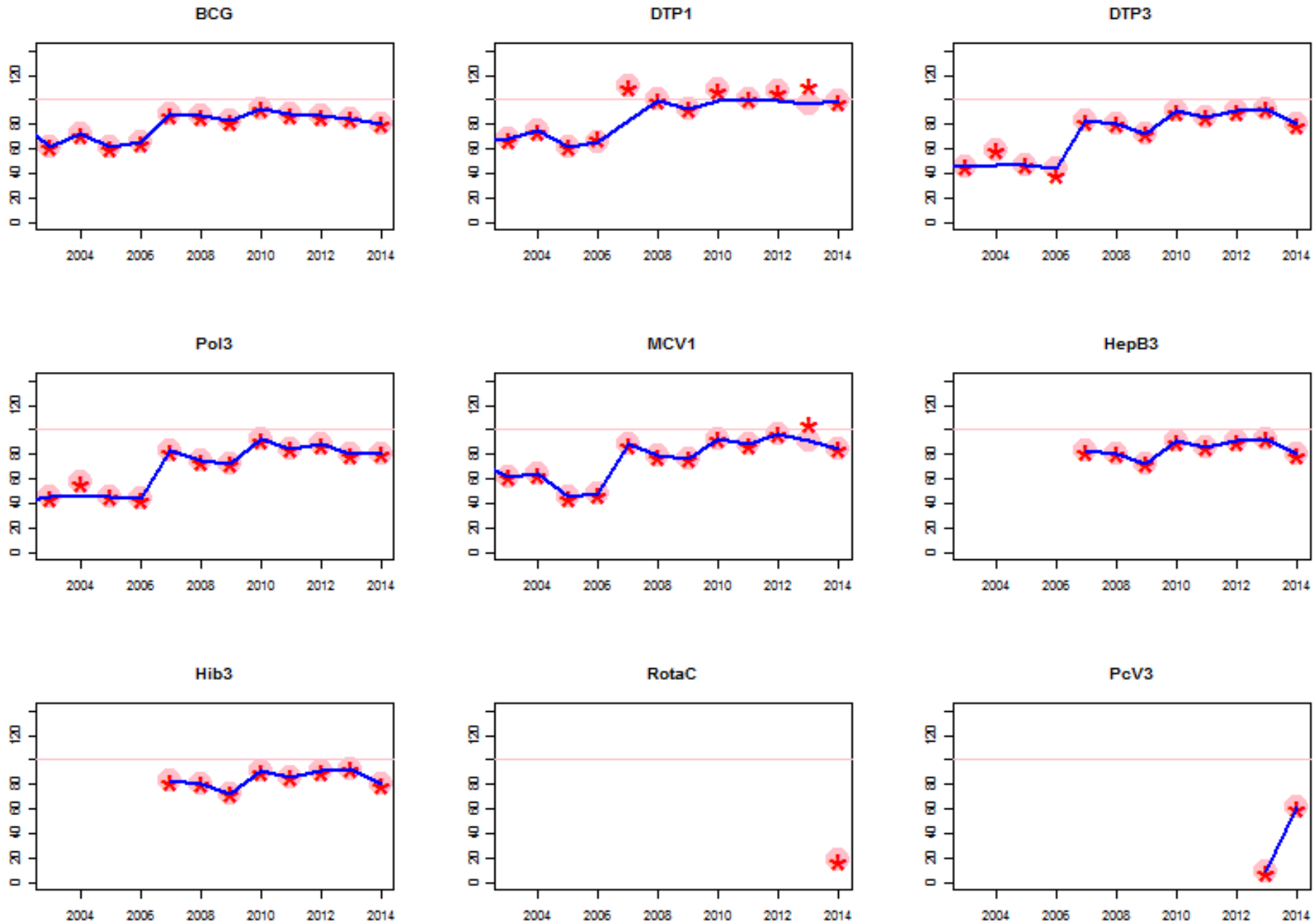
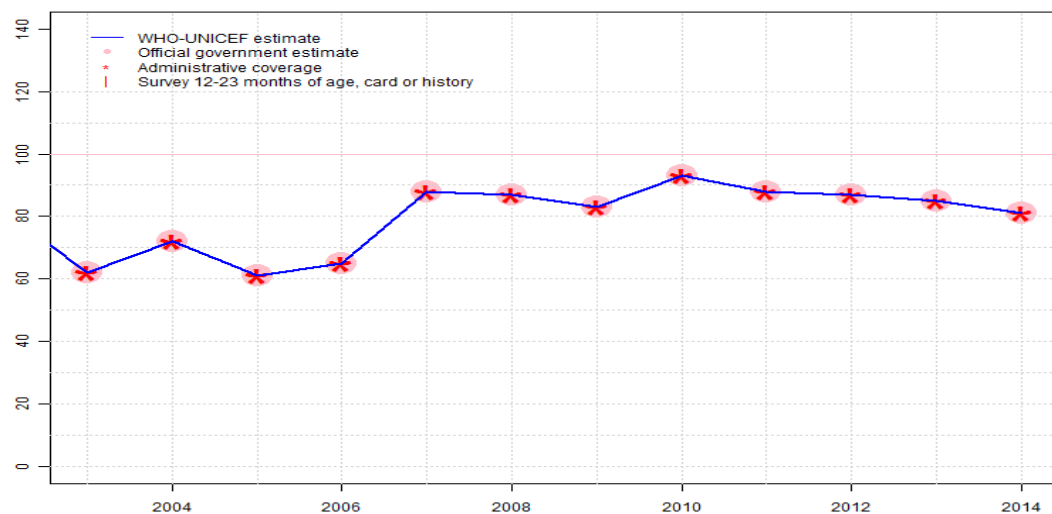


Angola: WHO and UNICEF estimates of immunization coverage: 2014 revision



Angola - BCG

AGO - BCG



| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 62 | 72 | 61 | 65 | 88 | 87 | 83 | 93 | 88 | 87 | 85 | 81 |
| Estimate GoC | ●● | ●● | ●● | ●● | ● | ● | ● | ● | ● | ● | ● | ● |
| Official | 62 | 72 | 61 | 65 | 88 | 87 | 83 | 93 | 88 | 87 | 85 | 81 |
| Administrative | 62 | 72 | 61 | 65 | 88 | 87 | 83 | 93 | 88 | 87 | 85 | 81 |
| 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:

- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 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. GoC=Assigned by working group. Preliminary results of a EPI coverage survey conducted in 2013, with documented evidence from card for 33 percent of children aged 12-23 m, suggests BCG coverage of 88 percent (card or history) (32 percent by card only).
- 2013: Estimate based on coverage reported by national government. Programme reports a one month stockout at national level. GoC=Assigned by working

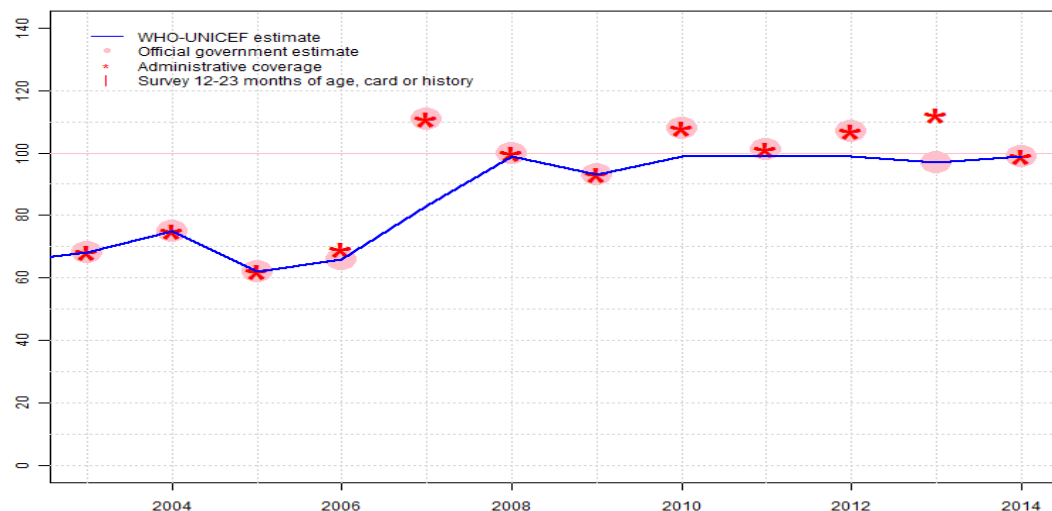
Angola - BCG

group. See prior year explanation.

2014: Estimate based on coverage reported by national government. WHO and UNICEF are aware of a coverage survey conducted during 2013 among children aged 12-23 m (33 percent home-based record retention) and await final results from the Government of Angola. Preliminary results from the survey for the 2012 birth cohort suggest BCG coverage of 88 percent. 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 challenged by: D-

Angola - DTP1

AGO - DTP1



| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 68 | 75 | 62 | 66 | 83 | 99 | 93 | 99 | 99 | 99 | 97 | 99 |
| Estimate GoC | ●● | ●● | ●● | ●● | ● | ● | ● | ● | ● | ● | ● | ● |
| Official | 68 | 75 | 62 | 66 | 111 | 100 | 93 | 108 | 101 | 107 | 97 | 99 |
| Administrative | 68 | 75 | 62 | 69 | 111 | 100 | 93 | 108 | 101 | 107 | 112 | 99 |
| 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:

- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 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 interpolation between data reported by national government. 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. 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 interpolation between data reported by national government. Reported data excluded. 101 percent greater than 100 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: Estimate based on interpolation between data reported by national government. Reported data excluded. 107 percent greater than 100 percent. Estimate challenged by: D-

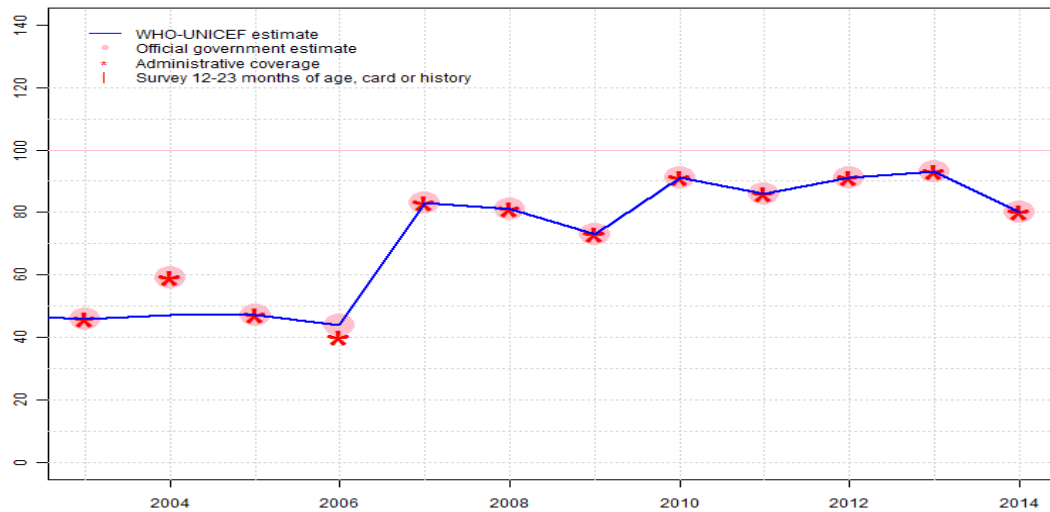
Angola - DTP1

2013: Estimate based on coverage reported by national government. Estimate challenged by: D-

2014: Estimate based on coverage reported by national government. WHO and UNICEF are aware of a coverage survey conducted during 2013 among children aged 12-23 m (33 percent home-based record retention) and await final results from the Government of Angola. Preliminary results from the survey for the 2012 birth cohort suggest first dose of DTP containing vaccine coverage of 83 percent. 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 challenged by: D-

Angola - DTP3

AGO - DTP3



| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 46 | 47 | 47 | 44 | 83 | 81 | 73 | 91 | 86 | 91 | 93 | 80 |
| Estimate GoC | •• | • | •• | •• | • | • | • | • | • | • | • | • |
| Official | 46 | 59 | 47 | 44 | 83 | 81 | 73 | 91 | 86 | 91 | 93 | 80 |
| Administrative | 46 | 59 | 47 | 40 | 83 | 81 | 73 | 91 | 86 | 91 | 93 | 80 |
| 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:

- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Estimate based on interpolation between data reported by national government. Reported data excluded. Unexplained increase from 46 percent to 59 percent with decrease 47 percent. Estimate challenged by: 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. GoC=Assigned by working group. Preliminary results of a EPI coverage survey conducted in 2013, with documented evidence from card for 33 percent of children aged 12-23 m, suggests DTP3 coverage of 48 percent (card or history) (27 percent by card only). Adjustment for recall bias of the preliminary result suggests third dose coverage for DTP containing

Angola - DTP3

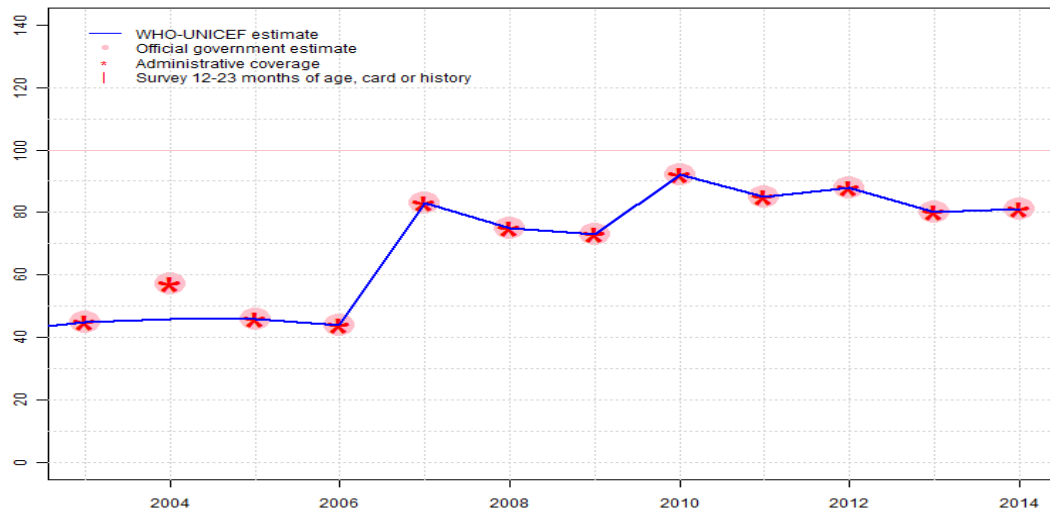
vaccine of 73 percent.

2013: Estimate based on coverage reported by national government. GoC=Assigned by working group. See prior year explanation.

2014: Estimate based on coverage reported by national government. WHO and UNICEF are aware of a coverage survey conducted during 2013 among children aged 12-23 m (33 percent home-based record retention) and await final results from the Government of Angola. Preliminary results from the survey for the 2012 birth cohort suggest third dose of DTP containing vaccine coverage of 73 percent after adjustment for recall bias (48 percent without adjustment). 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 challenged by: D-

Angola - Pol3

AGO - Pol3



| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 45 | 46 | 46 | 44 | 83 | 75 | 73 | 92 | 85 | 88 | 80 | 81 |
| Estimate GoC | •• | • | •• | •• | • | • | • | • | • | • | • | • |
| Official | 45 | 57 | 46 | 44 | 83 | 75 | 73 | 92 | 85 | 88 | 80 | 81 |
| Administrative | 45 | 57 | 46 | 44 | 83 | 75 | 73 | 92 | 85 | 88 | 80 | 81 |
| 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:

- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Estimate based on interpolation between data reported by national government. Reported data excluded. Unexplained increase from 45 percent to 57 percent with decrease 46 percent. Estimate challenged by: 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. GoC=Assigned by working group. Preliminary results of a EPI coverage survey conducted in 2013, with documented evidence from card for 33 percent of children aged 12-23 m, suggests polio3 coverage of 42 percent (card or history) (27 percent by card only).
- 2013: Estimate based on coverage reported by national government. Programme

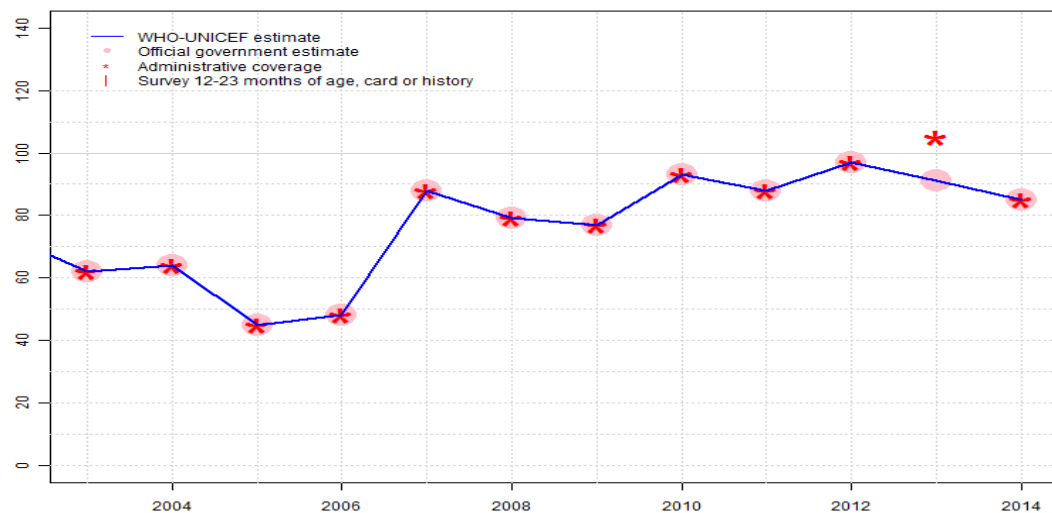
Angola - Pol3

reports a two month stockout at national level. GoC=Assigned by working group. See prior year explanation.

2014: Estimate based on coverage reported by national government. WHO and UNICEF are aware of a coverage survey conducted during 2013 among children aged 12-23 m (33 percent home-based record retention) and await final results from the Government of Angola. Preliminary results from the survey for the 2012 birth cohort suggest Polio3 coverage of 42 percent. Estimate challenged by: D-

Angola - MCV1

AGO - MCV1



| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 62 | 64 | 45 | 48 | 88 | 79 | 77 | 93 | 88 | 97 | 91 | 85 |
| Estimate GoC | ●● | ●● | ●● | ●● | ● | ● | ● | ● | ● | ● | ● | ● |
| Official | 62 | 64 | 45 | 48 | 88 | 79 | 77 | 93 | 88 | 97 | 91 | 85 |
| Administrative | 62 | 64 | 45 | 48 | 88 | 79 | 77 | 93 | 88 | 97 | 105 | 85 |
| 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:

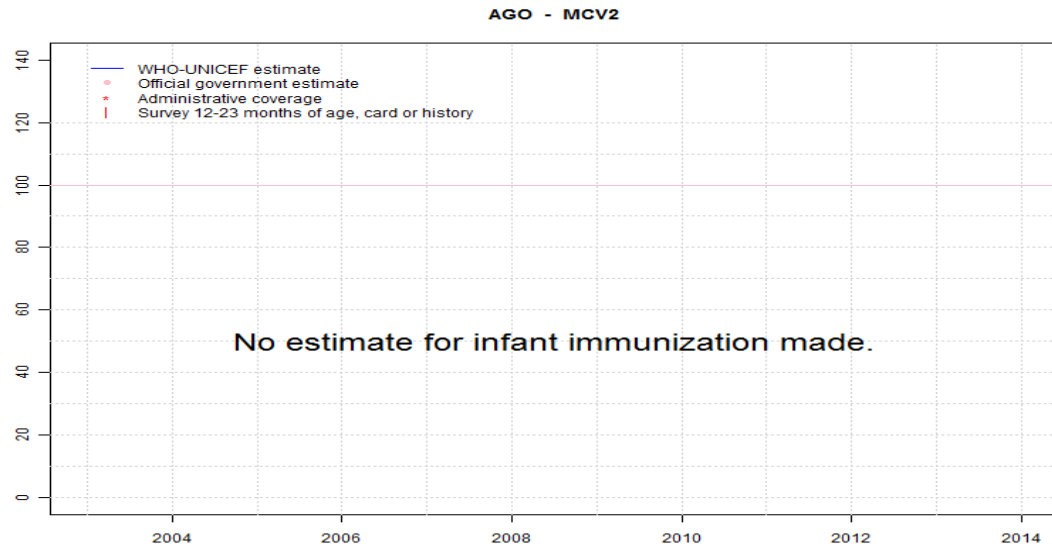
- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Estimate based on coverage reported by national government. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. 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. GoC=Assigned by working group. Preliminary results of a EPI coverage survey conducted in 2013, with documented evidence from card for 33 percent of children aged 12-23 m, suggests MCV coverage of 72 percent (card or history) (26 percent by card only).
- 2013: Estimate based on coverage reported by national government. Programme reports a one month stockout at national level. GoC=Assigned by working

Angola - MCV1

group. See prior year explanation.

2014: Estimate based on coverage reported by national government. WHO and UNICEF are aware of a coverage survey conducted during 2013 among children aged 12-23 m (33 percent home-based record retention) and await final results from the Government of Angola. Preliminary results from the survey for the 2012 birth cohort suggest MCV1 coverage of 72 percent, which may include doses delivered through campaign. 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 challenged by: D-

Angola - MCV2



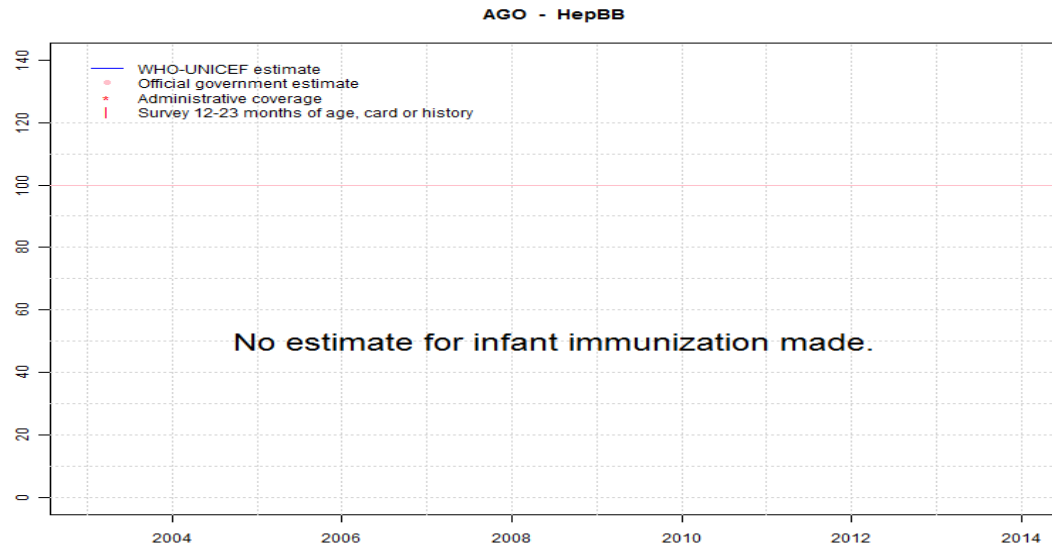
| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Estimate GoC | NA | NA | NA | NA | 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.

Angola - HepBB



| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 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 |

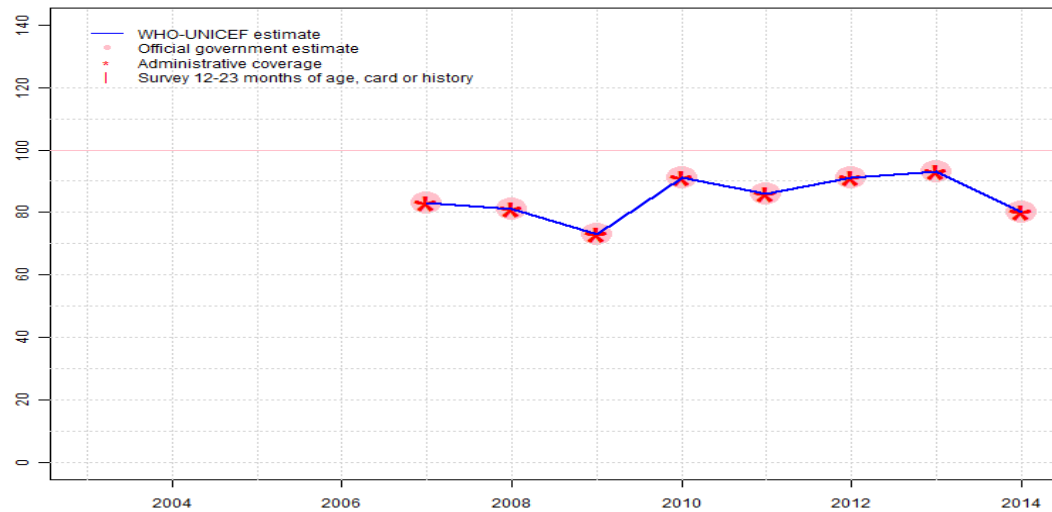
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Angola - HepB3

AGO - HepB3



| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | NA | NA | NA | NA | 83 | 81 | 73 | 91 | 86 | 91 | 93 | 80 |
| Estimate GoC | NA | NA | NA | NA | • | • | • | • | • | • | • | • |
| Official | NA | NA | NA | NA | 83 | 81 | 73 | 91 | 86 | 91 | 93 | 80 |
| Administrative | NA | NA | NA | NA | 83 | 81 | 73 | 91 | 86 | 91 | 93 | 80 |
| 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:

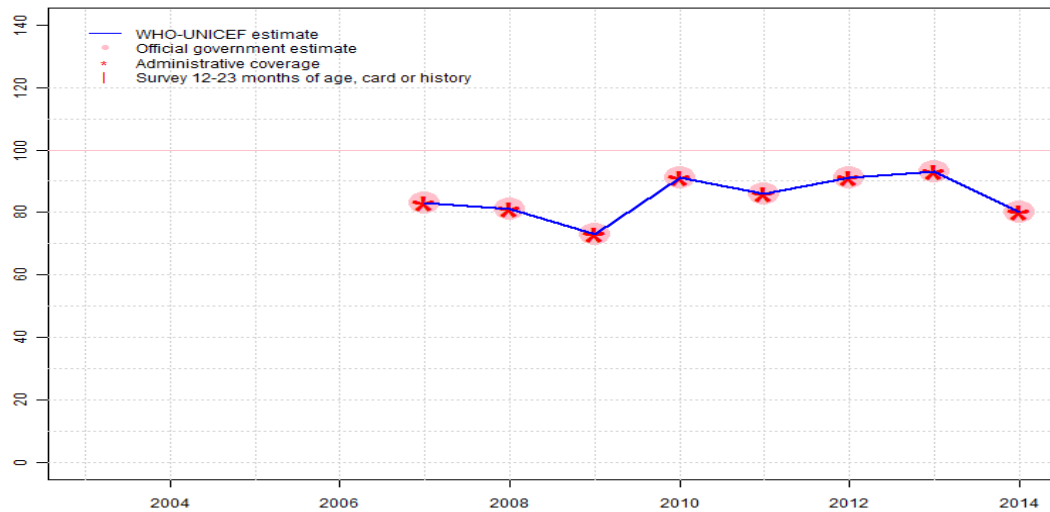
- 2007: Estimate based on coverage reported by national government. The increase in 2007 is the result of intensive national efforts targeting districts with high levels of unvaccinated children through increased fixed post, outreach, and mobile teams during the second semester of 2007. HepB vaccine introduced in 2006. Reporting started in 2007. Vaccine presentation is DTP-HepB-Hib. 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. GoC=Assigned by working group. Preliminary results of a EPI coverage survey conducted in 2013, with documented evidence from card for 33 percent of children aged 12-23 m, suggests DTP3 coverage of 48 percent (card or history) (27 percent by card only).
- 2013: Estimate based on coverage reported by national government. GoC=Assigned by working group. See prior year explanation.
- 2014: Estimate based on coverage reported by national government. WHO and UNICEF are aware of a coverage survey conducted during 2013 among children aged 12-23 m (33 percent home-based record retention) and await final results from the Government of Angola. Preliminary results from the survey for the 2012 birth cohort suggest third dose of DTP containing vaccine coverage of 73 percent after adjustment for recall bias (48 percent without adjustment). Decline in reported administrative coverage due in part to

Angola - HepB3

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 challenged by: D-

Angola - Hib3

AGO - Hib3



| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | NA | NA | NA | NA | 83 | 81 | 73 | 91 | 86 | 91 | 93 | 80 |
| Estimate GoC | NA | NA | NA | NA | • | • | • | • | • | • | • | • |
| Official | NA | NA | NA | NA | 83 | 81 | 73 | 91 | 86 | 91 | 93 | 80 |
| Administrative | NA | NA | NA | NA | 83 | 81 | 73 | 91 | 86 | 91 | 93 | 80 |
| 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:

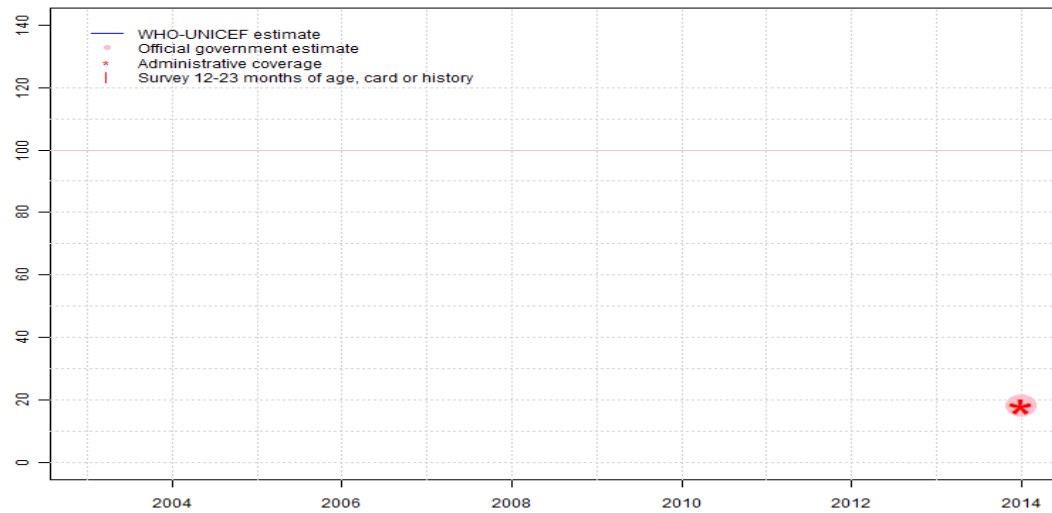
- 2007: Estimate based on coverage reported by national government. The increase in 2007 is the result of intensive national efforts targeting districts with high levels of unvaccinated children through increased fixed post, outreach, and mobile teams during the second semester of 2007. Hib vaccine introduced in 2006. Reporting started in 2007. Vaccine presentation is DTP-HepB-Hib. 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. GoC=Assigned by working group. Preliminary results of a EPI coverage survey conducted in 2013, with documented evidence from card for 33 percent of children aged 12-23 m, suggests DTP3 coverage of 48 percent (card or history) (27 percent by card only).
- 2013: Estimate based on coverage reported by national government. GoC=Assigned by working group. See prior year explanation.
- 2014: Estimate based on coverage reported by national government. WHO and UNICEF are aware of a coverage survey conducted during 2013 among children aged 12-23 m (33 percent home-based record retention) and await final results from the Government of Angola. Preliminary results from the survey for the 2012 birth cohort suggest third dose of DTP containing vaccine coverage of 73 percent after adjustment for recall bias (48 percent without adjustment). Decline in reported administrative coverage due in part to

Angola - Hib3

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 challenged by: D-

Angola - RotaC

AGO - RotaC



Description:

2014: Estimate based on coverage reported by national government. Rotavirus vaccine introduced during April 2014. GoC=Assigned by working group. Consistency across vaccines.

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 18 |
| 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 | 18 |
| Administrative | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 18 |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

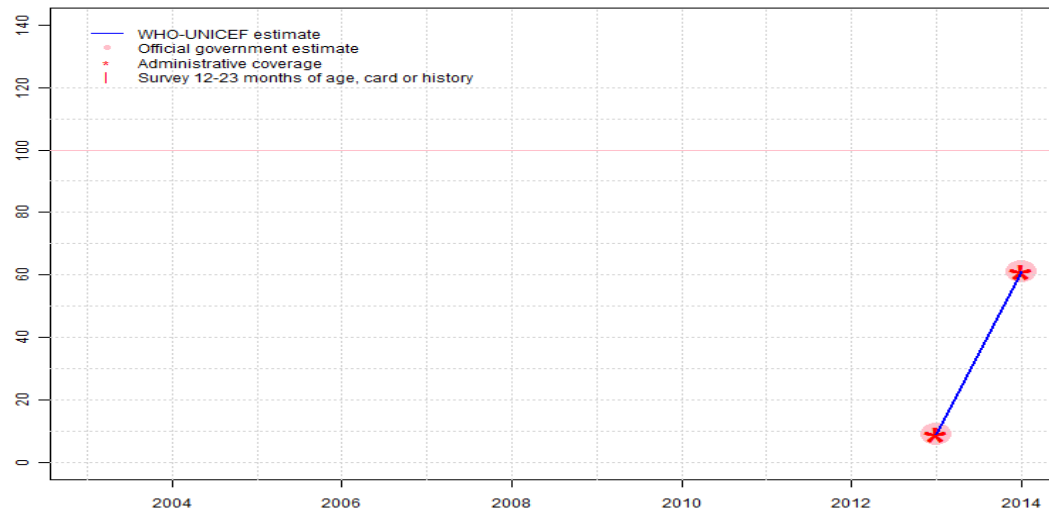
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Angola - PcV3

AGO - PcV3



| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 9 | 61 |
| Estimate GoC | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | ● | ● |
| Official | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 9 | 61 |
| Administrative | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 9 | 61 |
| 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.

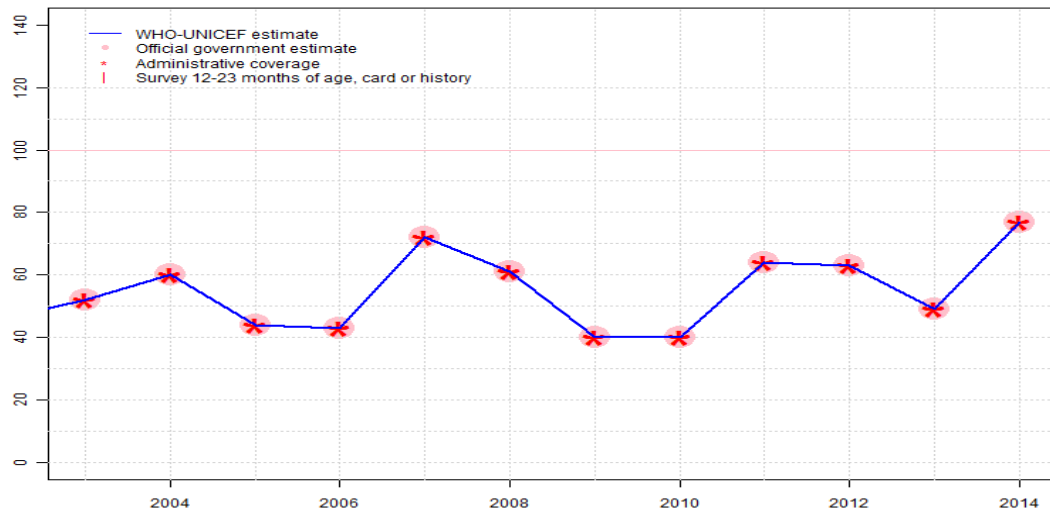
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2013: Estimate based on coverage reported by national government. Pneumococcal conjugate vaccine introduced in June 2013. GoC=Assigned by working group. .
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-

Angola - YFV

AGO - YFV



| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 52 | 60 | 44 | 43 | 72 | 61 | 40 | 40 | 64 | 63 | 49 | 77 |
| Estimate GoC | •• | •• | •• | •• | • | • | • | • | • | • | • | • |
| Official | 52 | 60 | 44 | 43 | 72 | 61 | 40 | 40 | 64 | 63 | 49 | 77 |
| Administrative | 52 | 60 | 44 | 43 | 72 | 61 | 40 | 40 | 64 | 63 | 49 | 77 |
| 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:

- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 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. 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 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. 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 coverage reported by national government. 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. GoC=Assigned by working group. Preliminary results of a EPI coverage survey conducted in 2013, with documented evidence from card for 33 percent of children aged 12-23 m, suggests YFV coverage of 64 percent (card or history) (22 percent by card only).

Angola - YFV

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. See prior year explanation.

2014: Estimate based on coverage reported by national government. WHO and UNICEF are aware of a coverage survey conducted during 2013 among children aged 12-23 m (33 percent home-based record retention) and await final results from the Government of Angola. Preliminary results from the survey for the 2012 birth cohort suggest Yellow Fever coverage of 64 percent, which may include doses delivered through campaign. Recovery from 2013 stock-out. Estimate challenged by: D-

Angola - survey details

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

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 (%) |
|------|---------------------------|
| 2003 | 71 |
| 2004 | 73 |
| 2005 | 75 |
| 2006 | 77 |
| 2007 | 78 |
| 2008 | 79 |
| 2009 | 88 |
| 2010 | 75 |
| 2011 | 70 |
| 2012 | 72 |
| 2013 | 75 |
| 2014 | 78 |

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.