data calibrated to 1997 and 2012 levels. Estimate of 61 percent changed from previous revision value of 79 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2009: Reported data calibrated to 1997 and 2012 levels. Estimate of 57 percent changed from previous revision value of 77 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2010: Reported data calibrated to 1997 and 2012 levels. The increase in 2010 is the result of intensification of routine immunization through outreach, mobile team activities and increase in cold chain equipment supported by the private sector and international agencies in selected districts. Estimate of 72 percent changed from previous revision value of 93 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2011: Reported data calibrated to 1997 and 2012 levels. Estimate of 64 percent changed from previous revision value of 88 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 72 percent based on 1 survey(s). Estimate of

# Angola - MCV1

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72 percent changed from previous revision value of 97 percent. Estimate challenged by: D-R-

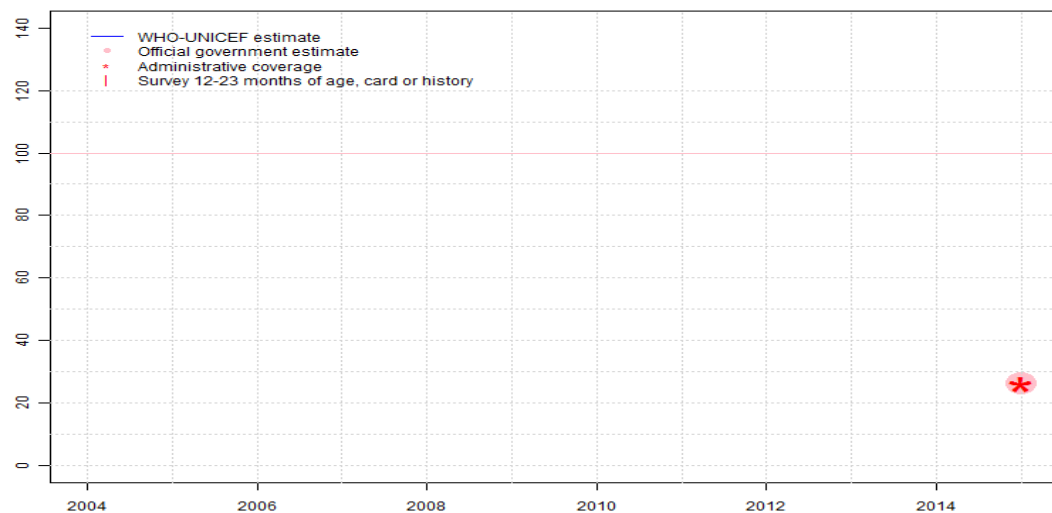
2013: Reported data calibrated to 2012 levels. Programme reports a one month stockout at national level. Estimate of 66 percent changed from previous revision value of 91 percent. Estimate challenged by: D-

2014: Reported data calibrated to 2012 levels. Decline in reported administrative coverage due in part to change in target population following release of 2014 census results. As such, data suggest coverage levels in prior years are overestimated. DQA conducted during 2014 suggests problems with recording and monitoring of vaccination services. Estimate of 60 percent changed from previous revision value of 85 percent. Estimate challenged by: D-

2015: Reported data calibrated to 2012 levels. WHO and UNICEF recommend assessment of the routine monitoring system. WHO and UNICEF are aware of the conduct of a Demographic and Health Survey (fieldwork between November 2015 and February 2016) and await the final results. Estimate challenged by: D-

# Angola - MCV2

AGO - 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	26
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	26
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	26
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

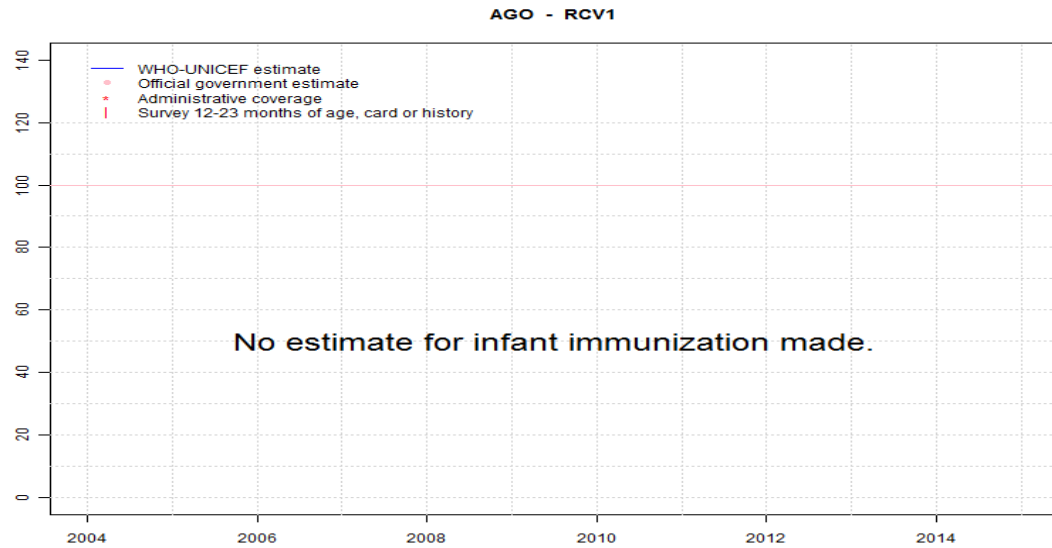
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

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

2015: Estimate based on coverage reported by national government. WHO and UNICEF recommend assessment of the routine monitoring system. WHO and UNICEF are aware of the conduct of a Demographic and Health Survey (fieldwork between November 2015 and February 2016) and await the final results. Second dose of measles containing vaccine introduced in 2014. Reporting began in 2015. GoC=Assigned by working group. Consistency with other vaccines in an introduction period.

# Angola - RCV1



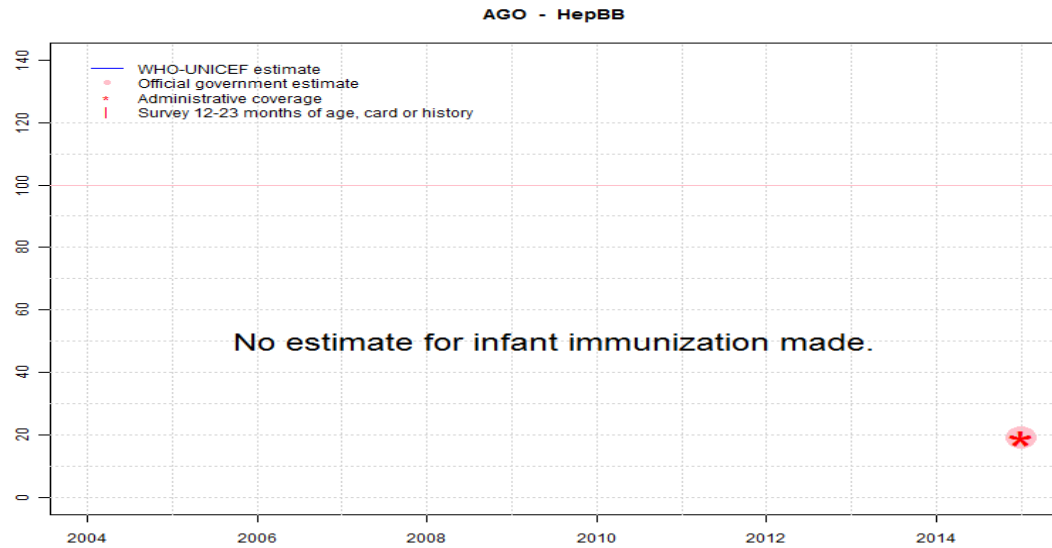
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

# Angola - 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	19
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

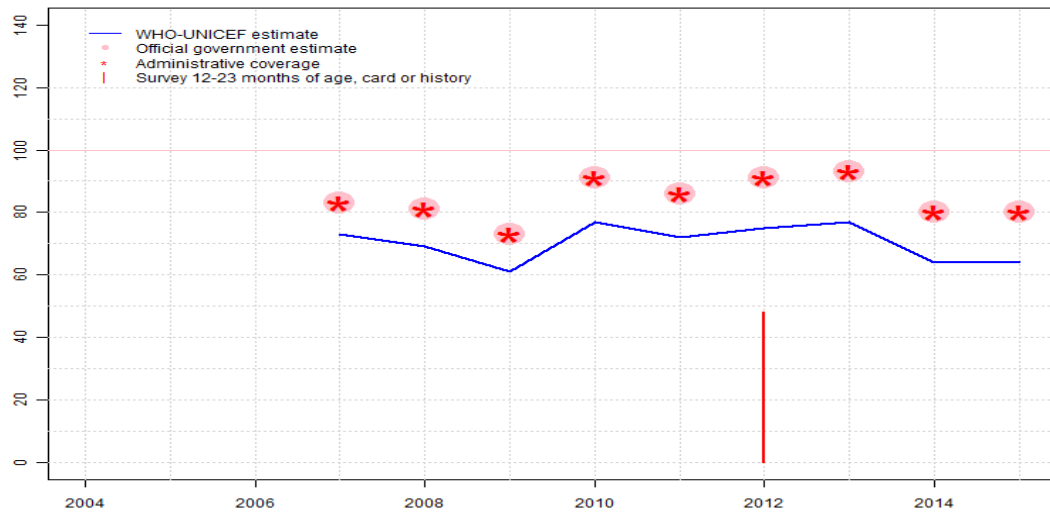
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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.

# Angola - HepB3

AGO - HepB3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	73	69	61	77	72	75	77	64	64
Estimate GoC	NA	NA	NA	•	•	•	•	•	•	•	•	•
Official	NA	NA	NA	83	81	73	91	86	91	93	80	80
Administrative	NA	NA	NA	83	81	73	91	86	91	93	80	80
Survey	NA	NA	NA	NA	NA	NA	NA	NA	48	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:

- 2007: Estimate based on estimated DTP3 coverage value. The increase in 2007 is the result of intensive national efforts targeting districts with high levels of unvaccinated children through increased fixed post, outreach, and mobile teams during the second semester of 2007. HepB vaccine introduced in 2006. Reporting started in 2007. Vaccine presentation is DTP-HepB-Hib. Estimate of 73 percent changed from previous revision value of 83 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2008: Reported data calibrated to 2007 and 2012 levels. Estimate of 69 percent changed from previous revision value of 81 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2009: Reported data calibrated to 2007 and 2012 levels. Estimate of 61 percent changed from previous revision value of 73 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2010: Reported data calibrated to 2007 and 2012 levels. The increase in 2010 is the result of intensification of routine immunization through outreach, mobile team activities and increase in cold chain equipment supported by the private sector and international agencies in selected districts. Estimate of 77 percent changed from previous revision value of 91 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2011: Reported data calibrated to 2007 and 2012 levels. Estimate of 72 percent changed from previous revision value of 86 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 75 percent based on 1 survey(s). EPI Coverage Evaluation Survey, Angola 2013 card or history results of 48 percent modified for recall bias to 75 percent based on 1st dose card or history coverage of 83 percent, 1st dose card only coverage of 30 percent and 3d dose card only coverage of 27 percent. Estimate of 75 percent changed from previous revision value of 91 percent. Estimate challenged by: D-R-
- 2013: Reported data calibrated to 2012 levels. Estimate of 77 percent changed from previous revision value of 93 percent. Estimate challenged by: D-

# Angola - HepB3

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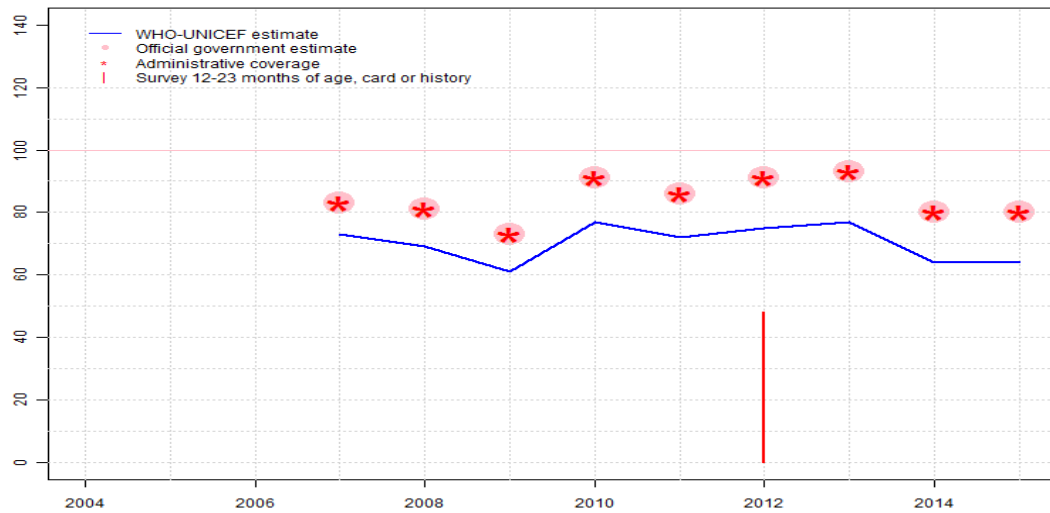
2014: Reported data calibrated to 2012 levels. Decline in reported administrative coverage due in part to change in target population following release of 2014 census results. As such, data suggest coverage levels in prior years are overestimated. DQA conducted during 2014 suggests problems with recording and monitoring of vaccination services. Estimate of 64 percent changed from previous revision value of 80 percent. Estimate challenged by: D-

2015: Reported data calibrated to 2012 levels. WHO and UNICEF recommend assessment of the routine monitoring system. WHO and UNICEF are aware of the conduct of a Demographic and Health Survey (fieldwork between November 2015 and February 2016) and await the final results. Programme reports one month national stock-out due to financial short-falls. Estimate challenged by: D-



# Angola - Hib3

AGO - Hib3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	73	69	61	77	72	75	77	64	64
Estimate GoC	NA	NA	NA	•	•	•	•	•	•	•	•	•
Official	NA	NA	NA	83	81	73	91	86	91	93	80	80
Administrative	NA	NA	NA	83	81	73	91	86	91	93	80	80
Survey	NA	NA	NA	NA	NA	NA	NA	NA	48	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:

- 2007: Estimate based on estimated DTP3 coverage value. The increase in 2007 is the result of intensive national efforts targeting districts with high levels of unvaccinated children through increased fixed post, outreach, and mobile teams during the second semester of 2007. Hib vaccine introduced in 2006. Reporting started in 2007. Vaccine presentation is DTP-HepB-Hib. Estimate of 73 percent changed from previous revision value of 83 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2008: Reported data calibrated to 2007 and 2012 levels. Estimate of 69 percent changed from previous revision value of 81 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2009: Reported data calibrated to 2007 and 2012 levels. Estimate of 61 percent changed from previous revision value of 73 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2010: Reported data calibrated to 2007 and 2012 levels. The increase in 2010 is the result of intensification of routine immunization through outreach, mobile team activities and increase in cold chain equipment supported by the private sector and international agencies in selected districts. Estimate of 77 percent changed from previous revision value of 91 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2011: Reported data calibrated to 2007 and 2012 levels. Estimate of 72 percent changed from previous revision value of 86 percent. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 75 percent based on 1 survey(s). EPI Coverage Evaluation Survey, Angola 2013 card or history results of 48 percent modified for recall bias to 75 percent based on 1st dose card or history coverage of 83 percent, 1st dose card only coverage of 30 percent and 3d dose card only coverage of 27 percent. Estimate of 75 percent changed from previous revision value of 91 percent. Estimate challenged by: D-R-
- 2013: Reported data calibrated to 2012 levels. Estimate of 77 percent changed from previous revision value of 93 percent. Estimate challenged by: D-

# Angola - Hib3

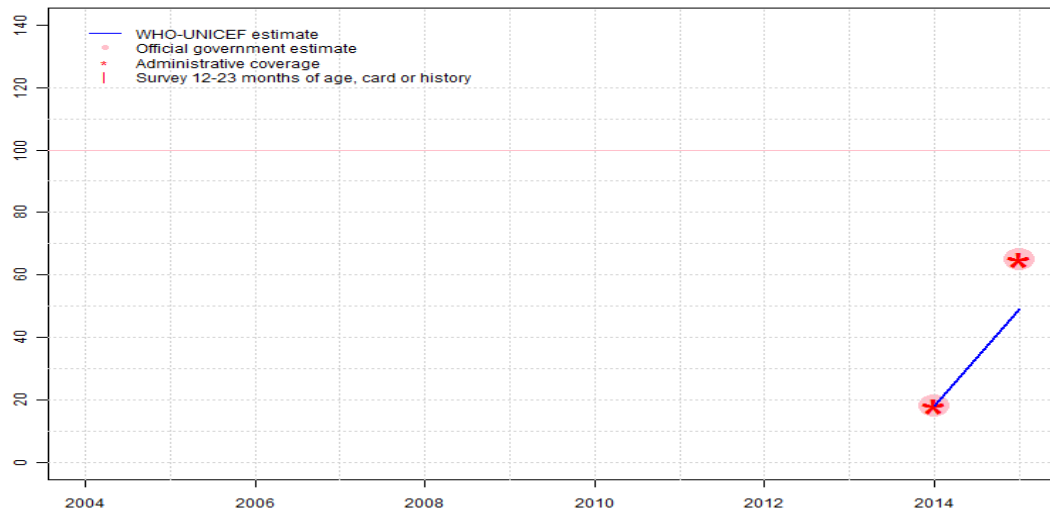
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2014: Reported data calibrated to 2012 levels. Decline in reported administrative coverage due in part to change in target population following release of 2014 census results. As such, data suggest coverage levels in prior years are overestimated. DQA conducted during 2014 suggests problems with recording and monitoring of vaccination services. Estimate of 64 percent changed from previous revision value of 80 percent. Estimate challenged by: D-

2015: Reported data calibrated to 2012 levels. WHO and UNICEF recommend assessment of the routine monitoring system. WHO and UNICEF are aware of the conduct of a Demographic and Health Survey (fieldwork between November 2015 and February 2016) and await the final results. Programme reports one month national stock-out due to financial short-falls. Estimate challenged by: D-

# Angola - RotaC

AGO - RotaC



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18	49
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18	65
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18	65
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.

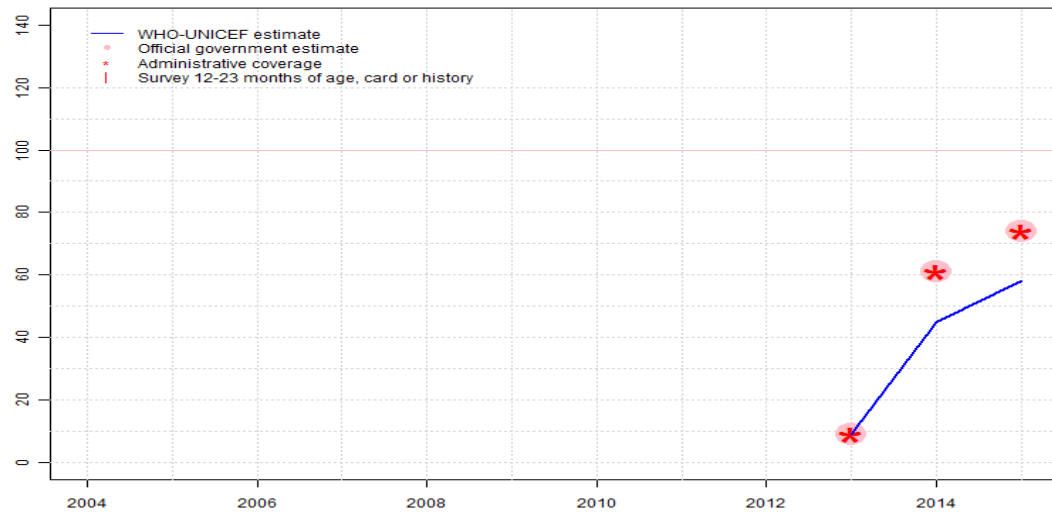
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2014: Rotavirus vaccine introduced during April 2014. GoC=Assigned by working group. Consistency across vaccines.
- 2015: Estimate is based on estimated DTP3 coverage level. WHO and UNICEF recommend assessment of the routine monitoring system. WHO and UNICEF are aware of the conduct of a Demographic and Health Survey (fieldwork between November 2015 and February 2016) and await the final results. Estimate challenged by: D-R-

# Angola - PcV3

AGO - PcV3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	9	45	58
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	●	●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	9	61	74
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	9	61	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.

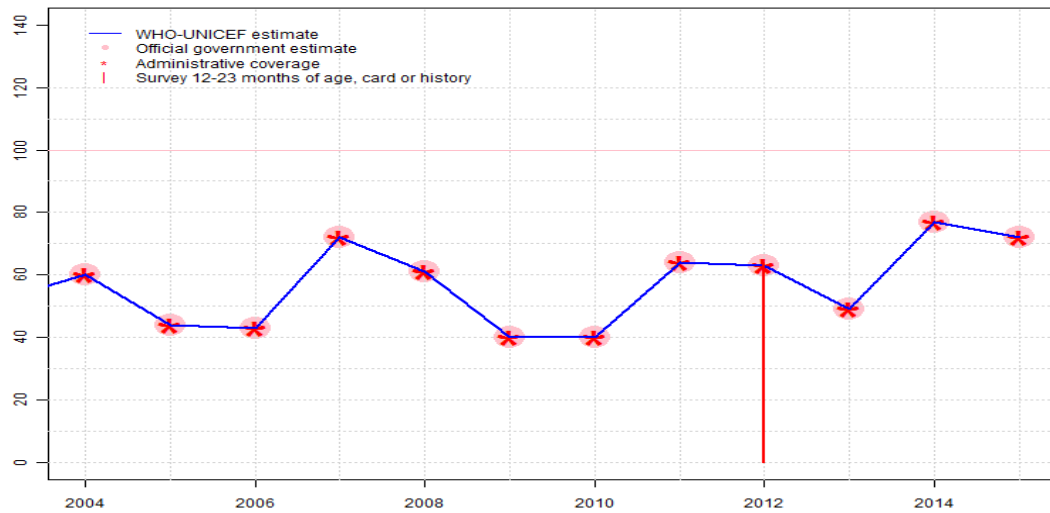
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2013: Pneumococcal conjugate vaccine introduced in June 2013. GoC=Assigned by working group. Consistency with other vaccines in a n introduction period.
- 2014: Estimate is based on estimated DTP3 coverage level. Estimate of 45 percent changed from previous revision value of 61 percent. Estimate challenged by: D-R-
- 2015: Estimate is based on estimated DTP3 coverage level. WHO and UNICEF recommend assessment of the routine monitoring system. WHO and UNICEF are aware of the conduct of a Demographic and Health Survey (fieldwork between November 2015 and February 2016) and await the final results. Estimate challenged by: D-R-

# Angola - YFV

AGO - YFV



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	60	44	43	72	61	40	40	64	63	49	77	72
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	60	44	43	72	61	40	40	64	63	49	77	72
Administrative	60	44	43	72	61	40	40	64	63	49	77	72
Survey	NA	NA	NA	NA	NA	NA	NA	NA	64	NA	NA	NA

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

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

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

## Description:

- 2004: Estimate based on reported data. GoC=Assigned by working group. .
- 2005: Estimate based on reported data. GoC=Assigned by working group. .
- 2006: Estimate based on reported data. GoC=Assigned by working group. .
- 2007: Estimate based on reported data. The increase in 2007 is the result of intensive national efforts targeting districts with high levels of unvaccinated children through increased fixed post, outreach, and mobile teams during the second semester of 2007. Reported data accepted for other antigens. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2008: Estimate based on reported data. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2009: Estimate based on reported data. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2010: Estimate based on reported data. Programme reports a three months stock out in 150 of 164 districts. The increase in 2010 is the result of intensification of routine immunization through outreach, mobile team activities and increase in cold chain equipment supported by the private sector and international agencies in selected districts. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2011: Estimate based on reported data. Decline result of vaccine stock out in 138 districts. GoC=Assigned by working group. In spite of reported coverage at similar levels between 2007-2011, the dramatic increase in coverage level from 2006 is not supported by an independent source.
- 2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 64 percent based on 1 survey(s). GoC=Assigned by working group. .
- 2013: Estimate based on coverage reported by national government. Decline in coverage due in part to a national stockout of three months. GoC=Assigned by working group. .
- 2014: Estimate based on coverage reported by national government. Recovery from 2013 stock-out. GoC=Assigned by working group. .
- 2015: Estimate based on coverage reported by national government. WHO and UNICEF recommend assessment of the routine monitoring system. WHO and UNICEF are aware of the conduct of a Demographic and Health Sur-

# Angola - YFV

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vey (fieldwork between November 2015 and February 2016) and await the final results. GoC=Assigned by working group. .

# Angola - survey details

2012 Inquérito de Cobertura Vacinal das Crianças de 12 a 23 meses de Idade, Angola 2013

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	32	12-23 m	3764	33
BCG	Card or History	88	12-23 m	3764	33
DTP1	Card	30	12-23 m	3764	33
DTP1	Card or History	83	12-23 m	3764	33
DTP3	Card	27	12-23 m	3764	33
DTP3	Card or History	48	12-23 m	3764	33
HepB1	Card	30	12-23 m	3764	33
HepB1	Card or History	83	12-23 m	3764	33
HepB3	Card	27	12-23 m	3764	33
HepB3	Card or History	48	12-23 m	3764	33
Hib1	Card	30	12-23 m	3764	33
Hib1	Card or History	83	12-23 m	3764	33
Hib3	Card	27	12-23 m	3764	33
Hib3	Card or History	48	12-23 m	3764	33
MCV1	Card	26	12-23 m	3764	33
MCV1	Card or History	72	12-23 m	3764	33
Pol1	Card	30	12-23 m	3764	33
Pol1	Card or History	83	12-23 m	3764	33
Pol3	Card	27	12-23 m	3764	33
Pol3	Card or History	42	12-23 m	3764	33
YFV	Card	22	12-23 m	3764	33
YFV	Card or History	64	12-23 m	3764	33

2000 Angola Multiple Indicator Cluster Survey 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	33	12-23 m	1102	34
BCG	Card <12 months	63	12-23 m	1102	34
BCG	Card or History	69	12-23 m	1102	34
BCG	History	36	12-23 m	1102	34
DTP1	Card	29	12-23 m	1102	34
DTP1	Card <12 months	50	12-23 m	1102	34
DTP1	Card or History	56	12-23 m	1102	34
DTP1	History	27	12-23 m	1102	34
DTP3	Card	23	12-23 m	1102	34
DTP3	Card <12 months	28	12-23 m	1102	34
DTP3	Card or History	34	12-23 m	1102	34
DTP3	History	11	12-23 m	1102	34
MCV1	Card	25	12-23 m	1102	34
MCV1	Card <12 months	42	12-23 m	1102	34
MCV1	Card or History	53	12-23 m	1102	34
MCV1	History	28	12-23 m	1102	34
Pol1	Card	30	12-23 m	1102	34
Pol1	Card <12 months	74	12-23 m	1102	34
Pol1	Card or History	82	12-23 m	1102	34
Pol1	History	52	12-23 m	1102	34
Pol3	Card	24	12-23 m	1102	34
Pol3	Card <12 months	51	12-23 m	1102	34
Pol3	Card or History	63	12-23 m	1102	34
Pol3	History	40	12-23 m	1102	34

Further information and estimates for previous years are available at:

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

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

## Angola

### 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	73
2005	75
2006	77
2007	78
2008	79
2009	88
2010	75
2011	70
2012	72
2013	75
2014	78
2015	78

<sup>1</sup> This model is described in: Griffiths U., Wolfson L., Quddus A., Younus M., Hafiz R.. Incremental cost-effectiveness of supplementary immunization activities to prevent neo-natal tetanus in Pakistan. Bulletin of the World Health Organization 2004; 82:643-651.