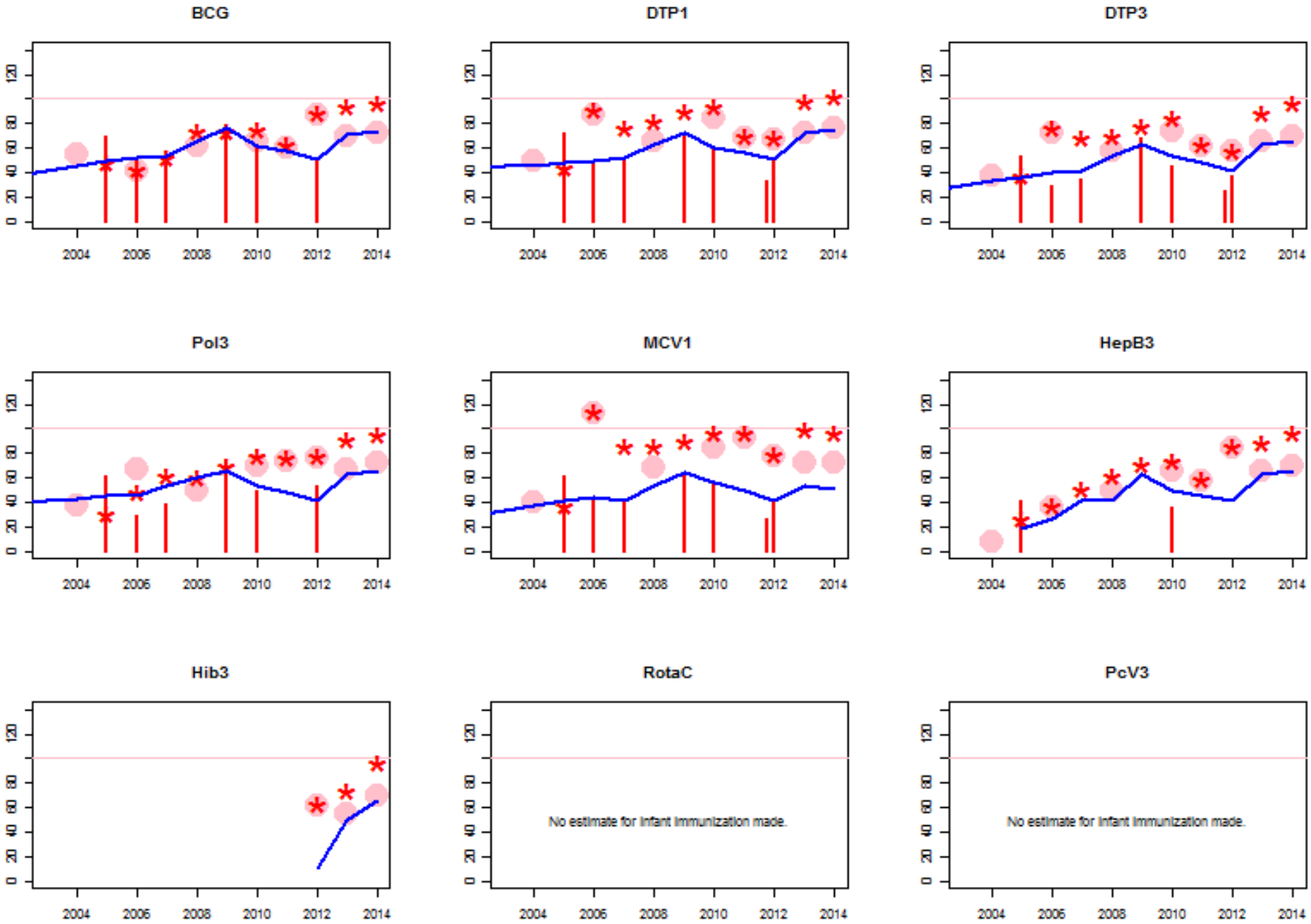
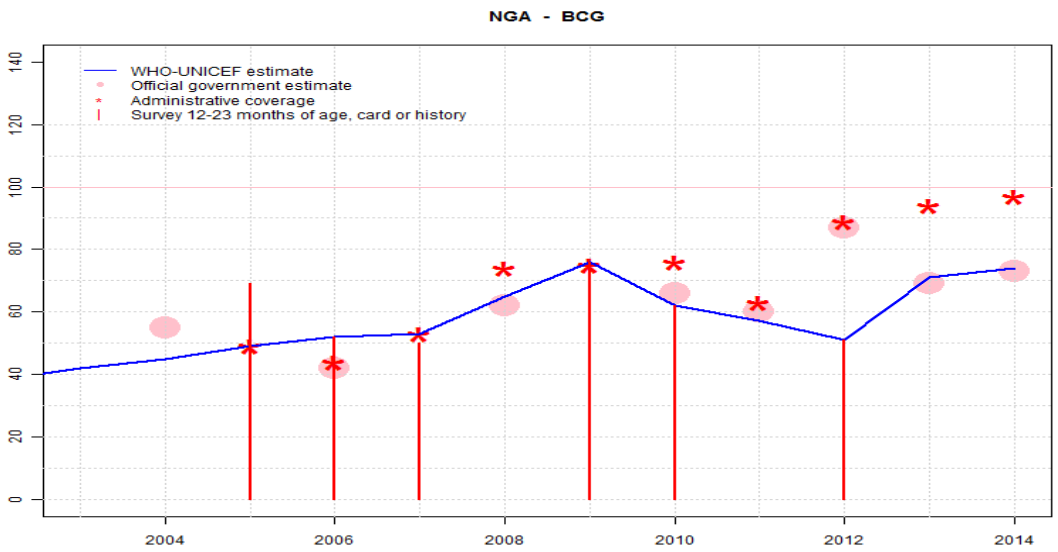

BCG
DTP1
DTP3
Pol3
MCV1
HepB3
Hib3
RotaC
PcV3
No estimate for Infant Immunization made.
No estimate for Infant Immunization made.
0
20
40
60
80
120
2004
2006
2008
2010
2012
2014

Nigeria - BCG



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	42	45	49	52	53	65	76	62	57	51	71	74
Estimate GoC	•	•	•	•	•	••	•	•	•	•	•	•
Official	NA	55	NA	42	NA	62	NA	66	60	87	69	73
Administrative	NA	NA	49	44	53	74	75	76	63	89	94	97
Survey	NA	NA	69	52	50	NA	76	62	NA	51	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 interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: S-

2004: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-S-

2005: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data.Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data. Estimate challenged by: R-S-

2006: Estimates based on survey results. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: D-R-S-

2007: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 50 percent based on 1 survey(s). Estimate challenged by: S-

2008: Reported data calibrated to 2007 and 2009 levels. Reported data excluded. Estimates based on survey results. Fluctuations in reported data suggest poor quality administrative recording and reporting. GoC=S+ D+

2009: Estimate based on survey results. Survey suggests that 60 percent of immunization services are obtained from fixed sites. Estimate challenged by: R-

2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 62 percent based on 1 survey(s). Estimate based on level established by the 2009 survey and follows trend in the reported data. Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: R-S-

2011: Estimate based on interpolation between 2010 and 2012 levels. Estimate based on interpolated value between 2010 and 2012 survey values Reported data excluded. Decline in reported coverage from 76 percent to 60 percent with increase to 87 percent. Estimate based on level established by the 2009 survey and follows trend in the reported data. Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011). Estimate of

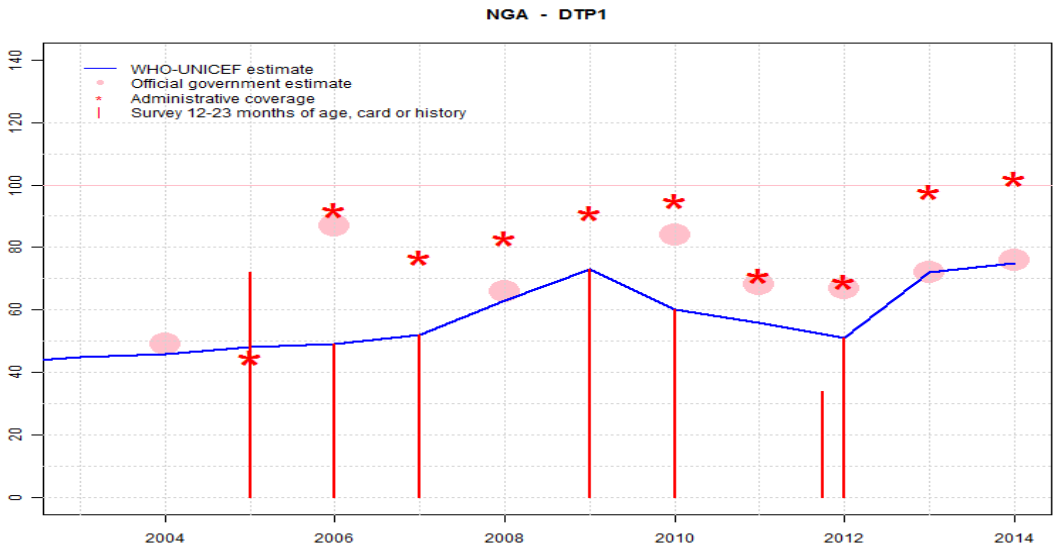
57 percent changed from previous revision value of 46 percent. Estimate challenged by: R-S-

2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 51 percent based on 1 survey(s). Reported data excluded. Unexplained increase from 60 percent to 87 percent with decrease 69 percent. Estimate of 51 percent changed from previous revision value of 73 percent. Estimate challenged by: D-R-S-

2013: Estimate based on survey value for 2012 birth cohort plus the year-to-year relative change in reported administrative coverage. Although the absolute levels of administrative coverage are inconsistent with survey results, relative increases in administrative coverage may provide useful information. Reported data excluded. Official government estimate based on administrative data adjusted the mean between using a 2014 DQS verification factor and results from a community survey. Estimate of 71 percent changed from previous revision value of 80 percent. Estimate challenged by: D-R-S-

2014: Estimate based on calibrated value for 2013 birth cohort plus the year-to-year relative change in reported administrative coverage. Although the absolute levels of administrative coverage are inconsistent with survey results, relative increases in administrative coverage may provide useful information. Official government estimate based on an adjustment to the administrative data based on a correction factor of 75 percent that was derived from observation of a community survey showing that 69 percent of infants were fully vaccinated. Nearly three-quarters of community survey respondents were from northern states observed to have lower routine immunization coverage. A DQS and coverage survey are planned for 2015. Estimate challenged by: D-R-S-

Nigeria - DTP1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	45	46	48	49	52	63	73	60	56	51	72	75
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	49	NA	87	NA	66	NA	84	68	67	72	76
Administrative	NA	NA	45	92	77	83	91	95	71	69	98	102
Survey	NA	NA	72	49	52	NA	73	60	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 interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: S-

2004: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-S-

2005: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data.Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data. Estimate challenged by: R-S-

2006: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 49 percent based on 1 survey(s). Estimate challenged by: D-R-S-

2007: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 52 percent based on 1 survey(s). Estimate challenged by: D-R-S-

2008: Reported data calibrated to 2007 and 2009 levels. Reported data excluded. Decline in reported coverage from 77 percent to 66 percent with increase to 91 percent. Estimate challenged by: D-

2009: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 73 percent based on 1 survey(s). Survey suggests that 60 percent of immunization services are obtained from fixed sites. Estimate challenged by: D-R-

2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 60 percent based on 1 survey(s). Estimate based on level established by the 2009 survey and follows trend in the reported data. Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: D-R-S-

2011: Estimate based on interpolation between 2010 and 2012 levels. Estimate based on interpolated value between 2010 and 2012 survey values Estimate based on level established by the 2009 survey and follows trend in the reported data. Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011). Estimate of 56 percent changed from

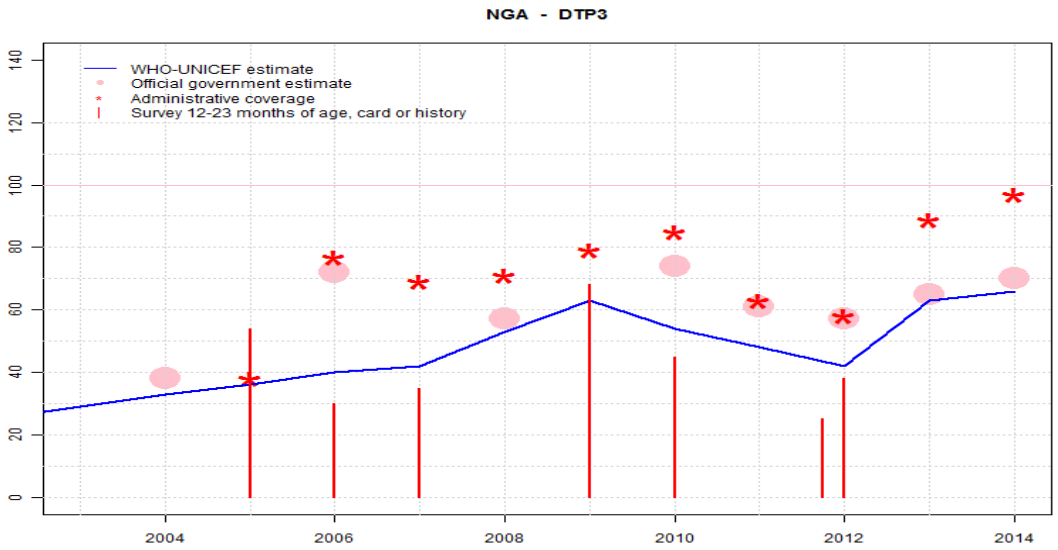
previous revision value of 33 percent. Estimate challenged by: D-R-S-

2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 51 percent based on 1 survey(s). Summary Findings of Cross-Sectional Health and Nutrition Survey, Nigeria 2013 results ignored by working group. Sub-national survey conducted in twenty-four states, accounting for approximately sixty-four percent of national target population.DTP-HepB-Hib pentavalent vaccine introduced in 2012. Estimate of 51 percent changed from previous revision value of 32 percent. Estimate challenged by: D-R-S-

2013: Estimate based on survey value for 2012 birth cohort plus the year-to-year relative change in reported administrative coverage. Although the absolute levels of administrative coverage are inconsistent with survey results, relative increases in administrative coverage may provide useful information. Reported data excluded. Official government estimate based on administrative data adjusted the mean between using a 2014 DQS verification factor and results from a community survey.Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. Estimate of 72 percent changed from previous revision value of 63 percent. Estimate challenged by: D-R-S-

2014: Estimate based on calibrated value for 2013 birth cohort plus the year-to-year relative change in reported administrative coverage. Although the absolute levels of administrative coverage are inconsistent with survey results, relative increases in administrative coverage may provide useful information. Official government estimate based on an adjustment to the administrative data based on a correction factor of 75 percent that was derived from observation of a community survey showing that 69 percent of infants were fully vaccinated. Nearly three-quarters of community survey respondents were from northern states observed to have lower routine immunization coverage. A DQS and coverage survey are planned for 2015. Estimate challenged by: D-R-S-

Nigeria - DTP3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	29	33	36	40	42	53	63	54	48	42	63	66
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	38	NA	72	NA	57	NA	74	61	57	65	70
Administrative	NA	NA	38	77	69	71	79	85	63	58	89	97
Survey	NA	NA	54	30	35	NA	68	45	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 interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: S-

2004: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-S-

2005: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data.Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data.Nigeria National Immunization Coverage Survey (2006) card or history results of 54 percent modifed for recall bias to 52 percent based on 1st dose card or history coverage of 72 percent, 1st dose card only coverage of 36 percent and 3d dose card only coverage of 26 percent. Estimate challenged by: R-S-

2006: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 40 percent based on 1 survey(s). Nigeria Multiple Indicator Cluster Survey 2007 card or history results of 30 percent modifed for recall bias to 40 percent based on 1st dose card or history coverage of 49 percent, 1st dose card only coverage of 17 percent and 3d dose card only coverage of 14 percent. Reported data excluded. Includes data from supplementary immunization activities (CHD) Estimate challenged by: D-R-S-

2007: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 42 percent based on 1 survey(s). Nigeria Demographic and Health Survey 2008 card or history results of 35 percent modifed for recall bias to 42 percent based on 1st dose card or history coverage of 52 percent, 1st dose card only coverage of 25 percent and 3d dose card only coverage of 20 percent. Estimate challenged by: D-R-S-

2008: Reported data calibrated to 2007 and 2009 levels. Reported data excluded. Decline in reported coverage from 69 percent to 57 percent with increase to 79 percent. Estimate challenged by: D-

2009: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 63 percent based on 1 survey(s). Nigeria 2010 National Immunization Coverage Survey card or history results of 68 percent modifed for recall bias to 63 percent based on 1st dose card or history coverage of 73 percent, 1st dose card only coverage of 29 percent and 3d dose card only coverage of 25 percent. Survey suggests that 60 percent of immunization services are obtained from fixed sites. Estimate challenged

by: D-R-

2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 54 percent based on 1 survey(s). Nigeria Multiple Indicator Cluster Survey 2011 card or history results of 45 percent modifed for recall bias to 54 percent based on 1st dose card or history coverage of 60 percent, 1st dose card only coverage of 29 percent and 3d dose card only coverage of 26 percent. Estimate based on level established by the 2009 survey and follows trend in the reported data. Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: D-R-S-

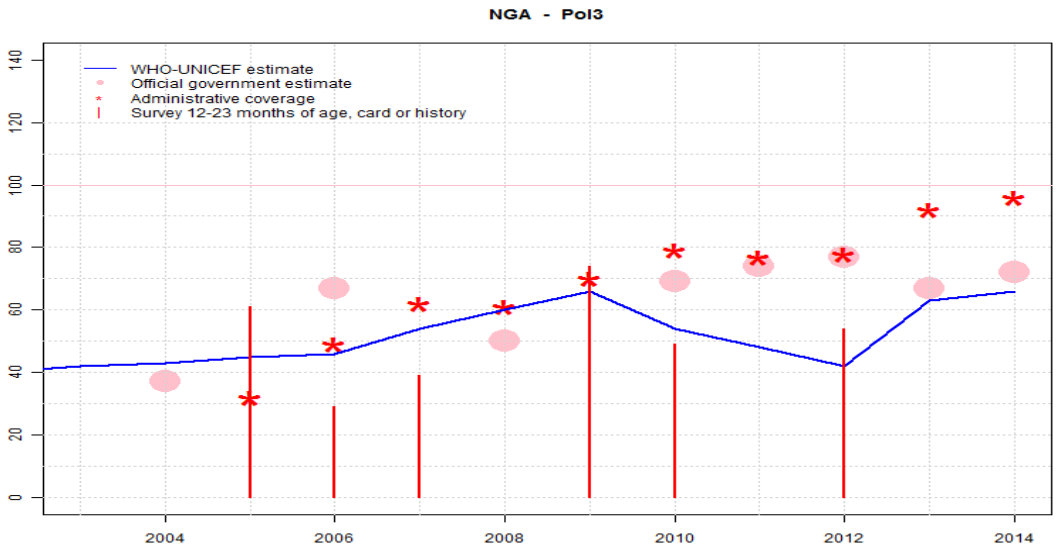
2011: Estimate based on interpolation between 2010 and 2012 levels. Estimate based on interpolated value between 2010 and 2012 survey values Estimate based on level established by the 2009 survey and follows trend in the reported data. Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011). Estimate of 48 percent changed from previous revision value of 30 percent. Estimate challenged by: D-R-S-

2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 42 percent based on 1 survey(s). Summary Findings of Cross-Sectional Health and Nutrition Survey, Nigeria 2013 results ignored by working group. Sub-national survey conducted in twenty-four states, accounting for approximately sixty-four percent of national target population.Nigeria Demographic and Health Survey 2013 card or history results of 38 percent modifed for recall bias to 42 percent based on 1st dose card or history coverage of 51 percent, 1st dose card only coverage of 27 percent and 3d dose card only coverage of 22 percent. DTP-HepB-Hib pentavalent vaccine introduced in 2012. Estimate of 42 percent changed from previous revision value of 26 percent. Estimate challenged by: D-R-S-

2013: Estimate based on calibrated value for 2012 birth cohort plus the year-to-year relative change in reported administrative coverage. Although the absolute levels of administrative coverage are inconsistent with survey results, relative increases in administrative coverage may provide useful information. Reported data excluded. Official government estimate based on administrative data adjusted the mean between using a 2014 DQS verification factor and results from a community survey.Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. Estimate of 63 percent changed from previous revision value of 58 percent. Estimate challenged by: D-R-S-

2014: Estimate based on calibrated value for 2013 birth cohort plus the year-to-year relative change in reported administrative coverage. Although the absolute levels of administrative coverage are inconsistent with survey results, relative increases in administrative coverage may provide useful information. Official government estimate based on an adjustment to the administrative data based on a correction factor of 75 percent that was derived from observation of a community survey showing that 69 percent of infants were fully vaccinated. Nearly three-quarters of community survey respondents were from northern states observed to have lower routine immunization coverage. A DQS and coverage survey are planned for 2015. Estimate challenged by: D-R-S-

Nigeria - Pol3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	42	43	45	46	54	60	66	54	48	42	63	66
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	37	NA	67	NA	50	NA	69	74	77	67	72
Administrative	NA	NA	32	49	62	61	70	79	77	78	92	96
Survey	NA	NA	61	29	39	NA	74	49	NA	54	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 interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: S-

2004: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-S-

2005: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data.Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data.Nigeria National Immunization Coverage Survey (2006) card or history results of 61 percent modifed for recall bias to 54 percent based on 1st dose card or history coverage of 78 percent, 1st dose card only coverage of 32 percent and 3d dose card only coverage of 22 percent. Estimate challenged by: D-R-S-

2006: Anchor point resolved to survey data. Fluctuations in reported data suggest poor quality administrative recording and reporting. Nigeria Multiple Indicator Cluster Survey 2007 card or history results of 29 percent modifed for recall bias to 46 percent based on 1st dose card or history coverage of 56 percent, 1st dose card only coverage of 16 percent and 3d dose card only coverage of 13 percent. Estimate challenged by: R-S-

2006: Anchor point resolved to survey data. Fluctuations in reported data suggest poor quality administrative recording and reporting. Nigeria Multiple Indicator Cluster Survey 2007 card or history results of 29 percent modifed for recall bias to 46 percent based on 1st dose card or history coverage of 56 percent, 1st dose card only coverage of 16 percent and 3d dose card only coverage of 13 percent. Estimate challenged by: R-S-

2007: Anchor point resolved to survey data. Fluctuations in reported data suggest poor quality administrative recording and reporting. Nigeria Demographic and Health Survey 2008 card or history results of 39 percent modifed for recall bias to 54 percent based on 1st dose card or history coverage of 68 percent, 1st dose card only coverage of 24 percent and 3d dose card only coverage of 19 percent. Estimate challenged by: R-S-

2007: Anchor point resolved to survey data. Fluctuations in reported data suggest poor quality administrative recording and reporting. Nigeria Demographic and Health Survey 2008 card or history results of 39 percent modifed for recall bias to 54 percent based on 1st dose card or history coverage of 68 percent, 1st dose card only coverage of 24 percent and 3d dose card only coverage of 19 percent. Estimate challenged by: R-S-

2008: Reported data calibrated to 2007 and 2009 levels. Reported data excluded. Decline in reported coverage from 62 percent to 50 percent with increase to 70 percent. Estimate challenged by: S-

2009: Estimate based on survey results. Nigeria 2010 National Immunization Coverage Survey card or history results of 74 percent modifed for recall bias to 66 percent based on 1st dose card or history coverage of 78 percent, 1st dose card only coverage of 27 percent and 3d dose card only coverage of 23 percent. Survey suggests that 60 percent of immunization services are obtained from fixed sites. Estimate challenged by: R-S-

2010: Estimate is based on DTP3 levels. Nigeria Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results likely include campaign doses.Nigeria Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results likely include campaign doses.Nigeria Multiple Indicator Cluster Survey 2011 card or history results of 49 percent modifed for recall bias to 68 percent based on 1st dose card or history coverage of 76 percent, 1st dose card only coverage of 28 percent and 3d dose card only coverage of 25 percent. Estimate based on level established by the 2009 survey and follows trend in the reported data. Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: D-R-S-

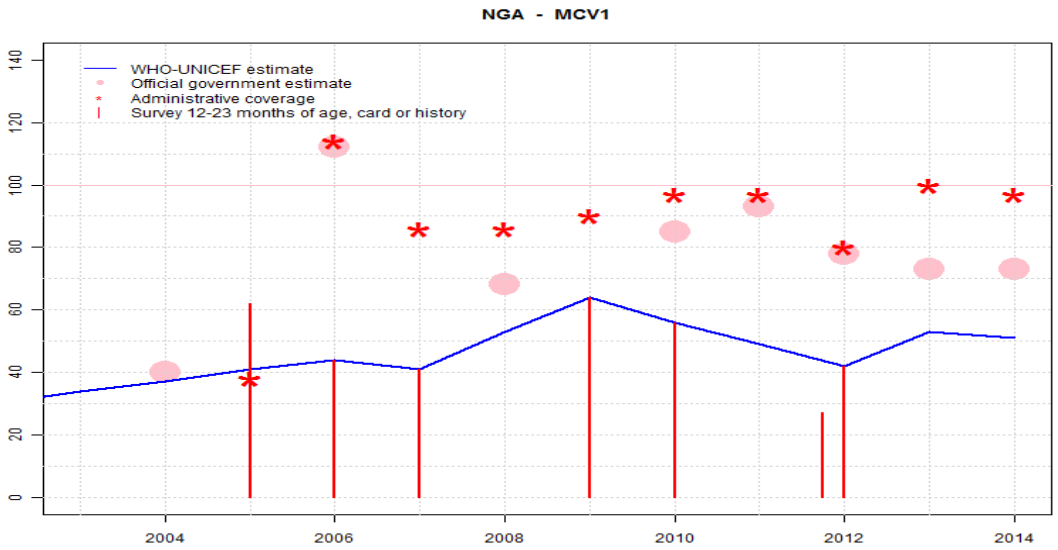
2011: Estimate based on interpolation between 2010 and 2012 levels. Estimate is based on htird dose of DTP containing vaccine. Estimate based on level established by the 2009 survey and follows trend in the reported data. Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011). Estimate of 48 percent changed from previous revision value of 49 percent. Estimate challenged by: D-R-S-

2012: Estimate based on survey result adjusted for recall bias for third dose of DTP containing vaccine. Survey result for polio for 2010 birth cohort ignored due to likely inclusion of campaign doses. Nigeria Demographic and Health Survey 2013 results ignored by working group. Survey result for polio vaccine likely includes campaign doses due to reliance on caregiver recall in face of low retention of home-based records.Nigeria Demographic and Health Survey 2013 results ignored by working group. Survey result for polio vaccine likely includes campaign doses due to reliance on caregiver recall in face of low retention of home-based records.Nigeria Demographic and Health Survey 2013 card or history results of 54 percent modifed for recall bias to 65 percent based on 1st dose card or history coverage of 76 percent, 1st dose card only coverage of 27 percent and 3d dose card only coverage of 23 percent. Estimate of 42 percent changed from previous revision value of 52 percent. Estimate challenged by: D-R-S-

2013: Estimate based on coverage for third dose of DTP containing vaccine. Reported data excluded. Official government estimate based on administrative data adjusted the mean between using a 2014 DQS verification factor and results from a community survey. Estimate of 63 percent changed from previous revision value of 67 percent. Estimate challenged by: D-R-S-

2014: Estimate based on coverage for third dose of DTP containing vaccine. Official government estimate based on an adjustment to the administrative data based on a correction factor of 75 percent that was derived from observation of a community survey showing that 69 percent of infants were fully vaccinated. Nearly three-quarters of community survey respondents were from northern states observed to have lower routine immunization coverage. A DQS and coverage survey are planned for 2015. Estimate challenged by: D-R-S-

Nigeria - MCV1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	34	37	41	44	41	53	64	56	49	42	53	51
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	40	NA	112	NA	68	NA	85	93	78	73	73
Administrative	NA	NA	38	114	86	86	90	97	97	80	100	97
Survey	NA	NA	62	44	41	NA	64	56	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 interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: S-

2004: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-S-

2005: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data.Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data. Estimate challenged by: R-S-

2006: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 44 percent based on 1 survey(s). Reported data excluded. 112 percent greater than 100 percent. Reported data excluded. Unexplained increase from 38 percent to 112 percent with decrease 86 percent. Estimate challenged by: D-R-S-

2007: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 41 percent based on 1 survey(s). Estimate challenged by: D-R-S-

2008: Reported data calibrated to 2007 and 2009 levels. Reported data excluded. Decline in reported coverage from 86 percent to 68 percent with increase to 90 percent. Estimate challenged by: D-

2009: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 64 percent based on 1 survey(s). Survey suggests that 60 percent of immunization services are obtained from fixed sites. Estimate challenged by: D-R-

2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 56 percent based on 1 survey(s). Estimate based on level established by the 2009 survey and follows trend in the reported data. Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: D-R-S-

2011: Estimate based on interpolation between 2010 and 2012 levels. Estimate based on interpolated value between 2010 and 2012 survey values Estimate based on level established by the 2009 survey and follows trend in the reported data. Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vac-

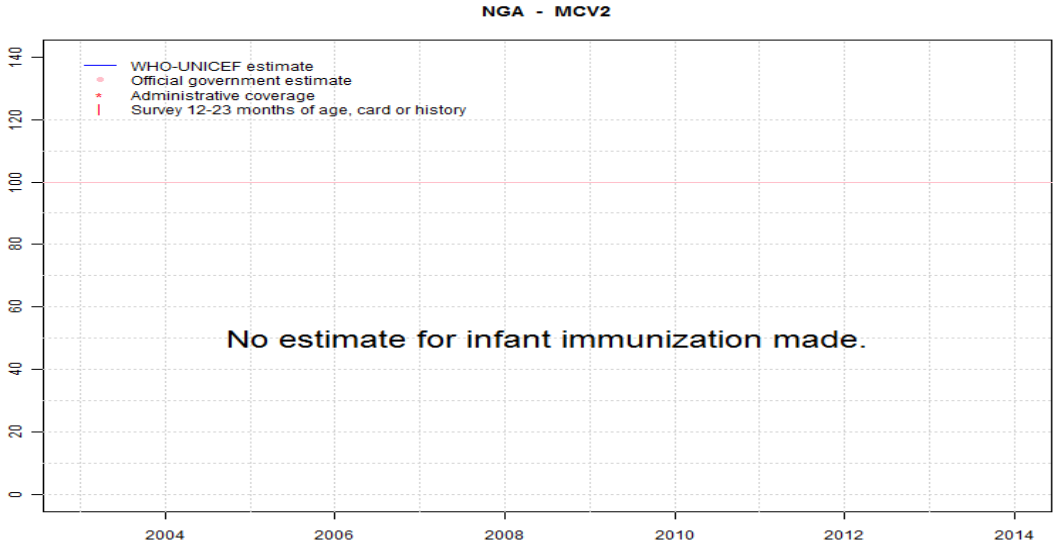
cine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011). Estimate of 49 percent changed from previous revision value of 52 percent. Estimate challenged by: D-R-S-

2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 42 percent based on 1 survey(s). Summary Findings of Cross-Sectional Health and Nutrition Survey, Nigeria 2013 results ignored by working group. Sub-national survey conducted in twenty-four states, accounting for approximately sixty-four percent of national target population. Estimate of 42 percent changed from previous revision value of 37 percent. Estimate challenged by: D-R-S-

2013: Estimate based on calibrated value for 2012 birth cohort plus the year-to-year relative change in reported administrative coverage. Although the absolute levels of administrative coverage are inconsistent with survey results, relative increases in administrative coverage may provide useful information. Reported data excluded. Official government estimate based on administrative data adjusted the mean between using a 2014 DQS verification factor and results from a community survey.Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. Estimate of 53 percent changed from previous revision value of 59 percent. Estimate challenged by: D-R-S-

2014: Estimate based on calibrated value for 2013 birth cohort plus the year-to-year relative change in reported administrative coverage. Although the absolute levels of administrative coverage are inconsistent with survey results, relative increases in administrative coverage may provide useful information. Official government estimate based on an adjustment to the administrative data based on a correction factor of 75 percent that was derived from observation of a community survey showing that 69 percent of infants were fully vaccinated. Nearly three-quarters of community survey respondents were from northern states observed to have lower routine immunization coverage. A DQS and coverage survey are planned for 2015. Estimate challenged by: D-R-S-

Nigeria - 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.

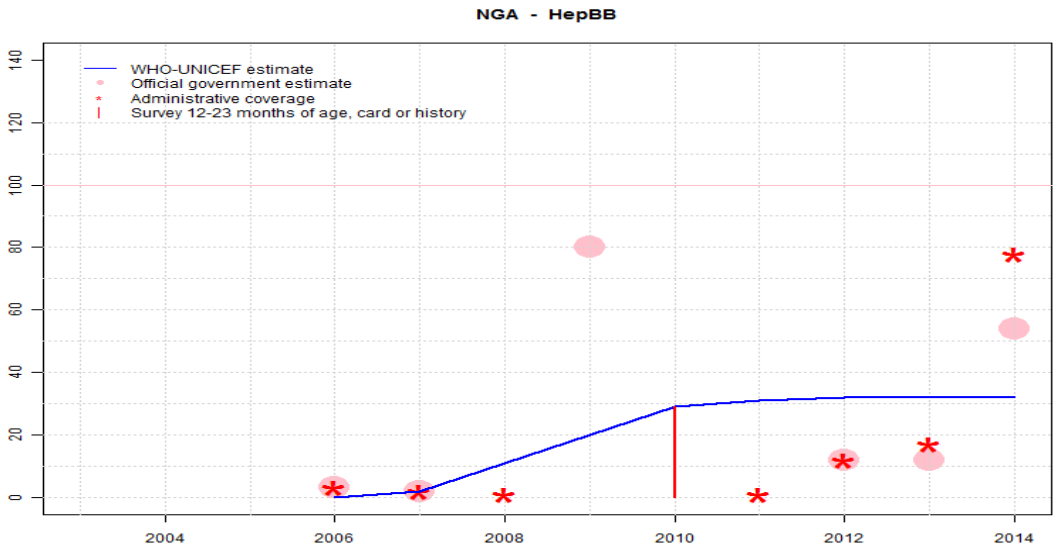
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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.

Nigeria - HepBB



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	0	2	11	20	29	31	32	32	32
Estimate GoC	NA	NA	NA	●●	●	●	●●	●	●	●	●	●
Official	NA	NA	NA	3	2	NA	80	NA	NA	12	12	54
Administrative	NA	NA	NA	3	2	1	NA	NA	1	12	17	78
Survey	NA	NA	NA	NA	NA	NA	NA	29	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:

2006: Reported data calibrated to 2007 levels. HepB birth dose introduced in 2004. Reporting began in 2006. GoC=D+

2007: . Reported data excluded. . Estimate challenged by: R-

2008: Reported data calibrated to 2007 and 2010 levels. Reported data excluded. . Estimate challenged by: D-

2009: Reported data calibrated to 2007 and 2010 levels. Reported data excluded. . Survey suggests that 60 percent of immunization services are obtained from fixed sites. GoC=S+

2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 29 percent based on 1 survey(s). Estimate based on level established by the 2009 survey and follows trend in the reported data.Institutional delivery is 45 percent. Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: S-

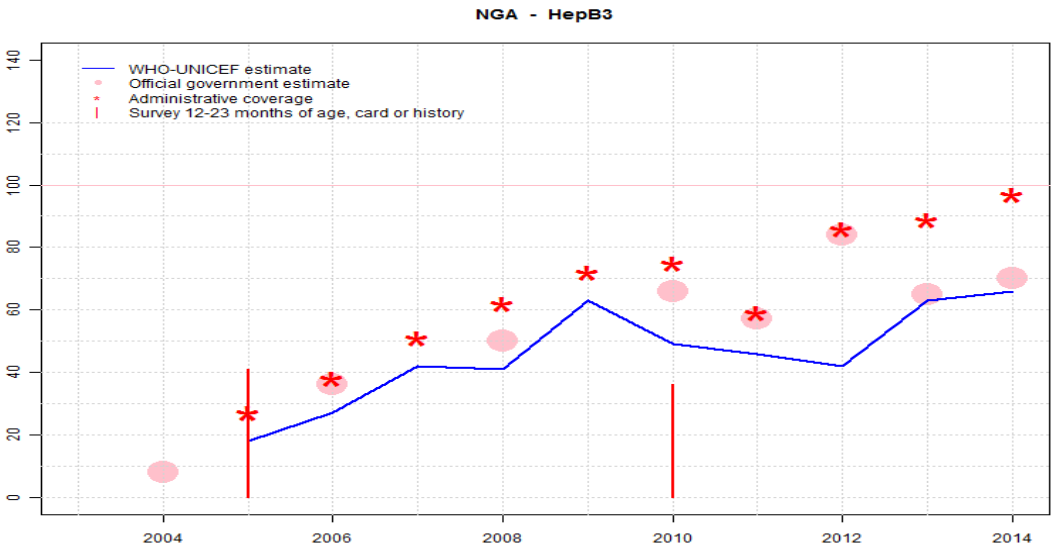
2011: Reported data calibrated to 2010 levels. Reported data excluded. . Estimate based on level established by the 2009 survey and follows trend in the reported data. Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011). Estimate challenged by: D-S-

2012: Reported data calibrated to 2010 levels. Estimate challenged by: D-S-

2013: Reported data calibrated to 2010 levels. Reported data excluded. Official government estimate based on administrative data adjusted the mean between using a 2014 DQS verification factor and results from a community survey. Estimate of 32 percent changed from previous revision value of 37 percent. Estimate challenged by: D-S-

2014: Reported data calibrated to 2010 levels. Reported data excluded. Change in reported coverage from 12 level to 54 percent. Official government estimate based on an adjustment to the administrative data based on a correction factor of 75 percent that was derived from observation of a community survey showing that 69 percent of infants were fully vaccinated. Nearly three-quarters of community survey respondents were from northern states observed to have lower routine immunization coverage. A DQS and coverage survey are planned for 2015. Estimate challenged by: D-S-

Nigeria - HepB3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	18	27	42	41	63	49	46	42	63	66
Estimate GoC	NA	NA	•	•	•	•	•	•	•	•	•	•
Official	NA	8	NA	36	NA	50	NA	66	57	84	65	70
Administrative	NA	NA	27	38	51	62	72	75	59	86	89	97
Survey	NA	NA	41	NA	NA	NA	NA	36	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:

2005: Reported data calibrated to 2007 levels. Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data.Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data.Nigeria National Immunization Coverage Survey (2006) card or history results of 41 percent modifed for recall bias to 37 percent based on 1st dose card or history coverage of 56 percent, 1st dose card only coverage of 30 percent and 3d dose card only coverage of 20 percent. HepB vaccine introduced in 2004. Reporting started in 2005. Estimate challenged by: S-

2006: Reported data calibrated to 2007 levels. Estimate challenged by: S-

2007: Estimates based on DTP3 levels. Estimate challenged by: R-S-

2008: Reported data calibrated to 2007 and 2009 levels. Estimate challenged by: D-

2009: Estimates based on DTP3 levels. Survey suggests that 60 percent of immunization services are obtained from fixed sites. Estimate challenged by: R-

2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 49 percent based on 1 survey(s). Nigeria Multiple Indicator Cluster Survey 2011 card or history results of 36 percent modifed for recall bias to 49 percent based on 1st dose card or history coverage of 55 percent, 1st dose card only coverage of 29 percent and 3d dose card only coverage of 26 percent. Estimate based on level established by the 2009 survey and follows trend in the reported data. Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: D-R-S-

2011: Reported data calibrated to 2010 and 2012 levels. Reported data excluded. Decline in reported coverage from 75 percent to 57 percent with increase to 84 percent. Estimate based on level established by the 2009 survey and follows trend in the reported data. Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011). Estimate of 46 percent changed from previous revision value of 31 percent. Estimate challenged by: D-S-

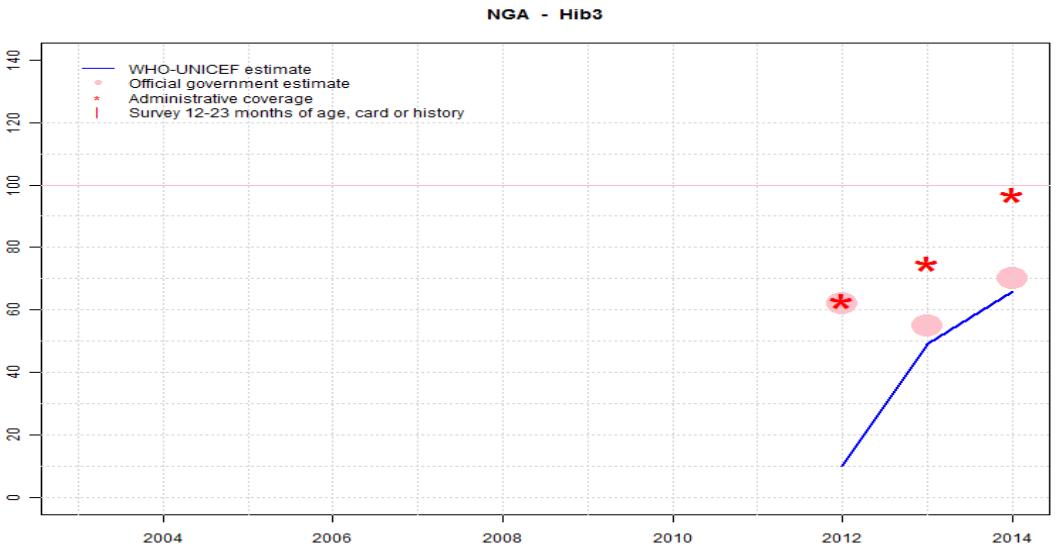
2012: Estimate is based on survey result for third dose of DTP containing vaccine. Inconsistent reporting for the third dose of HepB vaccine compared to other antigens. Reported data excluded. Sudden unexplained change from the

previous year.Reported data excluded. Unexplained increase from 57 percent to 84 percent with decrease 65 percent. DTP-HepB-Hib pentavalent vaccine introduced in 2012. Estimate of 42 percent changed from previous revision value of 47 percent. Estimate challenged by: D-R-S-

2013: Estimate based on third dose of DTP containing vaccine. Reported data excluded. Official government estimate based on administrative data adjusted the mean between using a 2014 DQS verification factor and results from a community survey.Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. Estimate challenged by: D-R-S-

2014: Estimate based on third dose of DTP containing vaccine. Starting in 2014, the reported administrative and official estimates for DTP, HepB and Hib vaccines are consistent following national introduction of pentavalent DTP-HepB-Hib Official government estimate based on an adjustment to the administrative data based on a correction factor of 75 percent that was derived from observation of a community survey showing that 69 percent of infants were fully vaccinated. Nearly three-quarters of community survey respondents were from northern states observed to have lower routine immunization coverage. A DQS and coverage survey are planned for 2015. Estimate challenged by: D-R-S-

Nigeria - Hib3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	49	66
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	62	55	70
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	63	75	97
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

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

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

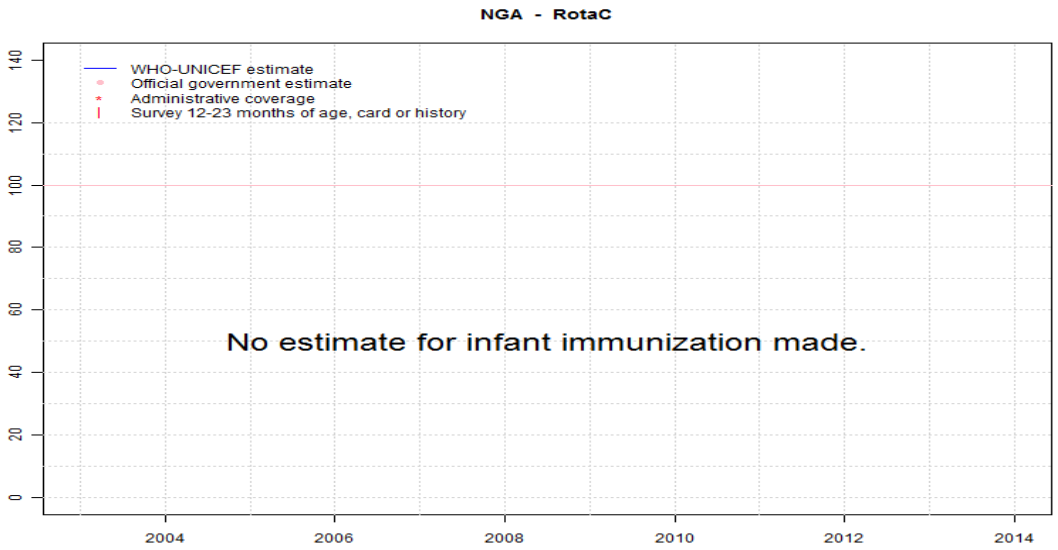
Description:

2012: Sixty three percent coverage achieved in 16 percent of the national target population. Hib vaccine introduced in May 2012 at subnational level as part of the DTP-HepB-Hib presentation. Estimate challenged by: R-S-

2013: Estimate based on difference between administrative coverage for the third dose of DTP containing vaccine and third dose of Hib vaccine applied to the WHO and UNICEF estimate for the third dose of DTP containing vaccine. Reported data excluded. Official government estimate based on administrative data adjusted the mean between using a 2014 DQS verification factor and results from a community survey.Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. Estimate of 49 percent changed from previous revision value of 46 percent. Estimate challenged by: D-R-S-

2014: Estimate based on third dose of DTP containing vaccine. Starting in 2014, the reported administrative and official estimates for DTP, HepB and Hib vaccines are consistent following national introduction of pentavalent DTP-HepB-Hib Official government estimate based on an adjustment to the administrative data based on a correction factor of 75 percent that was derived from observation of a community survey showing that 69 percent of infants were fully vaccinated. Nearly three-quarters of community survey respondents were from northern states observed to have lower routine immunization coverage. A DQS and coverage survey are planned for 2015. Estimate challenged by: D-R-S-

Nigeria - RotaC



	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.

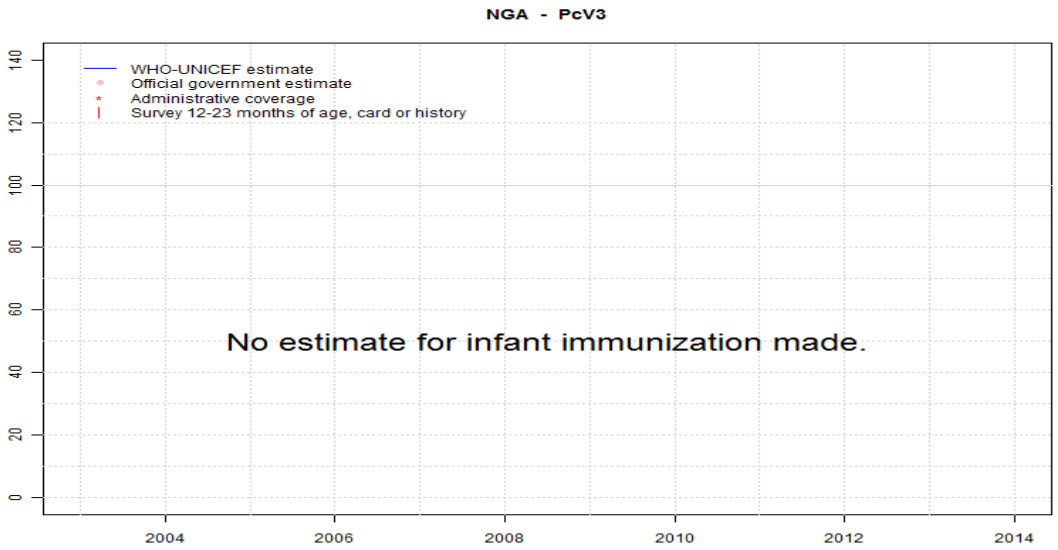
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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.

Nigeria - PcV3



	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.

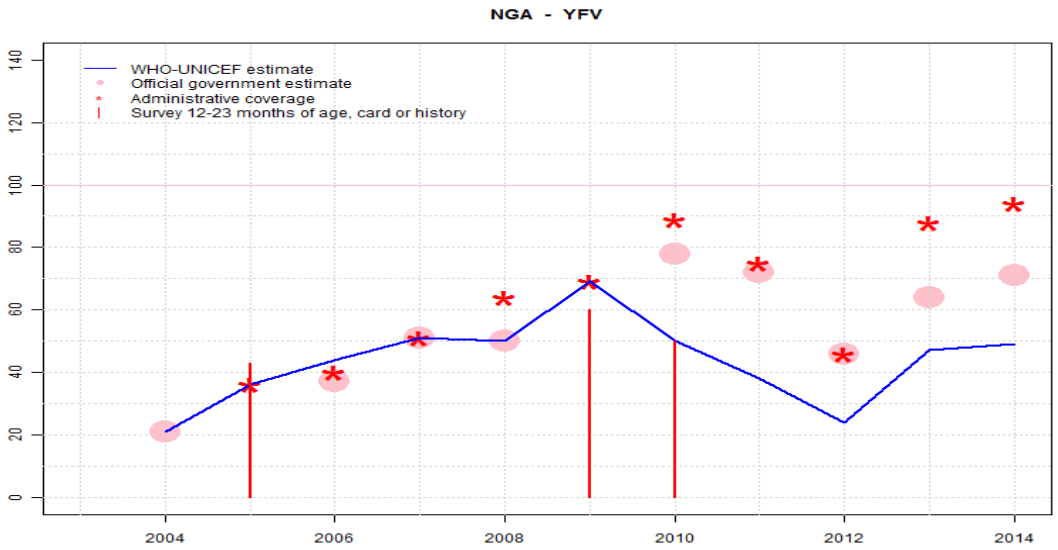
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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.

Nigeria - YFV



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	21	36	44	51	50	69	50	38	24	47	49
Estimate GoC	NA	●●	●●●	●	●●●	●	●●●	●	●	●	●	●
Official	NA	21	NA	37	51	50	NA	78	72	46	64	71
Administrative	NA	NA	36	40	51	64	69	89	75	46	88	94
Survey	NA	NA	43	NA	NA	NA	60	50	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:

2004: Estimate based on reported data. YFV introduced in 2004. GoC=R+

2005: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 43 percent based on 1 survey(s). GoC=R+ S+ D+

2006: Estimate based on interpolation between 2005 and 2009 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-

2007: Estimate based on coverage reported by national government. GoC=R+ S+ D+

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

2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 60 percent based on 1 survey(s). Survey suggests that 60 percent of immunization services are obtained from fixed sites. GoC=R+ S+ D+

2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 50 percent based on 1 survey(s). Reported data excluded. Unexplained increase from 69 percent to 89 percent with decrease 72 percent. Estimate based on level established by the 2009 survey and follows trend in the reported data. Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: D-R-S-

2011: Estimate is based on coverage for MCV1 adjusted based on the relative relationship between reported admin coverage for MCV1 and YFV. Estimate based on level established by the 2009 survey and follows trend in the reported data. Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011). Estimate of 38 percent changed from previous revision value of 33 percent. Estimate challenged by: D-R-S-

2012: Five-month vaccine stockout reported at the national level. Estimate is based on survey result for MCV1 adjusted based on the relative relationship between reported admin coverage for MCV1 and YFV to include the YFV stock-out during 2012. Reported data excluded. Decline in reported coverage from 72 percent to 46 percent with increase to 64 percent. Estimate of 24 percent changed from previous revision value of 7 percent. Estimate challenged by: D-R-S-

2013: Estimate is based on coverage for MCV1 adjusted based on the relative rela-

tionship between reported admin coverage for MCV1 and YFV. Reported data excluded. Official government estimate based on administrative data adjusted the mean between using a 2014 DQS verification factor and results from a community survey. Estimate of 47 percent changed from previous revision value of 49 percent. Estimate challenged by: D-R-S-

2014: Estimate is based on coverage for MCV1 adjusted based on the relative relationship between reported admin coverage for MCV1 and YFV. Official government estimate based on an adjustment to the administrative data based on a correction factor of 75 percent that was derived from observation of a community survey showing that 69 percent of infants were fully vaccinated. Nearly three-quarters of community survey respondents were from northern states observed to have lower routine immunization coverage. A DQS and coverage survey are planned for 2015. Estimate challenged by: D-R-S-

Nigeria - survey details

2012 Nigeria Demographic and Health Survey 2013

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	50	12-23 m	5900	28
BCG	Card	27	12-23 m	1650	28
BCG	Card or History	51	12-23 m	5900	28
BCG	History	24	12-23 m	4250	28
DTP1	C or H <12 months	50	12-23 m	5900	28
DTP1	Card	27	12-23 m	1650	28
DTP1	Card or History	51	12-23 m	5900	28
DTP1	History	24	12-23 m	4250	28
DTP3	C or H <12 months	36	12-23 m	5900	28
DTP3	Card	22	12-23 m	1650	28
DTP3	Card or History	38	12-23 m	5900	28
DTP3	History	16	12-23 m	4250	28
MCV1	C or H <12 months	35	12-23 m	5900	28
MCV1	Card	21	12-23 m	1650	28
MCV1	Card or History	42	12-23 m	5900	28
MCV1	History	21	12-23 m	4250	28
Pol1	C or H <12 months	75	12-23 m	5900	28
Pol1	Card	27	12-23 m	1650	28
Pol1	Card or History	76	12-23 m	5900	28
Pol1	History	50	12-23 m	4250	28
Pol3	C or H <12 months	51	12-23 m	5900	28
Pol3	Card	23	12-23 m	1650	28
Pol3	Card or History	54	12-23 m	5900	28
Pol3	History	31	12-23 m	4250	28

2012 Summary Findings of Cross-Sectional Health and Nutrition Survey, Nigeria 2013

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
DTP1	Card or History	34	12-23 m	3625	-
DTP3	Card or History	25	12-23 m	3625	-
MCV1	Card or History	27	12-23 m	3625	-

2010 Nigeria Multiple Indicator Cluster Survey 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	62	12-23 m	-	24
BCG	Card	28	12-23 m	-	24
BCG	Card or History	62	12-23 m	4986	24
BCG	History	34	12-23 m	-	24
DTP1	C or H <12 months	59	12-23 m	-	24
DTP1	Card	29	12-23 m	-	24
DTP1	Card or History	60	12-23 m	4986	24
DTP1	History	31	12-23 m	-	24
DTP3	C or H <12 months	43	12-23 m	4986	24
DTP3	Card	26	12-23 m	-	24
DTP3	Card or History	45	12-23 m	4986	24
DTP3	History	18	12-23 m	-	24
HepB1	C or H <12 months	54	12-23 m	4986	24
HepB1	Card	29	12-23 m	-	24
HepB1	Card or History	55	12-23 m	4986	24
HepB1	History	26	12-23 m	-	24
HepB3	C or H <12 months	34	12-23 m	4986	24
HepB3	Card	26	12-23 m	-	24
HepB3	Card or History	36	12-23 m	4986	24
HepB3	History	10	12-23 m	-	24
HepBB	C or H <12 months	29	12-23 m	4986	24
HepBB	Card	18	12-23 m	-	24
HepBB	Card or History	29	12-23 m	4986	24
HepBB	History	12	12-23 m	-	24
MCV1	C or H <12 months	49	12-23 m	4986	24
MCV1	Card	24	12-23 m	-	24
MCV1	Card or History	56	12-23 m	4986	24
MCV1	History	32	12-23 m	-	24
Pol1	C or H <12 months	75	12-23 m	4986	24
Pol1	Card	28	12-23 m	-	24
Pol1	Card or History	76	12-23 m	4986	24
Pol1	History	48	12-23 m	-	24
Pol3	C or H <12 months	46	12-23 m	4986	24
Pol3	Card	25	12-23 m	-	24
Pol3	Card or History	49	12-23 m	4986	24
Pol3	History	24	12-23 m	-	24
YFV	C or H <12 months	40	12-23 m	4986	24
YFV	Card	23	12-23 m	-	24

YFV	Card or History	50	12-23 m	4986	24
YFV	History	27	12-23 m	-	24

2009 Nigeria 2010 National Immunization Coverage Survey

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	33	12-23 m	19551	40
BCG	Card or History	76	12-23 m	19551	40
DTP1	Card	29	12-23 m	19551	40
DTP1	Card or History	73	12-23 m	19551	40
DTP3	Card	25	12-23 m	19551	40
DTP3	Card or History	68	12-23 m	19551	40
MCV1	Card	22	12-23 m	19551	40
MCV1	Card or History	64	12-23 m	19551	40
Pol1	Card	27	12-23 m	19551	40
Pol1	Card or History	78	12-23 m	19551	40
Pol3	Card	23	12-23 m	19551	40
Pol3	Card or History	74	12-23 m	19551	40
YFV	Card	20	12-23 m	19551	40
YFV	Card or History	60	12-23 m	19551	40

2007 Nigeria Demographic and Health Survey 2008

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	48	12-23 m	4945	26
BCG	Card	24	12-23 m	4945	26
BCG	Card or History	50	12-23 m	4945	26
BCG	History	26	12-23 m	4945	26
DTP1	C or H <12 months	49	12-23 m	4945	26
DTP1	Card	25	12-23 m	4945	26
DTP1	Card or History	52	12-23 m	4945	26
DTP1	History	27	12-23 m	4945	26
DTP3	C or H <12 months	33	12-23 m	4945	26
DTP3	Card	20	12-23 m	4945	26
DTP3	Card or History	35	12-23 m	4945	26
DTP3	History	15	12-23 m	4945	26
MCV1	C or H <12 months	34	12-23 m	4945	26
MCV1	Card	19	12-23 m	4945	26
MCV1	Card or History	41	12-23 m	4945	26
MCV1	History	22	12-23 m	4945	26
Pol1	C or H <12 months	64	12-23 m	4945	26
Pol1	Card	24	12-23 m	4945	26
Pol1	Card or History	68	12-23 m	4945	26
Pol1	History	43	12-23 m	4945	26
Pol3	C or H <12 months	36	12-23 m	4945	26
Pol3	Card	19	12-23 m	4945	26
Pol3	Card or History	39	12-23 m	4945	26
Pol3	History	20	12-23 m	4945	26

2006 Nigeria Multiple Indicator Cluster Survey 2007

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	50	12-23 m	3187	18
BCG	Card	17	12-23 m	3187	18
BCG	Card or History	52	12-23 m	3187	18
BCG	History	35	12-23 m	3187	18
DTP1	C or H <12 months	46	12-23 m	3187	18
DTP1	Card	17	12-23 m	3187	18
DTP1	Card or History	49	12-23 m	3187	18
DTP1	History	32	12-23 m	3187	18
DTP3	C or H <12 months	28	12-23 m	3187	18
DTP3	Card	14	12-23 m	3187	18
DTP3	Card or History	30	12-23 m	3187	18
DTP3	History	16	12-23 m	3187	18
MCV1	C or H <12 months	38	12-23 m	3187	18
MCV1	Card	14	12-23 m	3187	18
MCV1	Card or History	44	12-23 m	3187	18
MCV1	History	30	12-23 m	3187	18
Pol1	C or H <12 months	52	12-23 m	3187	18
Pol1	Card	16	12-23 m	3187	18
Pol1	Card or History	56	12-23 m	3187	18
Pol1	History	40	12-23 m	3187	18
Pol3	C or H <12 months	28	12-23 m	3187	18
Pol3	Card	13	12-23 m	3187	18
Pol3	Card or History	29	12-23 m	3187	18
Pol3	History	16	12-23 m	3187	18

Nigeria - survey details

2005 Nigeria National Immunization Coverage Survey (2006)

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	54	12-23 m	23414	50
BCG	Card or History	69	12-23 m	23414	50
DTP1	Card	36	12-23 m	23414	50
DTP1	Card or History	72	12-23 m	23414	50
DTP3	Card	26	12-23 m	23414	50
DTP3	Card or History	54	12-23 m	23414	50
HepB1	Card	30	12-23 m	23414	50
HepB1	Card or History	56	12-23 m	23414	50
HepB3	Card	20	12-23 m	23414	50
HepB3	Card or History	41	12-23 m	23414	50
MCV1	Card	26	12-23 m	23414	50
MCV1	Card or History	62	12-23 m	23414	50
Pol1	Card	32	12-23 m	23414	50
Pol1	Card or History	78	12-23 m	23414	50
Pol3	Card	22	12-23 m	23414	50
Pol3	Card or History	61	12-23 m	23414	50
YFV	Card	20	12-23 m	23414	50
YFV	Card or History	43	12-23 m	23414	50

2002 Nigeria Demographic and Health Survey 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	47	12-23 m	999	21
BCG	Card	20	12-23 m	999	21
BCG	Card or History	48	12-23 m	999	21
BCG	History	28	12-23 m	999	21
DTP1	C or H <12 months	39	12-23 m	999	21
DTP1	Card	18	12-23 m	999	21
DTP1	Card or History	43	12-23 m	999	21
DTP1	History	25	12-23 m	999	21
DTP3	C or H <12 months	20	12-23 m	999	21
DTP3	Card	10	12-23 m	999	21
DTP3	Card or History	21	12-23 m	999	21
DTP3	History	11	12-23 m	999	21
MCV1	C or H <12 months	31	12-23 m	999	21
MCV1	Card	14	12-23 m	999	21
MCV1	Card or History	36	12-23 m	999	21
MCV1	History	22	12-23 m	999	21
Pol1	C or H <12 months	64	12-23 m	999	21
Pol1	Card	18	12-23 m	999	21
Pol1	Card or History	67	12-23 m	999	21
Pol1	History	49	12-23 m	999	21
Pol3	C or H <12 months	27	12-23 m	999	21
Pol3	Card	11	12-23 m	999	21
Pol3	Card or History	29	12-23 m	999	21
Pol3	History	19	12-23 m	999	21

2002 Nigeria National Immunization Coverage Survey 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	29	12-23 m	40777	28
DTP1	Card or History	43	12-23 m	40777	28
DTP3	Card or History	25	12-23 m	40777	28
MCV1	Card or History	25	12-23 m	40777	28
Pol1	Card or History	63	12-23 m	40777	28
Pol3	Card or History	39	12-23 m	40777	28

1998 MICS Nigeria, 1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	17	12-23 m	2841	25
BCG	Card or History	43	12-23 m	2841	25
BCG	History	26	12-23 m	2841	25
DTP1	Card	16	12-23 m	2841	25
DTP1	Card or History	41	12-23 m	2841	25
DTP1	History	25	12-23 m	2841	25
DTP3	Card	12	12-23 m	2841	25
DTP3	Card or History	23	12-23 m	2841	25
DTP3	History	11	12-23 m	2841	25
MCV1	Card	16	12-23 m	2841	25

MCV1	Card or History	35	12-23 m	2841	25
Pol1	Card	12	12-23 m	2841	25
Pol1	Card or History	37	12-23 m	2841	25
Pol3	Card or History	19	12-23 m	2841	25

1998 Nigeria Demographic and Health Survey 1999, 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	52	12-23 m	1161	-
BCG	Card	19	12-23 m	1161	-
BCG	Card or History	54	12-23 m	1161	-
BCG	History	35	12-23 m	1161	-
DTP1	C or H <12 months	46	12-23 m	1161	-
DTP1	Card	16	12-23 m	1161	-
DTP1	Card or History	47	12-23 m	1161	-
DTP1	History	31	12-23 m	1161	-
DTP3	C or H <12 months	25	12-23 m	1161	-
DTP3	Card	11	12-23 m	1161	-
DTP3	Card or History	26	12-23 m	1161	-
DTP3	History	16	12-23 m	1161	-
MCV1	C or H <12 months	32	12-23 m	1161	-
MCV1	Card	13	12-23 m	1161	-
MCV1	Card or History	40	12-23 m	1161	-
MCV1	History	27	12-23 m	1161	-
Pol1	C or H <12 months	54	12-23 m	1161	-
Pol1	Card	18	12-23 m	1161	-
Pol1	Card or History	57	12-23 m	1161	-
Pol1	History	39	12-23 m	1161	-
Pol3	C or H <12 months	23	12-23 m	1161	-
Pol3	Card	10	12-23 m	1161	-
Pol3	Card or History	25	12-23 m	1161	-
Pol3	History	15	12-23 m	1161	-

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

Nigeria
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	61
2004	61
2005	62
2006	63
2007	63
2008	64
2009	67
2010	69
2011	60
2012	60
2013	60
2014	55

[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.