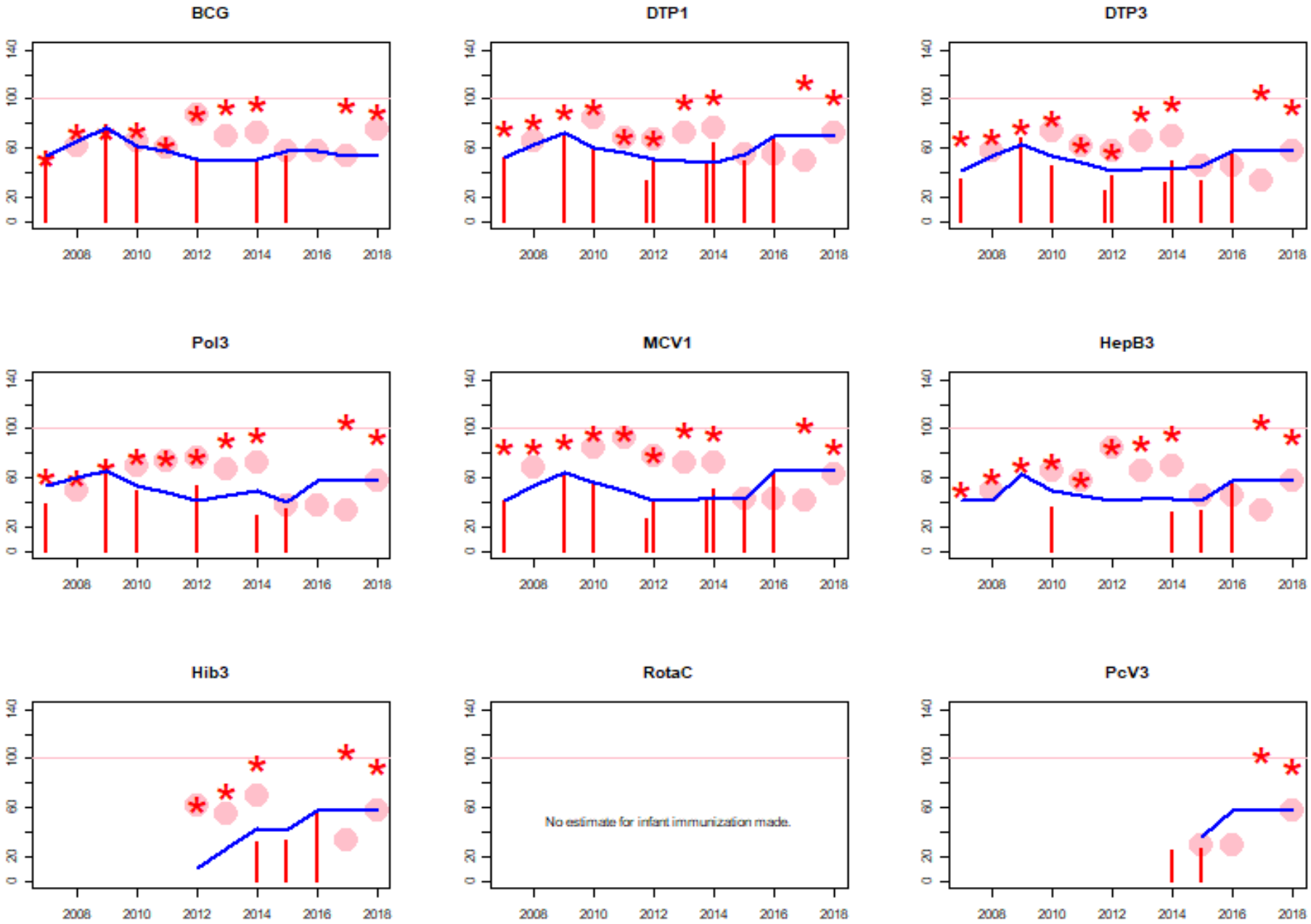

BCG
DTP1
DTP3
Pol3
MCV1
HepB3
Hib3
RotaC
No estimate for infant immunization made.
PcV3
0
20
60
100
140
2008
2010
2012
2014
2016
2018

BACKGROUND NOTE: Each year WHO and UNICEF jointly review reports submitted by Member States regarding national immunization coverage, finalized survey reports as well as data from the published and grey literature. Based on these data, with due consideration to potential biases and the views of local experts, WHO and UNICEF attempt to distinguish between situations where the available empirical data accurately reflect immunization system performance and those where the data are likely to be compromised and present a misleading view of immunization coverage while jointly estimating the most likely coverage levels for each country.

WHO and UNICEF estimates are country-specific; that is to say, each country's data are reviewed individually, and data are not borrowed from other countries in the absence of data. Estimates are not based on ad hoc adjustments to reported data; in some instances empirical data are available from a single source, usually the nationally reported coverage data. In cases where no data are available for a given country/vaccine/year combination, data are considered from earlier and later years and interpolated to estimate coverage for the missing year(s). In cases where data sources are mixed and show large variation, an attempt is made to identify the most likely estimate with consideration of the possible biases in available data. For methods see:

*Burton et al. 2009. WHO and UNICEF estimates of national infant immunization coverage: methods and processes.
*Burton et al. 2012. A formal representation of the WHO and UNICEF estimates of national immunization coverage: a computational logic approach.
*Brown et al. 2013. An introduction to the grade of confidence used to characterize uncertainty around the WHO and UNICEF estimates of national immunization coverage.

DATA SOURCES.

ADMINISTRATIVE coverage: Reported by national authorities and based on aggregated administrative reports from health service providers on the number of vaccinations administered during a given period (numerator data) and reported target population data (denominator data). May be biased by inaccurate numerator and/or denominator data.

OFFICIAL coverage: Estimated coverage reported by national authorities that reflects their assessment of the most likely coverage based on any combination of administrative coverage, survey-based estimates or other data sources or adjustments. Approaches to determine OFFICIAL coverage may differ across countries.

SURVEY coverage: Based on estimated coverage from population-based household surveys among children aged 12-23 months or 24-35 months following a review of survey methods and results. Information is based on the combination of vaccination history from documented evidence or caregiver recall. Survey results are considered for the appropriate birth cohort based on the period of data collection.

ABBREVIATIONS

BCG: percentage of births who received one dose of Bacillus Calmette Guerin vaccine.

DTP1 / DTP3: percentage of surviving infants who received the 1st / 3rd dose, respectively, of diphtheria and tetanus toxoid with pertussis containing vaccine.

Pol3: percentage of surviving infants who received the 3rd dose of polio containing vaccine. May be either oral or inactivated polio vaccine.

IPV1: percentage of surviving infants who received at least one dose of inactivated polio vaccine. In countries utilizing an immunization schedule recommending either (i) a primary series of three doses of oral polio vaccine (OPV) plus at least one dose of IPV where OPV is included in routine immunization and/or campaign or (ii) a sequential schedule of IPV followed by OPV, WHO and UNICEF estimates for IPV1 reflect coverage with at least one routine dose of IPV among infants <1 year of age among countries. For countries utilizing IPV containing vaccine use only, i.e., no recommended dose of OPV, the WHO and UNICEF estimate for IPV1 corresponds to coverage for the 1st dose of IPV.

Production of IPV coverage estimates, which begins in 2015, results in no change of the estimated coverage levels for the 3rd dose of polio (Pol3). For countries recommending routine immunization with a primary series of three doses of IPV alone, WHO and UNICEF estimated Pol3 coverage is equivalent to estimated coverage with three doses of IPV. For countries with a sequential schedule, estimated Pol3 coverage is based on that for the 3rd dose of polio vaccine regardless of vaccine type.

MCV1: percentage of surviving infants who received the 1st dose of measles containing vaccine. In countries where the national schedule recommends the 1st dose of MCV at 12 months or later based on the epidemiology of disease in the country, coverage estimates reflect the percentage of children who received the 1st dose of MCV as recommended.

MCV2: percentage of children who received the 2nd dose of measles containing vaccine according to the nationally recommended schedule.

RCV1: percentage of surviving infants who received the 1st dose of rubella containing vaccine. Co verage estimates are based on WHO and UNICEF estimates of coverage for the dose of measles containing vaccine that corresponds to the first measles-rubella combination vaccine. Nationally reported coverage of RCV is not taken into consideration nor are the data represented in the accompanying graph and data table.

HepBB: percentage of births which received a dose of hepatitis B vaccine within 24 hours of delivery. Estimates of hepatitis B birth dose coverage are produced only for countries with a universal birth dose policy. Estimates are not produced for countries that recommend a birth dose to infants born to HepB virus-infected mothers only or where there is insufficient information to determine whether vaccination is within 24 hours of birth.

HepB3: percentage of surviving infants who received the 3rd dose of hepatitis B containing vaccine following the birth dose.

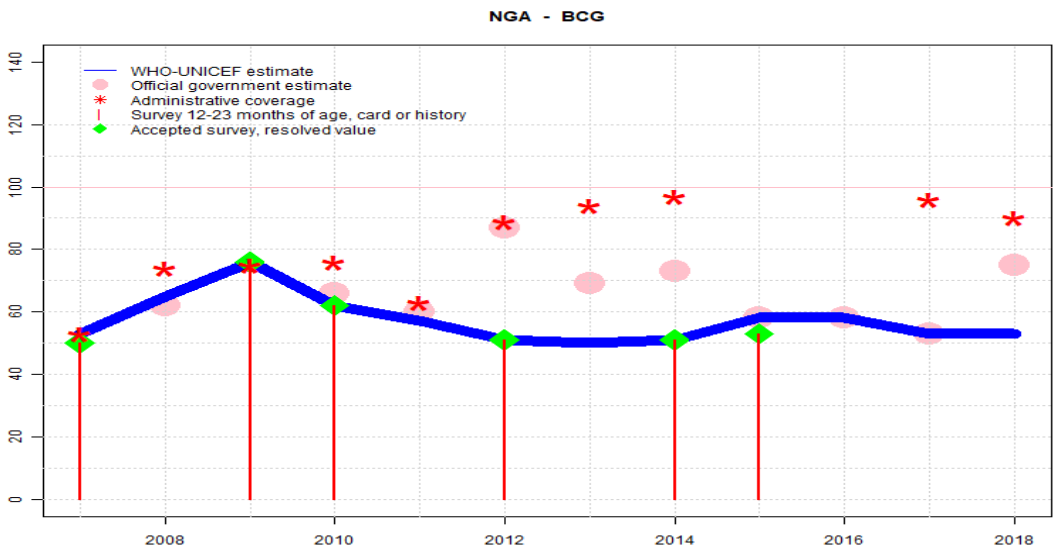
Hib3: percentage of surviving infants who received the 3rd dose of Haemophilus influenzae type b containing vaccine.

RotaC: percentage of surviving infants who received the final recommended dose of rotavirus vaccine, which can be either the 2nd or the 3rd dose depending on the vaccine.

PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect the percentage of surviving infants who received two doses of PcV prior to the 1st birthday.

YFV: percentage of surviving infants who received one dose of yellow fever vaccine in countries where YFV is part of the national immunization schedule for children or is recommended in at risk areas; coverage estimates are annualized for the entire cohort of surviving infants.

Nigeria - BCG



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Estimate	53	65	76	62	57	51	50	51	58	58	53	53
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	62	NA	66	60	87	69	73	58	58	53	75
Administrative	53	74	75	76	63	89	94	97	NA	NA	96	90
Survey	50	NA	76	62	NA	51	NA	51	53	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: 2017 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:

2018: Estimate based on extrapolation from data reported by national government. Reported data excluded due to sudden change in coverage from 53 level to 75 percent. WHO and UNICEF await the 2018 DHS final results that may help elucidate trends in coverage in a time of intensification of vaccination activities. See comment in 2017.Official estimates based on a review of strategic plan targets, 2018 Nutrition and Health Survey results, and routine immunization lot-quality assurance survey results. Estimate challenged by: D-

2017: Estimate based on coverage reported by national government. Programme reports national level stock-out of unspecified duration. Preliminary 2018 DHS results suggest 67 percent coverage for the 2017 cohort. Estimate challenged by: D-

2016: Estimate based on coverage reported by national government. Programme reports district level vaccine supply disruptions for all vaccines in the infant immunization series. Estimate of 58 percent changed from previous revision value of 53 percent. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 53 percent based on 1 survey(s). Programme acknowledges challenges in data quality impacting on administrative coverage levels, including delays and incomplete reporting. Reported official government estimate received July 2017 is based on preliminary 2016 MICS-NICS results applied to the 2015 birth cohort. Estimate of 58 percent changed from previous revision value of 53 percent. Estimate challenged by: D-

2014: Estimate of 51 percent assigned by working group. Estimate based on results from the 2016 MICS-NICS survey. Reported data excluded. 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. Estimate challenged by: D-R-

2013: Reported data calibrated to 2012 and 2014 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 50 percent changed from previous revision value of 51 percent. Estimate challenged by: D-R-

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 due to an increase from 60 percent to 87 percent with decrease 69 percent. 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 Reported data excluded due to 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 challenged by: R-S-

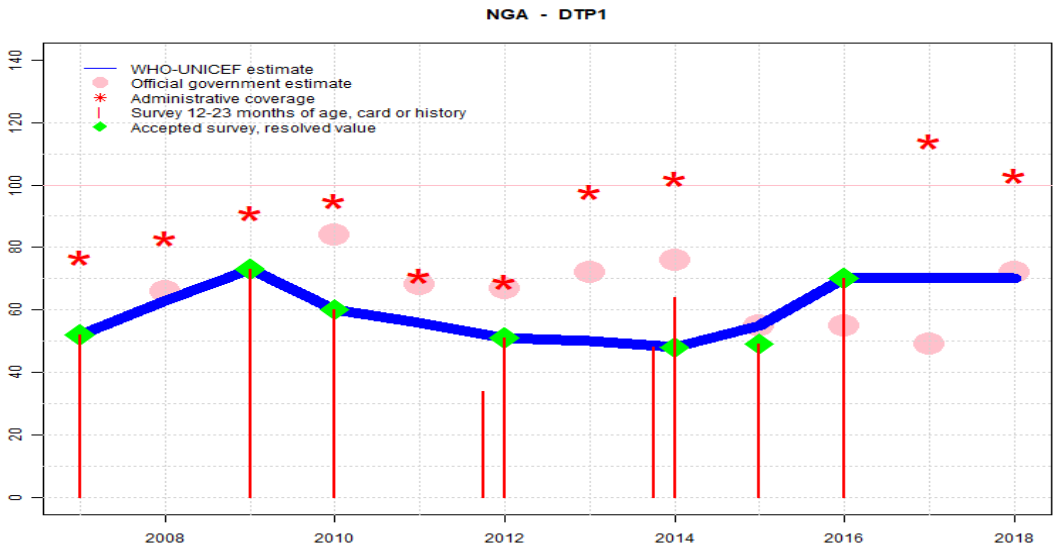
2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 62 percent based on 1 survey(s). Estimate based on level established by the 2009 survey and follows trend in the reported data. Survey results support the trends but not the coverage levels intertemporally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

2009: Estimate of 76 percent assigned by working group. Estimate based on survey results. Survey suggests that 60 percent of immunization services are obtained from fixed sites. Estimate challenged by: R-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. Estimate challenged by: 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-

Nigeria - DTP1



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Estimate	52	63	73	60	56	51	50	48	55	70	70	70
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	66	NA	84	68	67	72	76	55	55	49	72
Administrative	77	83	91	95	71	69	98	102	NA	NA	114	103
Survey	52	NA	73	60	NA	*	NA	*	49	70	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: 2017 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:

2018: Estimate of 70 percent assigned by working group. Estimate based on 2018 National Nutrition and Health Survey results reflecting coverage for the 2016 birth cohort. Reported data excluded due to sudden change in coverage from 49 level to 72 percent. WHO and UNICEF await the 2018 DHS final results that may help elucidate trends in coverage in a time of intensification of vaccination activities. See comment in 2017. Official estimates based on a review of strategic plan targets, 2018 Nutrition and Health Survey results, and routine immunization lot-quality assurance survey results. Sharp increases between 2015 and 2016-18 period may be partially explained by the timing of survey fieldwork vis-a-vis investments and activity to improve routine immunization. Estimate challenged by: D-R-

2017: Estimate of 70 percent assigned by working group. Estimate based on 2018 National Nutrition and Health Survey results reflecting coverage for the 2016 birth cohort. Preliminary 2018 DHS results suggest 65 percent coverage for the 2017 cohort. Estimate of 70 percent changed from previous revision value of 49 percent. Estimate challenged by: D-R-S-

2016: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 70 percent based on 1 survey(s). Programme reports district level vaccine supply disruptions for all vaccines in the infant immunization series. Estimate of 70 percent changed from previous revision value of 49 percent. Estimate challenged by: D-R-S-

2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 49 percent based on 1 survey(s). Programme acknowledges challenges in data quality impacting on administrative coverage levels, including delays and incomplete reporting. Estimate of 55 percent changed from previous revision value of 49 percent. Estimate challenged by: D-S-

2014: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 48 percent based on 1 survey(s). Nigeria National Nutrition and Health Survey, 2015 results ignored by working group. The results of the 2015 Nigeria National Nutrition and Health Survey are presented such that coverage by card and by recall cannot be assessed and thus are not considered.Reported data excluded. 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. Estimate challenged by: D-R-S-

2013: Reported data calibrated to 2012 and 2014 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. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stock-out. Estimate of 50 percent changed from previous revision value of 49 percent. Estimate challenged by: D-R-

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. Survey is ignored because it is a 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 challenged by: D-R-

2011: Reported data calibrated to 2010 and 2012 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-R-S-

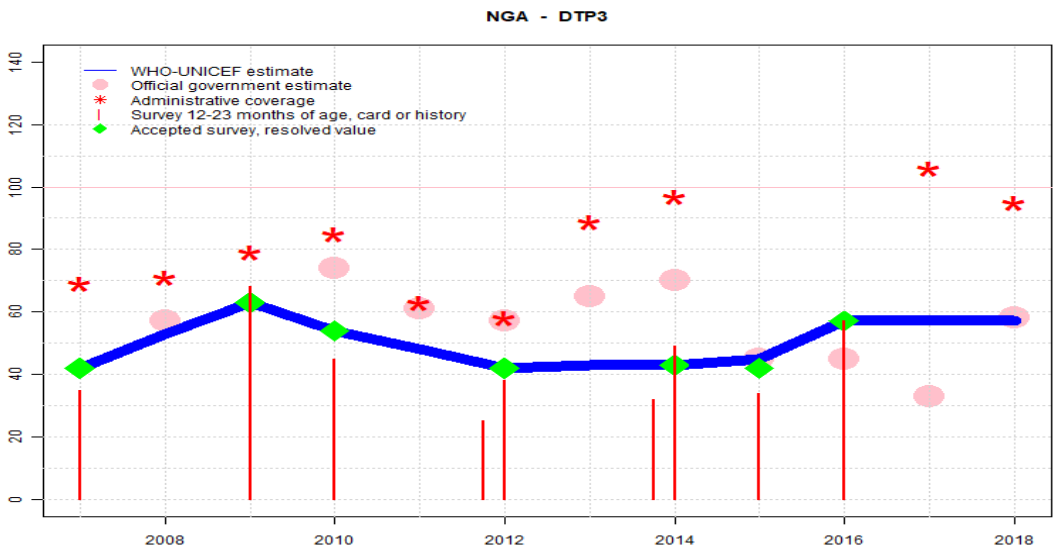
2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 60 percent based on 1 survey(s). Estimate based on level established by the 2009 survey and follows trend in the reported data. Survey results support the trends but not the coverage levels intertemporally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

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-S-

2008: Reported data calibrated to 2007 and 2009 levels. Reported data excluded due to decline in reported coverage from 77 percent to 66 percent with increase to 91 percent. 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-

Nigeria - DTP3



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Estimate	42	53	63	54	48	42	43	43	45	57	57	57
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	57	NA	74	61	57	65	70	45	45	33	58
Administrative	69	71	79	85	63	58	89	97	NA	NA	106	95
Survey	35	NA	68	45	NA	*	NA	*	34	57	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: 2017 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:

2018: Reported data calibrated to 2016 levels. Reported data excluded due to sudden change in coverage from 106 level to 58 percent. WHO and UNICEF await the 2018 DHS final results that may help elucidate trends in coverage in a time of intensification of vaccination activities. See comment in 2017. Official estimates based on a review of strategic plan targets, 2018 Nutrition and Health Survey results, and routine immunization lot-quality assurance survey results. Sharp increases between 2015 and 2016 may be partially explained by the timing of survey fieldwork vis-a-vis investments and activity to improve routine immunization. Estimate challenged by: D-R-

2017: Reported data calibrated to 2016 levels. Reported data excluded because 106 percent greater than 100 percent. Reported data excluded due to an increase from 45 percent to 106 percent with decrease 58 percent. Preliminary 2018 DHS results suggest 50 percent coverage for the 2017 cohort. The reported government official estimate is based on results from the 2016 MICS-NICS survey, however, the official estimate does not account for recall bias. Estimate of 57 percent changed from previous revision value of 42 percent. Estimate challenged by: D-R-S-

2016: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 57 percent based on 1 survey(s). Programme reports district level vaccine supply disruptions for all vaccines in the infant immunization series. Estimate of 57 percent changed from previous revision value of 42 percent. Estimate challenged by: D-R-S-

2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 42 percent based on 1 survey(s). Nigeria Multiple Indicator Cluster Survey 2016-2017 card or history results of 34 percent modifed for recall bias to 42 percent based on 1st dose card or history coverage of 49 percent, 1st dose card only coverage of 27 percent and 3rd dose card only coverage of 23 percent. Programme acknowledges challenges in data quality impacting on administrative coverage levels, including delays and incomplete reporting. Estimate of 45 percent changed from previous revision value of 42 percent. Estimate challenged by: D-S-

2014: Estimate of 43 percent assigned by working group. Estimate is based on survey coverage level. Nigeria National Nutrition and Health Survey, 2015 results ignored by working group. The results of the 2015 Nigeria National Nutrition and Health Survey are presented such that recall bias cannot be assessed and thus are not considered.Nigeria Multiple Indicator Cluster Survey 2016-2017 card or history results of 32 percent modifed for recall bias to 43 percent based on 1st dose card or history coverage of 48 percent, 1st dose card only coverage of 18 percent and 3rd dose card only coverage of 16 percent. Reported data excluded. 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. Estimate challenged by: D-R-S-

2013: Reported data calibrated to 2012 and 2014 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. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stock-out. Estimate challenged by: D-R-

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. Survey is ignored because it is a 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 3rd dose card only coverage of 22 percent. DTP-HepB-Hib pentavalent vaccine introduced in 2012. 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 challenged by: D-R-S-

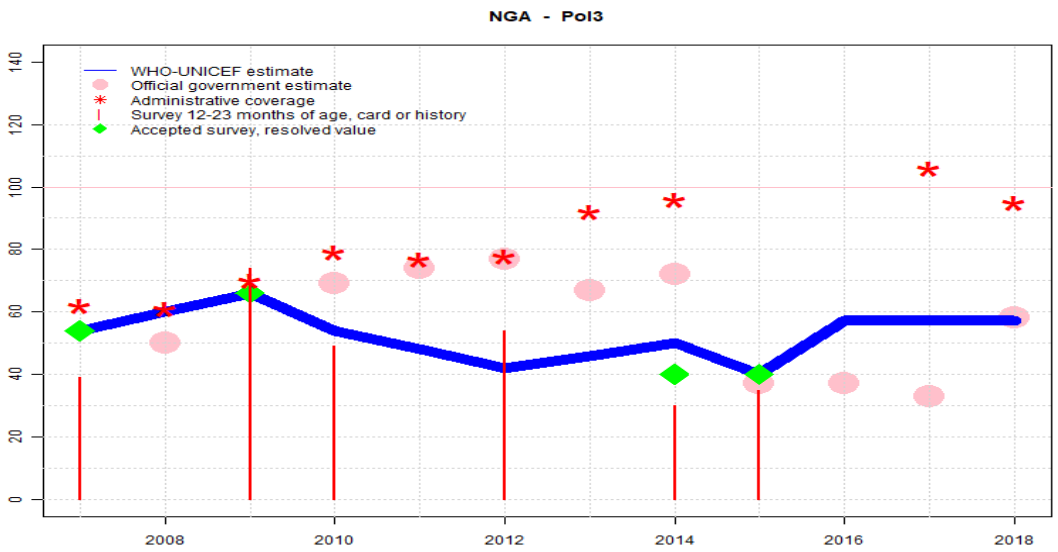
2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 54 percent based on 1 survey(s). Nigeria Multiple Indicator Cluster Survey 2011 card or history results of 45 percent modifed for recall bias to 54 percent based on 1st dose card or history coverage of 60 percent, 1st dose card only coverage of 29 percent and 3rd 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-

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 3rd 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-S-

2008: Reported data calibrated to 2007 and 2009 levels. Reported data excluded due to decline in reported coverage from 69 percent to 57 percent with increase to 79 percent. 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 3rd dose card only coverage of 20 percent. Estimate challenged by: D-R-S-

Nigeria - Pol3



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Estimate	54	60	66	54	48	42	46	50	40	57	57	57
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	50	NA	69	74	77	67	72	37	37	33	58
Administrative	62	61	70	79	77	78	92	96	NA	NA	106	95
Survey	39	NA	74	49	NA	54	NA	30	35	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: 2017 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:

2018: Reported data calibrated to 2017 levels. Reported data excluded due to sudden change in coverage from 33 level to 58 percent. WHO and UNICEF await the 2018 DHS final results that may help elucidate trends in coverage in a time of intensification of vaccination activities. See comment in 2017. Estimate challenged by: D-R-

2017: Estimate of 57 percent assigned by working group. Estimate is based on estimated DTP3 coverage. Preliminary 2018 DHS results suggest 47 percent coverage for the 2017 cohort. Estimate of 57 percent changed from previous revision value of 40 percent. Estimate challenged by: D-R-S-

2016: Estimate of 57 percent assigned by working group. Estimate is based on estimated DTP3 coverage. Programme reports district level vaccine supply disruptions for all vaccines in the infant immunization series. Estimate of 57 percent changed from previous revision value of 40 percent. Estimate challenged by: D-R-S-

2015: Estimate of 40 percent assigned by working group. Estimate is based on survey result adjusted for recall bias. Nigeria Multiple Indicator Cluster Survey 2016-2017 card or history results of 35 percent modifed for recall bias to 40 percent based on 1st dose card or history coverage of 50 percent, 1st dose card only coverage of 26 percent and 3rd dose card only coverage of 21 percent. Programme acknowledges challenges in data quality impacting on administrative coverage levels, including delays and incomplete reporting. Estimate challenged by: D-R-

2014: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 40 percent based on 1 survey(s). Nigeria Multiple Indicator Cluster Survey 2016-2017 card or history results of 30 percent modifed for recall bias to 40 percent based on 1st dose card or history coverage of 48 percent, 1st dose card only coverage of 17 percent and 3rd dose card only coverage of 14 percent. Reported data excluded. 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. Estimate of 50 percent changed from previous revision value of 40 percent. Estimate challenged by: D-

2013: Reported data calibrated to 2012 and 2014 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 46 percent changed from previous revision value of 41 percent. Estimate challenged by: D-R-

2012: Estimate of 42 percent assigned by working group. 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 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 3rd dose card only coverage of 23 percent. Estimate challenged by: D-R-

2011: Estimate based on interpolation between 2010 and 2012 levels. Estimate is based on estimated DTP3 coverage. 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-R-S-

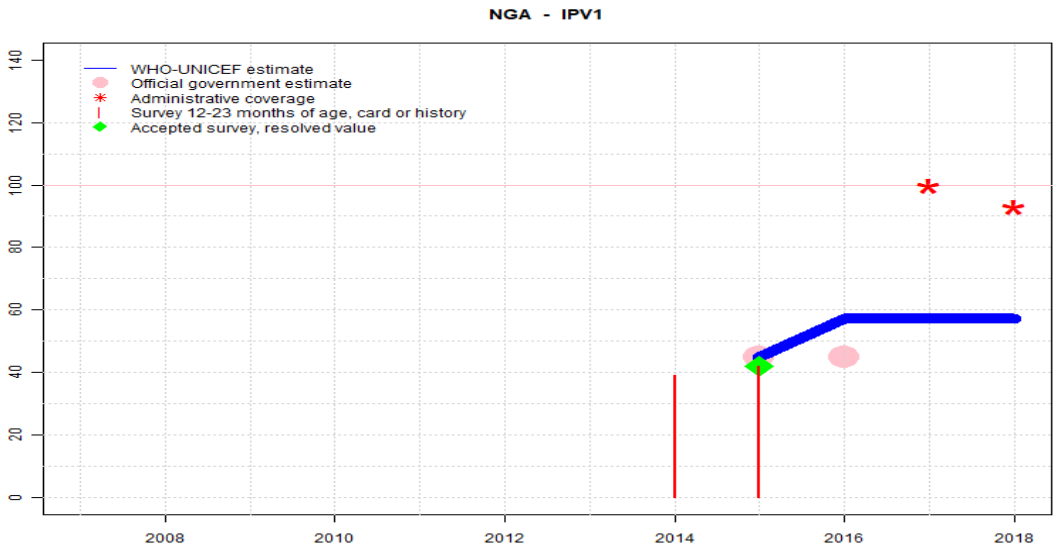
2010: Estimate of 54 percent assigned by working group. Estimate is based on DTP3 levels. Nigeria Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results likely include campaign doses.Nigeria Multiple Indicator Cluster Survey 2011 card or history results of 49 percent 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 3rd 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-

2009: Estimate of 66 percent assigned by working group. 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 3rd 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-

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

2007: Estimate of 54 percent assigned by working group. 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 3rd dose card only coverage of 19 percent. Estimate challenged by: R-S-

Nigeria - IPV1



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	45	57	57	57
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	45	45	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100	93
Survey	NA	NA	NA	NA	NA	NA	NA	39	42	NA	NA	NA

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

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2017 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:

Estimates for a dose of inactivated polio vaccine (IPV) begin in 2015 following the Global Polio Eradication Initiative's Polio Eradication and Endgame Strategic Plan: 2013-2018 which recommended at least one full dose or two fractional doses of IPV into routine immunization schedules as a strategy to mitigate the potential consequences should any re-emergence of type 2 poliovirus occur following the planned withdrawal of Sabin type 2 strains from oral polio vaccine (OPV).

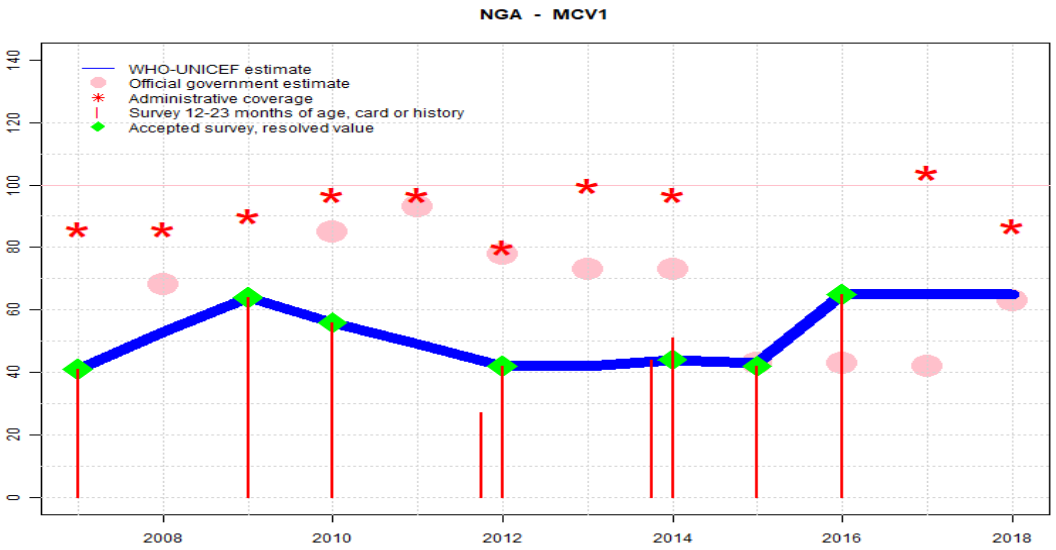
2018: Reported data calibrated to 2017 levels. Reported data excluded. WHO and UNICEF await the 2018 DHS final results that may help elucidate trends in coverage in a time of intensification of vaccination activities. See comment in 2017. Estimate challenged by: D-R-

2017: Estimate of 57 percent assigned by working group. Estimate is based on results of the 2016 MICS-NICS survey for DTP3. Preliminary 2018 DHS results suggest 53 percent coverage for the 2017 cohort. Estimate of 57 percent changed from previous revision value of 42 percent. Estimate challenged by: D-R-S-

2016: Estimate of 57 percent assigned by working group. Estimate is based on results of the 2016 MICS-NICS survey for DTP3. Programme reports district level vaccine supply disruptions for all vaccines in the infant immunization series. Estimate of 57 percent changed from previous revision value of 42 percent. Estimate challenged by: D-R-S-

2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 42 percent based on 1 survey(s). Programme acknowledges challenges in data quality impacting on administrative coverage levels, including delays and incomplete reporting. Inactivated polio vaccine introduced in early 2015. Government reports an exceptionally high year-to-year increase in the number of surviving infants compared to the UN Population Division. Estimate of 45 percent changed from previous revision value of 42 percent. Estimate challenged by: D-

Nigeria - MCV1



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Estimate	41	53	64	56	49	42	42	44	43	65	65	65
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	68	NA	85	93	78	73	73	43	43	42	63
Administrative	86	86	90	97	97	80	100	97	NA	NA	104	87
Survey	41	NA	64	56	NA	*	NA	*	42	65	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: 2017 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:

2018: Estimate of 65 percent assigned by working group. Estimate based on 2018 National Nutrition and Health Survey results reflecting the 2016 birth cohort. Reported data excluded due to sudden change in coverage from 42 level to 63 percent. WHO and UNICEF await the 2018 DHS final results that may help elucidate trends in coverage in a time of intensification of vaccination activities. See comment in 2017. Official estimates based on a review of strategic plan targets, 2018 Nutrition and Health Survey results, and routine immunization lot-quality assurance survey results. Sharp increases between 2015 and 2016-18 period may be partially explained by the timing of survey fieldwork vis-a-vis investments and activity to improve routine immunization. Estimate challenged by: D-R-

2017: Estimate of 65 percent assigned by working group. Estimate based on 2018 National Nutrition and Health Survey results reflecting the 2016 birth cohort. Preliminary 2018 DHS results suggest 54 percent coverage for the 2017 cohort. Estimate of 65 percent changed from previous revision value of 42 percent. Estimate challenged by: D-R-S-

2016: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 65 percent based on 1 survey(s). Programme reports district level vaccine supply disruptions for all vaccines in the infant immunization series. Estimate of 65 percent changed from previous revision value of 42 percent. Estimate challenged by: D-R-S-

2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 42 percent based on 1 survey(s). Programme acknowledges challenges in data quality impacting on administrative coverage levels, including delays and incomplete reporting. Estimate of 43 percent changed from previous revision value of 42 percent. Estimate challenged by: D-S-

2014: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 44 percent based on 1 survey(s). Nigeria National Nutrition and Health Survey, 2015 results ignored by working group. The results of the 2015 Nigeria National Nutrition and Health Survey are presented such that coverage by card and by recall cannot be assessed and thus are not considered.Reported data excluded. 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. Estimate challenged by: D-R-S-

2013: Reported data calibrated to 2012 and 2014 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. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stock-out. Estimate of 42 percent changed from previous revision value of 43 percent. Estimate challenged by: D-R-

2012: Survey evidence does not support reported data. Estimate based on survey results. Sur-

vey 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. Survey is ignored because it is a sub-national survey conducted in twenty-four states, accounting for approximately sixty-four percent of national target population. 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 challenged by: D-R-S-

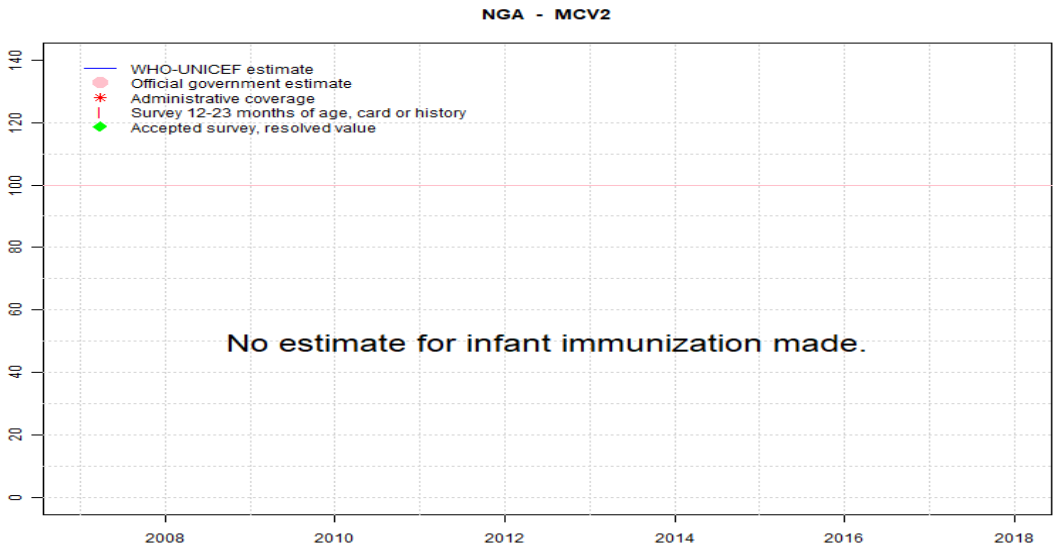
2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 56 percent based on 1 survey(s). Estimate based on level established by the 2009 survey and follows trend in the reported data. Survey results support the trends but not the coverage levels intertemporally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

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-S-

2008: Reported data calibrated to 2007 and 2009 levels. Reported data excluded due to decline in reported coverage from 86 percent to 68 percent with increase to 90 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-

Nigeria - MCV2



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
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.

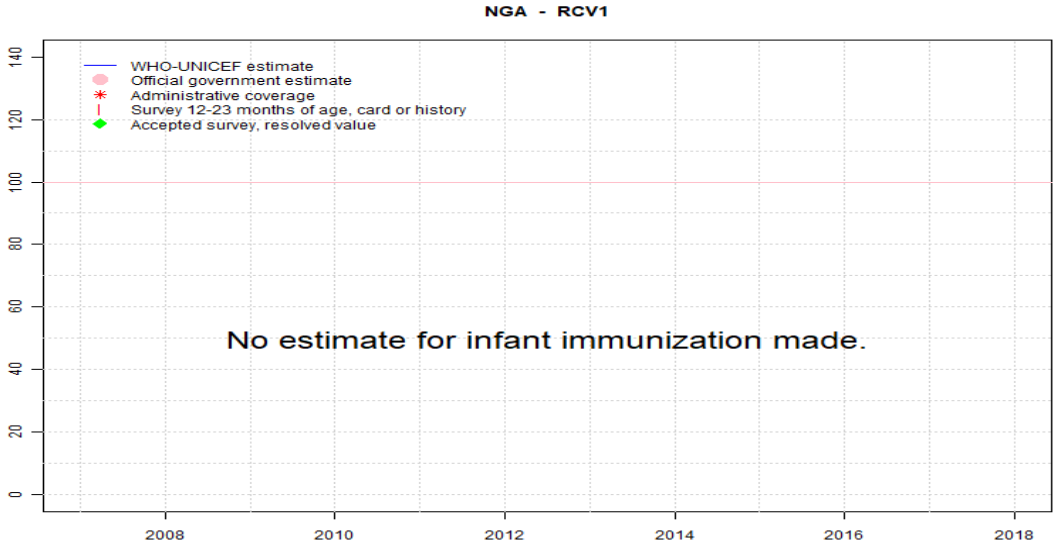
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2017 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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 - RCV1



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
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.

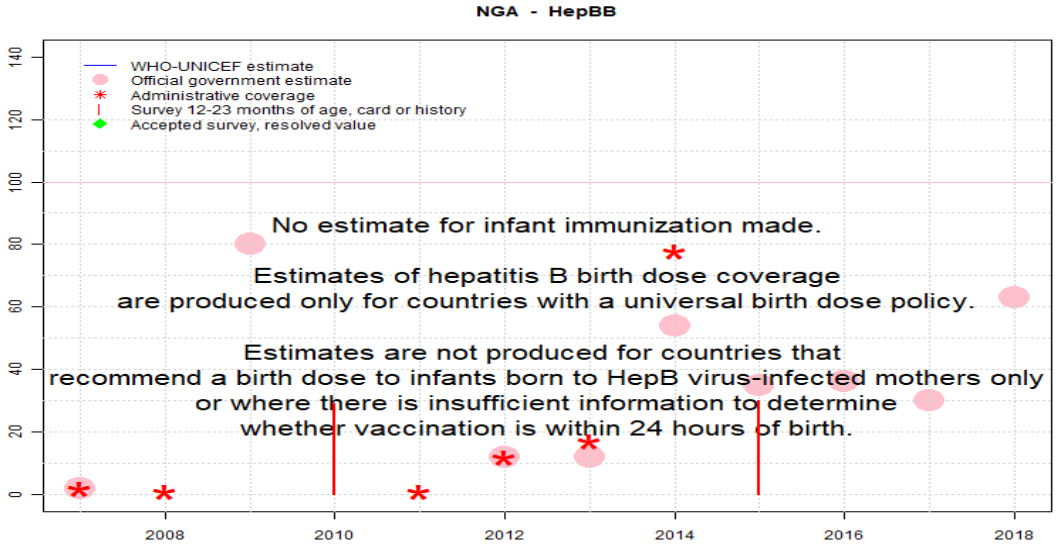
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2017 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
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	2	NA	80	NA	NA	12	12	54	35	36	30	63
Administrative	2	1	NA	NA	1	12	17	78	NA	NA	NA	NA
Survey	NA	NA	NA	29	NA	NA	NA	NA	30	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.

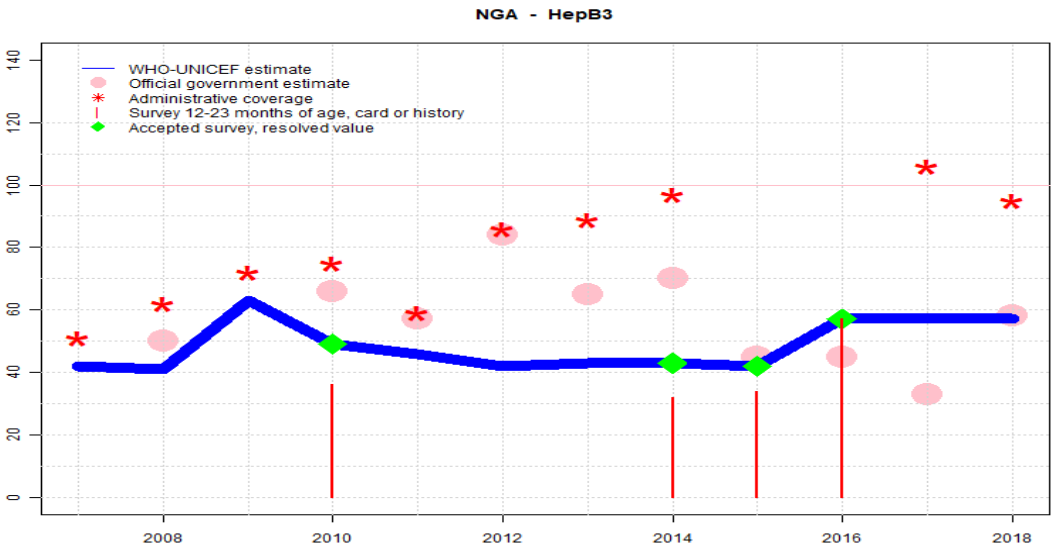
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2017 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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 - HepB3



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Estimate	42	41	63	49	46	42	43	43	42	57	57	57
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	50	NA	66	57	84	65	70	45	45	33	58
Administrative	51	62	72	75	59	86	89	97	NA	NA	106	95
Survey	NA	NA	NA	36	NA	NA	NA	32	34	57	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: 2017 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:

2018: Reported data calibrated to 2016 levels. Reported data excluded due to sudden change in coverage from 106 level to 58 percent. WHO and UNICEF await the 2018 DHS final results that may help elucidate trends in coverage in a time of intensification of vaccination activities. See comment in 2017. Official estimates based on a review of strategic plan targets, 2018 Nutrition and Health Survey results, and routine immunization lot-quality assurance survey results. Sharp increases between 2015 and 2016-18 period may be partially explained by the timing of survey fieldwork vis-a-vis investments and activity to improve routine immunization. Estimate challenged by: D-R-

2017: Reported data calibrated to 2016 levels. Reported data excluded because 106 percent greater than 100 percent. Reported data excluded due to an increase from 45 percent to 106 percent with decrease 58 percent. The reported government official estimate is based on results from the 2016 MICS-NICS survey, however, the official estimate does not account for recall bias. Estimate of 57 percent changed from previous revision value of 42 percent. Estimate challenged by: D-R-S-

2016: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 57 percent based on 1 survey(s). Programme reports district level vaccine supply disruptions for all vaccines in the infant immunization series. Estimate of 57 percent changed from previous revision value of 42 percent. Estimate challenged by: D-R-S-

2015: Estimate of 42 percent assigned by working group. Estimate is based on survey results. Nigeria Multiple Indicator Cluster Survey 2016-2017 card or history results of 34 percent modifed for recall bias to 42 percent based on 1st dose card or history coverage of 49 percent, 1st dose card only coverage of 27 percent and 3rd dose card only coverage of 23 percent. Programme acknowledges challenges in data quality impacting on administrative coverage levels, including delays and incomplete reporting. Estimate challenged by: D-R-S-

2014: Estimate of 43 percent assigned by working group. Estimate is based on survey coverage level. Nigeria Multiple Indicator Cluster Survey 2016-2017 card or history results of 32 percent modifed for recall bias to 43 percent based on 1st dose card or history coverage of 48 percent, 1st dose card only coverage of 18 percent and 3rd dose card only coverage of 16 percent. Reported data excluded. 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. Estimate challenged by: D-R-S-

2013: Reported data calibrated to 2012 and 2014 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. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stock-out. Estimate challenged by: D-R-

2012: Estimate of 42 percent assigned by working group. Estimate is based on survey result for DTP3. 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 due to an increase from 57 percent to 84 percent with decrease 65 percent. DTP-HepB-Hib pentavalent vaccine introduced in 2012. Estimate challenged by: D-R-

2011: Reported data calibrated to 2010 and 2012 levels. Reported data excluded due to 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 challenged by: D-R-

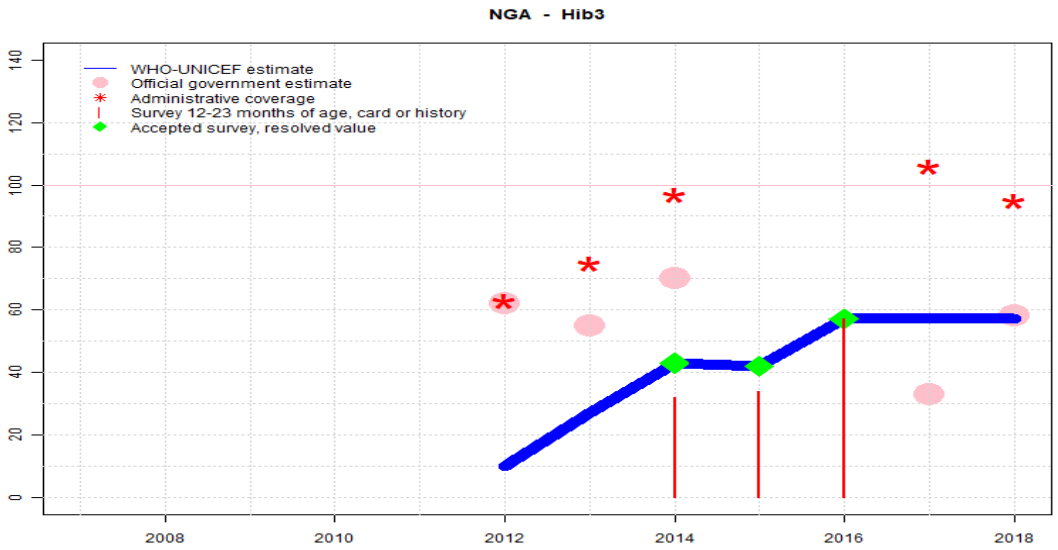
2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 49 percent based on 1 survey(s). Nigeria Multiple Indicator Cluster Survey 2011 card or history results of 36 percent modifed for recall bias to 49 percent based on 1st dose card or history coverage of 55 percent, 1st dose card only coverage of 29 percent and 3rd 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-

2009: Estimate of 63 percent assigned by working group. Estimates based on DTP3 levels. Survey suggests that 60 percent of immunization services are obtained from fixed sites. Estimate challenged by: R-S-

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

2007: Estimate of 42 percent assigned by working group. Estimates based on DTP3 levels. Estimate challenged by: R-

Nigeria - Hib3



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Estimate	NA	NA	NA	NA	NA	10	27	43	42	57	57	57
Estimate GoC	NA	NA	NA	NA	NA	•	•	•	•	•	•	•
Official	NA	NA	NA	NA	NA	62	55	70	NA	NA	33	58
Administrative	NA	NA	NA	NA	NA	63	75	97	NA	NA	106	95
Survey	NA	NA	NA	NA	NA	NA	NA	32	34	57	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: 2017 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:

2018: Reported data calibrated to 2017 levels. Reported data excluded due to sudden change in coverage from 33 level to 58 percent. WHO and UNICEF await the 2018 DHS final results that may help elucidate trends in coverage in a time of intensification of vaccination activities. See comment in 2017. Official estimates based on a review of strategic plan targets, 2018 Nutrition and Health Survey results, and routine immunization lot-quality assurance survey results. Sharp increases between 2015 and 2016-18 period may be partially explained by the timing of survey fieldwork vis-a-vis investments and activity to improve routine immunization. Estimate challenged by: D-R-

2017: Estimate of 57 percent assigned by working group. Estimate is based on estimated DTP3 coverage. Estimate of 57 percent changed from previous revision value of 42 percent. Estimate challenged by: D-R-S-

2016: Estimate of 57 percent assigned by working group. Estimate is based on estimated DTP3 coverage. Programme reports district level vaccine supply disruptions for all vaccines in the infant immunization series. Estimate of 57 percent changed from previous revision value of 42 percent. Estimate challenged by: D-S-

2015: Estimate of 42 percent assigned by working group. Estimate is based on survey results. Nigeria Multiple Indicator Cluster Survey 2016-2017 card or history results of 34 percent modifed for recall bias to 42 percent based on 1st dose card or history coverage of 49 percent, 1st dose card only coverage of 27 percent and 3rd dose card only coverage of 23 percent. Programme acknowledges challenges in data quality impacting on administrative coverage levels, including delays and incomplete reporting. Estimate challenged by: D-S-

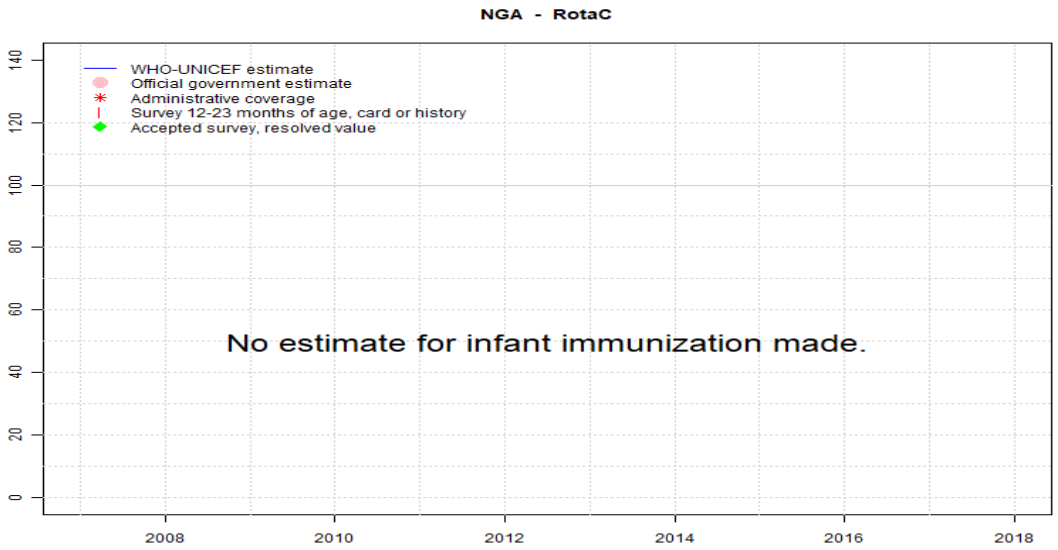
2014: Estimate of 43 percent assigned by working group. Estimate is based on survey coverage level. Nigeria Multiple Indicator Cluster Survey 2016-2017 card or history results of 32 percent modifed for recall bias to 43 percent based on 1st dose card or history coverage of 48 percent, 1st dose card only coverage of 18 percent and 3rd dose card only coverage of 16 percent. Reported data excluded. 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. Estimate challenged by: D-R-S-

2013: Estimate based on interpolation between 2012 and 2014 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. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. Estimate may overestimate coverage as DTP-HepB-Hib continued to be introduced across the country during the year but was not nationally available in all areas until 2014. Estimate challenged by: D-R-S-

2012: Estimate of 10 percent assigned by working group. 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-

Nigeria - RotaC



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
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.

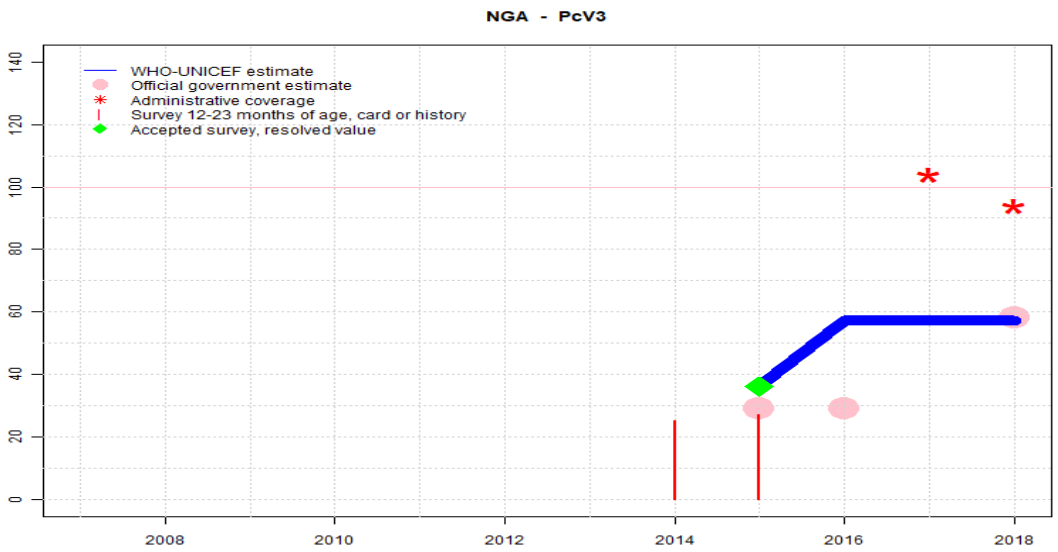
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2017 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	36	57	57	57
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	29	29	NA	58
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	104	94
Survey	NA	NA	NA	NA	NA	NA	NA	25	27	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: 2017 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:

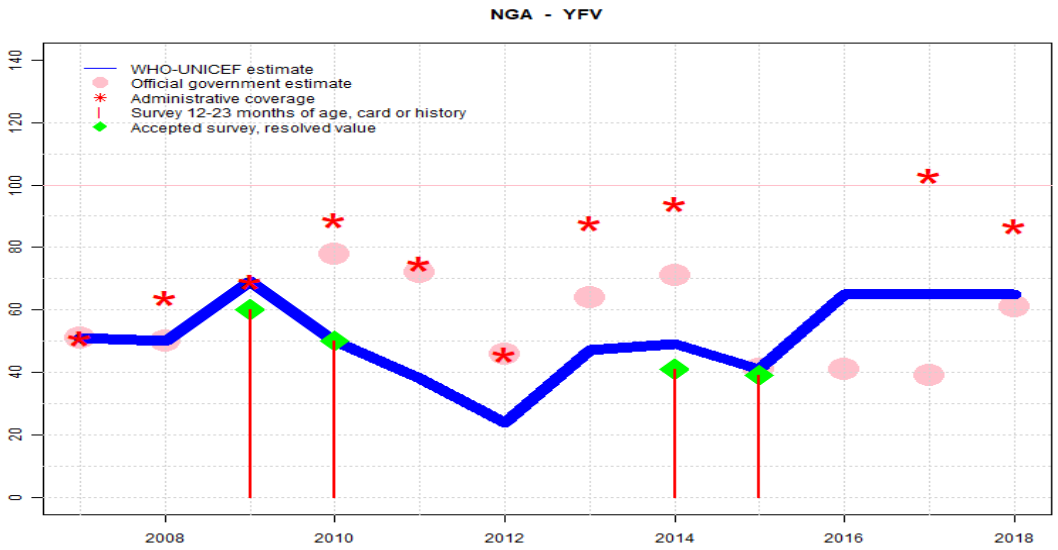
2018: Reported data calibrated to 2017 levels. Reported data excluded due to decline in reported coverage from 104 level to 58 percent. WHO and UNICEF await the 2018 DHS final results that may help elucidate trends in coverage in a time of intensification of vaccination activities. See comment in 2017.Official estimates based on a review of strategic plan targets, 2018 Nutrition and Health Survey results, and routine immunization lot-quality assurance survey results. Estimate challenged by: D-R-

2017: Estimate of 57 percent assigned by working group. Estimate is based on estimated DTP3 coverage. Reported data excluded because 104 percent greater than 100 percent. Reported data excluded due to an increase from 29 percent to 104 percent with decrease 58 percent. Preliminary 2018 DHS results suggest 47 percent coverage for the 2017 cohort. Estimate of 57 percent changed from previous revision value of 36 percent. Estimate challenged by: D-R-S-

2016: Estimate of 57 percent assigned by working group. Estimate is based on estimated DTP3 coverage. Programme reports district level vaccine supply disruptions for all vaccines in the infant immunization series. Reported official government estimate received June 2017 is based on preliminary 2016 MICS-NICS results applied to the 2015 birth cohort. Estimate of 57 percent changed from previous revision value of 36 percent. Estimate challenged by: R-S-

2015: Estimate based on results of the 2016 MICS-NICS survey adjusted for recall bias. Nigeria Multiple Indicator Cluster Survey 2016-2017 card or history results of 27 percent modifed for recall bias to 36 percent based on 1st dose card or history coverage of 40 percent, 1st dose card only coverage of 19 percent and 3rd dose card only coverage of 17 percent. Programme acknowledges challenges in data quality impacting on administrative coverage levels, including delays and incomplete reporting. Pneumococcal conjugate vaccine introduced in 2015. Estimate challenged by: D-R-

Nigeria - YFV



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Estimate	51	50	69	50	38	24	47	49	41	65	65	65
Estimate GoC	●●●	●	●	●	●	●	●	●	●	●	●	●
Official	51	50	NA	78	72	46	64	71	41	41	39	61
Administrative	51	64	69	89	75	46	88	94	NA	NA	103	87
Survey	NA	NA	60	50	NA	NA	NA	41	39	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: 2017 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:

2018: Estimate based on estimated MCV1 coverage. Reported data excluded due to sudden change in coverage from 39 level to 61 percent. WHO and UNICEF await the 2018 DHS final results that may help elucidate trends in coverage in a time of intensification of vaccination activities. See comment in 2017.Official estimates based on a review of strategic plan targets, 2018 Nutrition and Health Survey results, and routine immunization lot-quality assurance survey results. Estimate challenged by: D-R-

2017: Estimate based on estimated MCV1 coverage. Estimate of 65 percent changed from previous revision value of 39 percent. Estimate challenged by: D-R-S-

2016: Estimate of 65 percent assigned by working group. Estimate based on survey result. Programme reports district level vaccine supply disruptions for all vaccines in the infant immunization series. Reported official government estimate received June 2017 is based on preliminary 2016 MICS-NICS results applied to the 2016 birth cohort. WHO and UNICEF await the final results of the Nigeria MICS-NICS for the 2015 birth cohort and encourage a comprehensive review and revision of the historical time-series. Estimate of 65 percent changed from previous revision value of 39 percent. Estimate challenged by: D-R-S-

2015: Estimate based on coverage reported by national government supported by survey. Survey evidence of 39 percent based on 1 survey(s). Programme acknowledges challenges in data quality impacting on administrative coverage levels, including delays and incomplete reporting. Reported official government estimate received June 2017 is based on preliminary 2016 MICS-NICS results applied to the 2015 birth cohort. WHO and UNICEF await the final results of the Nigeria MICS-NICS for the 2015 birth cohort and encourage a comprehensive review and revision of the historical time-series. Estimate of 41 percent changed from previous revision value of 39 percent. Estimate challenged by: D-

2014: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 41 percent based on 1 survey(s). Reported data excluded. 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. Estimate of 49 percent changed from previous revision value of 41 percent. Estimate challenged by: D-

2013: Estimate of 47 percent assigned by working group. Estimate is based on estimated MCV1 coverage level. 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 challenged by: D-R-

2012: Estimate of 24 percent assigned by working group. Five-month vaccine stock-out 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 due to decline in reported coverage from 72 percent to 46 percent with increase to 64 percent. 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 challenged by: D-R-S-

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 due to an 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-

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. Estimate challenged by: S-

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

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

Nigeria - survey details

2016 Nigeria National Nutrition and Health Survey (NNHS) 2018

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
DTP1	Card or History	69.9	12-23 m	3976	40
DTP3	Card or History	57.2	12-23 m	3976	40
HepB1	Card or History	69.9	12-23 m	3976	40
HepB3	Card or History	57.2	12-23 m	3976	40
Hib1	Card or History	69.9	12-23 m	3976	40
Hib3	Card or History	57.2	12-23 m	3976	40
MCV1	Card or History	64.7	12-23 m	3976	40

2015 Nigeria Multiple Indicator Cluster Survey 2016-2017

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	52.8	12-23 m	5535	29
BCG	Card	27.8	12-23 m	5535	29
BCG	Card or History	53.1	12-23 m	5535	29
BCG	History	25.3	12-23 m	5535	29
DTP1	C or H <12 months	48.8	12-23 m	5535	29
DTP1	Card	26.9	12-23 m	5535	29
DTP1	Card or History	49.3	12-23 m	5535	29
DTP1	History	22.3	12-23 m	5535	29
DTP3	C or H <12 months	33.6	12-23 m	5535	29
DTP3	Card	23	12-23 m	5535	29
DTP3	Card or History	34.4	12-23 m	5535	29
DTP3	History	11.4	12-23 m	5535	29
HepB1	C or H <12 months	48.8	12-23 m	5535	29
HepB1	Card	26.9	12-23 m	5535	29
HepB1	Card or History	49.3	12-23 m	5535	29
HepB1	History	22.3	12-23 m	5535	29
HepB3	C or H <12 months	33.6	12-23 m	5535	29
HepB3	Card	23	12-23 m	5535	29
HepB3	Card or History	34.4	12-23 m	5535	29
HepB3	History	11.4	12-23 m	5535	29
HepBB	C or H <12 months	30	12-23 m	5535	29
HepBB	Card	20.3	12-23 m	5535	29
HepBB	Card or History	30.1	12-23 m	5535	29
HepBB	History	9.7	12-23 m	5535	29
Hib1	C or H <12 months	48.8	12-23 m	5535	29
Hib1	Card	26.9	12-23 m	5535	29
Hib1	Card or History	49.3	12-23 m	5535	29
Hib1	History	22.3	12-23 m	5535	29
Hib3	C or H <12 months	33.6	12-23 m	5535	29
Hib3	Card	23	12-23 m	5535	29
Hib3	Card or History	34.4	12-23 m	5535	29
Hib3	History	11.4	12-23 m	5535	29
IPV1	C or H <12 months	40.2	12-23 m	5535	29
IPV1	Card	18.8	12-23 m	5535	29
IPV1	Card or History	42.4	12-23 m	5535	29
IPV1	History	23.6	12-23 m	5535	29
MCV1	C or H <12 months	38.5	12-23 m	5535	29
MCV1	Card	20.4	12-23 m	5535	29
MCV1	Card or History	41.8	12-23 m	5535	29
MCV1	History	21.4	12-23 m	5535	29
PCV1	C or H <12 months	38.8	12-23 m	5535	29
PCV1	Card	19.3	12-23 m	5535	29
PCV1	Card or History	39.6	12-23 m	5535	29
PCV1	History	20.4	12-23 m	5535	29
PCV3	C or H <12 months	26.2	12-23 m	5535	29
PCV3	Card	16.6	12-23 m	5535	29
PCV3	Card or History	27.2	12-23 m	5535	29
PCV3	History	10.7	12-23 m	5535	29
Pol1	C or H <12 months	49.8	12-23 m	5535	29
Pol1	Card	25.5	12-23 m	5535	29
Pol1	Card or History	50.4	12-23 m	5535	29
Pol1	History	25	12-23 m	5535	29
Pol3	C or H <12 months	34	12-23 m	5535	29
Pol3	Card	21.4	12-23 m	5535	29
Pol3	Card or History	34.7	12-23 m	5535	29
Pol3	History	13.3	12-23 m	5535	29
YFV	C or H <12 months	36	12-23 m	5535	29
YFV	Card	19.6	12-23 m	5535	29
YFV	Card or History	39	12-23 m	5535	29
YFV	History	19.3	12-23 m	5535	29

2014 Nigeria Multiple Indicator Cluster Survey 2016-2017

Nigeria - survey details

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	49.1	24-35 m	5514	29
BCG	Card	18.4	24-35 m	5514	29
BCG	Card or History	50.9	24-35 m	5514	29
BCG	History	32.5	24-35 m	5514	29
DTP1	C or H <12 months	44.7	24-35 m	5514	29
DTP1	Card	18.4	24-35 m	5514	29
DTP1	Card or History	47.8	24-35 m	5514	29
DTP1	History	29.4	24-35 m	5514	29
DTP3	C or H <12 months	28.3	24-35 m	5514	29
DTP3	Card	15.5	24-35 m	5514	29
DTP3	Card or History	32.3	24-35 m	5514	29
DTP3	History	16.8	24-35 m	5514	29
HepB1	C or H <12 months	44.7	24-35 m	5514	29
HepB1	Card	18.4	24-35 m	5514	29
HepB1	Card or History	47.8	24-35 m	5514	29
HepB1	History	29.4	24-35 m	5514	29
HepB3	C or H <12 months	28.3	24-35 m	5514	29
HepB3	Card	15.5	24-35 m	5514	29
HepB3	Card or History	32.3	24-35 m	5514	29
HepB3	History	16.8	24-35 m	5514	29
HepBB	Card	16.3	24-35 m	5514	29
HepBB	History	14.1	24-35 m	5514	29
Hib1	C or H <12 months	44.7	24-35 m	5514	29
Hib1	Card	18.4	24-35 m	5514	29
Hib1	Card or History	47.8	24-35 m	5514	29
Hib1	History	29.4	24-35 m	5514	29
Hib3	C or H <12 months	28.3	24-35 m	5514	29
Hib3	Card	15.5	24-35 m	5514	29
Hib3	Card or History	32.3	24-35 m	5514	29
Hib3	History	16.8	24-35 m	5514	29
IPV1	C or H <12 months	29.7	24-35 m	5514	29
IPV1	Card	8.2	24-35 m	5514	29
IPV1	Card or History	38.7	24-35 m	5514	29
IPV1	History	30.4	24-35 m	5514	29
MCV1	C or H <12 months	36.5	24-35 m	5514	29
MCV1	Card	15	24-35 m	5514	29
MCV1	Card or History	44.3	24-35 m	5514	29
MCV1	History	29.4	24-35 m	5514	29
PCV1	C or H <12 months	36.3	24-35 m	5514	29
PCV1	Card	12.3	24-35 m	5514	29
PCV1	Card or History	39.9	24-35 m	5514	29
PCV1	History	27.6	24-35 m	5514	29
PCV3	C or H <12 months	21.1	24-35 m	5514	29
PCV3	Card	10.2	24-35 m	5514	29
PCV3	Card or History	25.1	24-35 m	5514	29
PCV3	History	15	24-35 m	5514	29
Pol1	C or H <12 months	45.2	24-35 m	5514	29
Pol1	Card	17.2	24-35 m	5514	29
Pol1	Card or History	48.3	24-35 m	5514	29
Pol1	History	31.1	24-35 m	5514	29
Pol3	C or H <12 months	26.5	24-35 m	5514	29
Pol3	Card	14.5	24-35 m	5514	29
Pol3	Card or History	30.2	24-35 m	5514	29
Pol3	History	15.7	24-35 m	5514	29
YFV	C or H <12 months	33.4	24-35 m	5514	29
YFV	Card	14.1	24-35 m	5514	29
YFV	Card or History	41.3	24-35 m	5514	29
YFV	History	27.1	24-35 m	5514	29

2014 Nigeria National Nutrition and Health Survey, 2015

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
DTP1	Card or History	63.5	12-23 m	4205	34
DTP3	Card or History	48.8	12-23 m	4205	34
MCV1	Card or History	50.6	12-23 m	4205	34

2012 Nigeria Demographic and Health Survey 2013

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	50.3	12-23 m	5900	28
BCG	Card	27	12-23 m	1650	28
BCG	Card or History	51.2	12-23 m	5900	28
BCG	History	24.1	12-23 m	4250	28
DTP1	C or H <12 months	49.6	12-23 m	5900	28
DTP1	Card	26.7	12-23 m	1650	28
DTP1	Card or History	50.6	12-23 m	5900	28

DTP1	History	23.9	12-23 m	4250	28
DTP3	C or H <12 months	36.2	12-23 m	5900	28
DTP3	Card	22.2	12-23 m	1650	28
DTP3	Card or History	38.2	12-23 m	5900	28
DTP3	History	16	12-23 m	4250	28
MCV1	C or H <12 months	35.1	12-23 m	5900	28
MCV1	Card	21.1	12-23 m	1650	28
MCV1	Card or History	42.1	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	26.8	12-23 m	1650	28
Pol1	Card or History	76.5	12-23 m	5900	28
Pol1	History	49.7	12-23 m	4250	28
Pol3	C or H <12 months	51.2	12-23 m	5900	28
Pol3	Card	22.7	12-23 m	1650	28
Pol3	Card or History	53.6	12-23 m	5900	28
Pol3	History	30.8	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	33.7	12-23 m	3625	-
DTP3	Card or History	25	12-23 m	3625	-
MCV1	Card or History	26.9	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	61.7	12-23 m	-	24
BCG	Card	28.5	12-23 m	-	24
BCG	Card or History	62.4	12-23 m	4986	24
BCG	History	33.9	12-23 m	-	24
DTP1	C or H <12 months	59.3	12-23 m	-	24
DTP1	Card	29.3	12-23 m	-	24
DTP1	Card or History	60.4	12-23 m	4986	24
DTP1	History	31.1	12-23 m	-	24
DTP3	C or H <12 months	42.6	12-23 m	4986	24
DTP3	Card	26.5	12-23 m	-	24
DTP3	Card or History	44.7	12-23 m	4986	24
DTP3	History	18.2	12-23 m	-	24
HepB1	C or H <12 months	54.1	12-23 m	4986	24
HepB1	Card	28.8	12-23 m	-	24
HepB1	Card or History	55.1	12-23 m	4986	24
HepB1	History	26.3	12-23 m	-	24
HepB3	C or H <12 months	34	12-23 m	4986	24
HepB3	Card	26.1	12-23 m	-	24
HepB3	Card or History	35.9	12-23 m	4986	24
HepB3	History	9.8	12-23 m	-	24
HepBB	C or H <12 months	29	12-23 m	4986	24
HepBB	Card	17.7	12-23 m	-	24
HepBB	Card or History	29.3	12-23 m	4986	24
HepBB	History	11.6	12-23 m	-	24
MCV1	C or H <12 months	49.2	12-23 m	4986	24
MCV1	Card	23.8	12-23 m	-	24
MCV1	Card or History	55.6	12-23 m	4986	24
MCV1	History	31.7	12-23 m	-	24
Pol1	C or H <12 months	74.8	12-23 m	4986	24
Pol1	Card	28.3	12-23 m	-	24
Pol1	Card or History	76.4	12-23 m	4986	24
Pol1	History	48.1	12-23 m	-	24
Pol3	C or H <12 months	46.1	12-23 m	4986	24
Pol3	Card	25.3	12-23 m	-	24
Pol3	Card or History	48.8	12-23 m	4986	24
Pol3	History	23.5	12-23 m	-	24
YFV	C or H <12 months	40.4	12-23 m	4986	24
YFV	Card	22.9	12-23 m	-	24
YFV	Card or History	50.1	12-23 m	4986	24
YFV	History	27.1	12-23 m	-	24

2009 Nigeria 2010 National Immunization Coverage Survey

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	32.7	12-23 m	19551	40
BCG	Card or History	76.4	12-23 m	19551	40
DTP1	Card	28.9	12-23 m	19551	40

DTP1	Card or History	73.4	12-23 m	19551	40
DTP3	Card	24.7	12-23 m	19551	40
DTP3	Card or History	67.7	12-23 m	19551	40
MCV1	Card	21.5	12-23 m	19551	40
MCV1	Card or History	63.6	12-23 m	19551	40
Pol1	Card	27.3	12-23 m	19551	40
Pol1	Card or History	78.1	12-23 m	19551	40
Pol3	Card	23.4	12-23 m	19551	40
Pol3	Card or History	74	12-23 m	19551	40
YFV	Card	20.5	12-23 m	19551	40
YFV	Card or History	60.1	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	47.9	12-23 m	4945	26
BCG	Card	23.7	12-23 m	4945	26
BCG	Card or History	49.7	12-23 m	4945	26
BCG	History	25.9	12-23 m	4945	26
DTP1	C or H <12 months	49.4	12-23 m	4945	26
DTP1	Card	24.9	12-23 m	4945	26
DTP1	Card or History	52	12-23 m	4945	26
DTP1	History	27.1	12-23 m	4945	26
DTP3	C or H <12 months	32.8	12-23 m	4945	26
DTP3	Card	20.2	12-23 m	4945	26
DTP3	Card or History	35.4	12-23 m	4945	26
DTP3	History	15.2	12-23 m	4945	26
MCV1	C or H <12 months	33.6	12-23 m	4945	26
MCV1	Card	19.4	12-23 m	4945	26
MCV1	Card or History	41.4	12-23 m	4945	26
MCV1	History	22.1	12-23 m	4945	26
Pol1	C or H <12 months	64.1	12-23 m	4945	26
Pol1	Card	24.4	12-23 m	4945	26
Pol1	Card or History	67.8	12-23 m	4945	26
Pol1	History	43.4	12-23 m	4945	26
Pol3	C or H <12 months	36	12-23 m	4945	26
Pol3	Card	19.2	12-23 m	4945	26
Pol3	Card or History	38.7	12-23 m	4945	26
Pol3	History	19.5	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	50.5	12-23 m	3187	18
BCG	Card	16.9	12-23 m	3187	18
BCG	Card or History	51.5	12-23 m	3187	18
BCG	History	34.6	12-23 m	3187	18
DTP1	C or H <12 months	46.4	12-23 m	3187	18
DTP1	Card	17	12-23 m	3187	18
DTP1	Card or History	48.6	12-23 m	3187	18
DTP1	History	31.6	12-23 m	3187	18
DTP3	C or H <12 months	28.1	12-23 m	3187	18
DTP3	Card	14.1	12-23 m	3187	18
DTP3	Card or History	29.6	12-23 m	3187	18
DTP3	History	15.6	12-23 m	3187	18
MCV1	C or H <12 months	38.3	12-23 m	3187	18
MCV1	Card	13.9	12-23 m	3187	18
MCV1	Card or History	44	12-23 m	3187	18
MCV1	History	30.1	12-23 m	3187	18
Pol1	C or H <12 months	52.5	12-23 m	3187	18
Pol1	Card	15.6	12-23 m	3187	18
Pol1	Card or History	55.6	12-23 m	3187	18
Pol1	History	39.9	12-23 m	3187	18
Pol3	C or H <12 months	27.5	12-23 m	3187	18
Pol3	Card	12.9	12-23 m	3187	18
Pol3	Card or History	29.4	12-23 m	3187	18
Pol3	History	16.5	12-23 m	3187	18

2005 Nigeria National Immunization Coverage Survey (2006)

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	54.5	12-23 m	23414	50
BCG	Card or History	68.6	12-23 m	23414	50
DTP1	Card	36.1	12-23 m	23414	50
DTP1	Card or History	71.7	12-23 m	23414	50
DTP3	Card	25.7	12-23 m	23414	50

DTP3	Card or History	53.5	12-23 m	23414	50
HepB1	Card	29.6	12-23 m	23414	50
HepB1	Card or History	56	12-23 m	23414	50
HepB3	Card	19.5	12-23 m	23414	50
HepB3	Card or History	41.2	12-23 m	23414	50
MCV1	Card	25.8	12-23 m	23414	50
MCV1	Card or History	62.4	12-23 m	23414	50
Pol1	Card	31.7	12-23 m	23414	50
Pol1	Card or History	78.5	12-23 m	23414	50
Pol3	Card	22	12-23 m	23414	50
Pol3	Card or History	60.7	12-23 m	23414	50
YFV	Card	20.3	12-23 m	23414	50
YFV	Card or History	42.9	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	46.9	12-23 m	999	21
BCG	Card	20.2	12-23 m	999	21
BCG	Card or History	48.3	12-23 m	999	21
BCG	History	28.1	12-23 m	999	21
DTP1	C or H <12 months	38.7	12-23 m	999	21
DTP1	Card	18	12-23 m	999	21
DTP1	Card or History	42.6	12-23 m	999	21
DTP1	History	24.6	12-23 m	999	21
DTP3	C or H <12 months	20.1	12-23 m	999	21
DTP3	Card	10.4	12-23 m	999	21
DTP3	Card or History	21.4	12-23 m	999	21
DTP3	History	11	12-23 m	999	21
MCV1	C or H <12 months	31.4	12-23 m	999	21
MCV1	Card	13.5	12-23 m	999	21
MCV1	Card or History	35.9	12-23 m	999	21
MCV1	History	22.4	12-23 m	999	21
Pol1	C or H <12 months	63.7	12-23 m	999	21
Pol1	Card	17.8	12-23 m	999	21
Pol1	Card or History	67.2	12-23 m	999	21
Pol1	History	49.4	12-23 m	999	21
Pol3	C or H <12 months	26.8	12-23 m	999	21
Pol3	Card	10.7	12-23 m	999	21
Pol3	Card or History	29.4	12-23 m	999	21
Pol3	History	18.7	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	29.3	12-23 m	40777	28
DTP1	Card or History	43.2	12-23 m	40777	28
DTP3	Card or History	24.8	12-23 m	40777	28
MCV1	Card or History	25.3	12-23 m	40777	28
Pol1	Card or History	63	12-23 m	40777	28
Pol3	Card or History	38.6	12-23 m	40777	28

1998 MICS Nigeria, 1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	17.2	12-23 m	2841	25
BCG	Card or History	43	12-23 m	2841	25
BCG	History	25.8	12-23 m	2841	25
DTP1	Card	16.5	12-23 m	2841	25
DTP1	Card or History	41.1	12-23 m	2841	25
DTP1	History	25.1	12-23 m	2841	25
DTP3	Card	12.4	12-23 m	2841	25
DTP3	Card or History	23.4	12-23 m	2841	25
DTP3	History	11.1	12-23 m	2841	25
MCV1	Card	15.9	12-23 m	2841	25
MCV1	Card or History	35	12-23 m	2841	25
Pol1	Card	11.8	12-23 m	2841	25
Pol1	Card or History	37.4	12-23 m	2841	25
Pol3	Card or History	18.8	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	18.7	12-23 m	1161	-
BCG	Card or History	53.8	12-23 m	1161	-

Nigeria - survey details

BCG	History	35.1	12-23 m	1161	-
DTP1	C or H <12 months	45.7	12-23 m	1161	-
DTP1	Card	16.4	12-23 m	1161	-
DTP1	Card or History	47.4	12-23 m	1161	-
DTP1	History	31	12-23 m	1161	-
DTP3	C or H <12 months	24.8	12-23 m	1161	-
DTP3	Card	10.6	12-23 m	1161	-
DTP3	Card or History	26.3	12-23 m	1161	-
DTP3	History	15.7	12-23 m	1161	-
MCV1	C or H <12 months	32.1	12-23 m	1161	-
MCV1	Card	13.1	12-23 m	1161	-
MCV1	Card or History	40.5	12-23 m	1161	-
MCV1	History	27.4	12-23 m	1161	-
Pol1	C or H <12 months	54.3	12-23 m	1161	-
Pol1	Card	17.5	12-23 m	1161	-
Pol1	Card or History	56.8	12-23 m	1161	-
Pol1	History	39.2	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	24.8	12-23 m	1161	-
Pol3	History	14.8	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