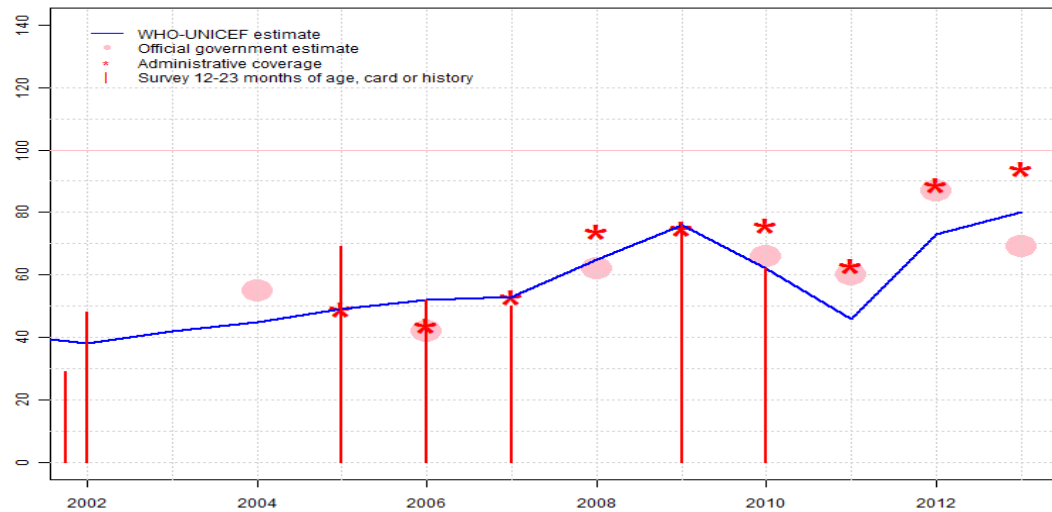


# Nigeria - BCG

NGA - BCG



|                | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 38   | 42   | 45   | 49   | 52   | 53   | 65   | 76   | 62   | 46   | 73   | 80   |
| Estimate GoC   | •    | •    | •    | •    | •    | •    | ••   | •    | •    | •    | •    | •    |
| Official       | NA   | NA   | 55   | NA   | 42   | NA   | 62   | NA   | 66   | 60   | 87   | 69   |
| Administrative | NA   | NA   | NA   | 49   | 44   | 53   | 74   | 75   | 76   | 63   | 89   | 94   |
| Survey         | *    | NA   | NA   | 69   | 52   | 50   | NA   | 76   | 62   | NA   | NA   | NA   |

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

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

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

## Description:

- 2002: Estimates based on survey results. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: D-
- 2003: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: S-
- 2004: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-S-
- 2005: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data. Estimate challenged by: R-S-
- 2006: Estimates based on survey results. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: D-R-S-
- 2007: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 50 percent based on 1 survey(s). Estimate challenged by: S-
- 2008: Reported data calibrated to 2007 and 2009 levels. Reported data excluded. Estimates based on survey results. Fluctuations in reported data suggest poor quality administrative recording and reporting. GoC=S+ D+
- 2009: Estimate based on survey results. Survey suggests that 60 percent of immunization services are obtained from fixed sites. Estimate challenged by: R-
- 2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 62 percent based on 1 survey(s). Estimate based on level established by the 2009 survey and follows trend in the reported data..Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate of 62 percent changed from previous revision value of 68 percent. Estimate challenged by: R-S-
- 2011: Reported data calibrated to 2010 levels. Estimate based on level established by the 2009 survey and follows trend in the reported data.Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011).. Estimate of 46 percent changed from previous revision value of 60

# Nigeria - BCG

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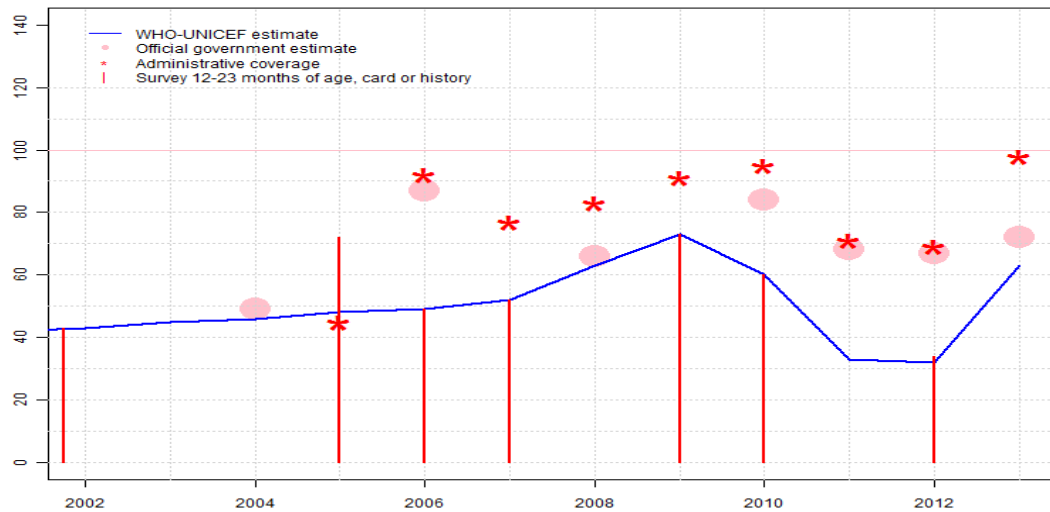
percent. Estimate challenged by: D-S-

2012: Reported data calibrated to 2010 levels. Estimate of 73 percent changed from previous revision value of 60 percent. Estimate challenged by: D-S-

2013: Reported data calibrated to 2010 levels. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. 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-S-

# Nigeria - DTP1

NGA - DTP1



|                | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 43   | 45   | 46   | 48   | 49   | 52   | 63   | 73   | 60   | 33   | 32   | 63   |
| Estimate GoC   | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    |
| Official       | NA   | NA   | 49   | NA   | 87   | NA   | 66   | NA   | 84   | 68   | 67   | 72   |
| Administrative | NA   | NA   | NA   | 45   | 92   | 77   | 83   | 91   | 95   | 71   | 69   | 98   |
| Survey         | *    | NA   | NA   | 72   | 49   | 52   | NA   | 73   | 60   | NA   | 34   | NA   |

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

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

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

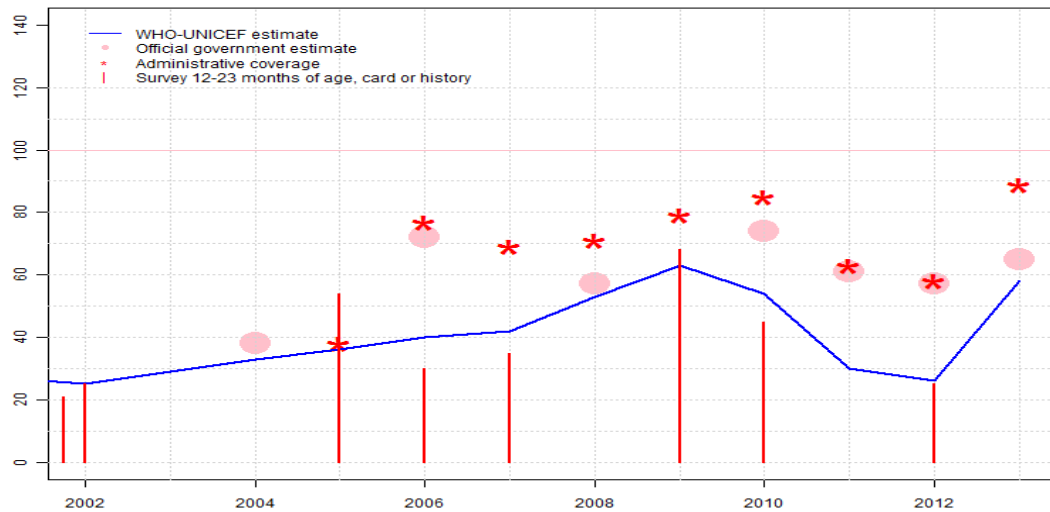
## Description:

- 2002: Estimates based on survey results. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: D-
- 2003: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: S-
- 2004: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-S-
- 2005: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data. Estimate challenged by: R-S-
- 2006: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 49 percent based on 1 survey(s). Estimate challenged by: D-R-S-
- 2007: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 52 percent based on 1 survey(s). Estimate challenged by: D-R-S-
- 2008: Reported data calibrated to 2007 and 2009 levels. Reported data excluded. Decline in reported coverage from 77 percent to 66 percent with increase to 91 percent. Estimate challenged by: D-
- 2009: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 73 percent based on 1 survey(s). Survey suggests that 60 percent of immunization services are obtained from fixed sites. Estimate challenged by: D-R-
- 2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 60 percent based on 1 survey(s). Estimate based on level established by the 2009 survey and follows trend in the reported data. Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: D-R-S-
- 2011: Reported data calibrated to 2010 levels. Estimate based on level established by the 2009 survey and follows trend in the reported data. Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011).. Estimate of 33 percent changed from previous revision value of 48

- percent. Estimate challenged by: D-S-
- 2012: Reported data calibrated to 2010 levels. Summary Findings of Cross-Sectional Health and Nutrition Survey, Nigeria 2013 results ignored by working group. Sub-national survey conducted in twenty-four states, accounting for approximately sixty-four percent of national target population. DTP-HepB-Hib pentavalent vaccine introduced in 2012. Estimate of 32 percent changed from previous revision value of 47 percent. Estimate challenged by: D-S-
- 2013: Reported data calibrated to 2010 levels. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stock-out. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. 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-S-

# Nigeria - DTP3

NGA - DTP3



|                | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 25   | 29   | 33   | 36   | 40   | 42   | 53   | 63   | 54   | 30   | 26   | 58   |
| Estimate GoC   | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    |
| Official       | NA   | NA   | 38   | NA   | 72   | NA   | 57   | NA   | 74   | 61   | 57   | 65   |
| Administrative | NA   | NA   | NA   | 38   | 77   | 69   | 71   | 79   | 85   | 63   | 58   | 89   |
| Survey         | *    | NA   | NA   | 54   | 30   | 35   | NA   | 68   | 45   | NA   | 25   | NA   |

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

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

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

## Description:

- 2002: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 25 percent based on 2 survey(s). Nigeria Demographic and Health Survey 2003 card or history results of 21 percent modified for recall bias to 24 percent based on 1st dose card or history coverage of 43 percent, 1st dose card only coverage of 18 percent and 3d dose card only coverage of 10 percent. Estimate challenged by: D-
- 2003: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: S-
- 2004: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-S-
- 2005: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data. Nigeria National Immunization Coverage Survey (2006) card or history results of 54 percent modified for recall bias to 52 percent based on 1st dose card or history coverage of 72 percent, 1st dose card only coverage of 36 percent and 3d dose card only coverage of 26 percent. Estimate challenged by: R-S-
- 2006: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 40 percent based on 1 survey(s). Nigeria Multiple Indicator Cluster Survey 2007 card or history results of 30 percent modified for recall bias to 40 percent based on 1st dose card or history coverage of 49 percent, 1st dose card only coverage of 17 percent and 3d dose card only coverage of 14 percent. Reported data excluded. Includes data from supplementary immunization activities (CHD) Estimate challenged by: D-R-S-
- 2007: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 42 percent based on 1 survey(s). Nigeria Demographic and Health Survey 2008 card or history results of 35 percent modified for recall bias to 42 percent based on 1st dose card or history coverage of 52 percent, 1st dose card only coverage of 25 percent and 3d dose card only coverage of 20 percent. Estimate challenged by: D-R-S-
- 2008: Reported data calibrated to 2007 and 2009 levels. Reported data excluded. Decline in reported coverage from 69 percent to 57 percent with increase to 79 percent. Estimate challenged by: D-
- 2009: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 63 percent based on 1 survey(s). Nigeria 2010 National Immunization Coverage Survey card or history results of 68 per-

cent modified for recall bias to 63 percent based on 1st dose card or history coverage of 73 percent, 1st dose card only coverage of 29 percent and 3d dose card only coverage of 25 percent. Survey suggests that 60 percent of immunization services are obtained from fixed sites. Estimate challenged by: D-R-

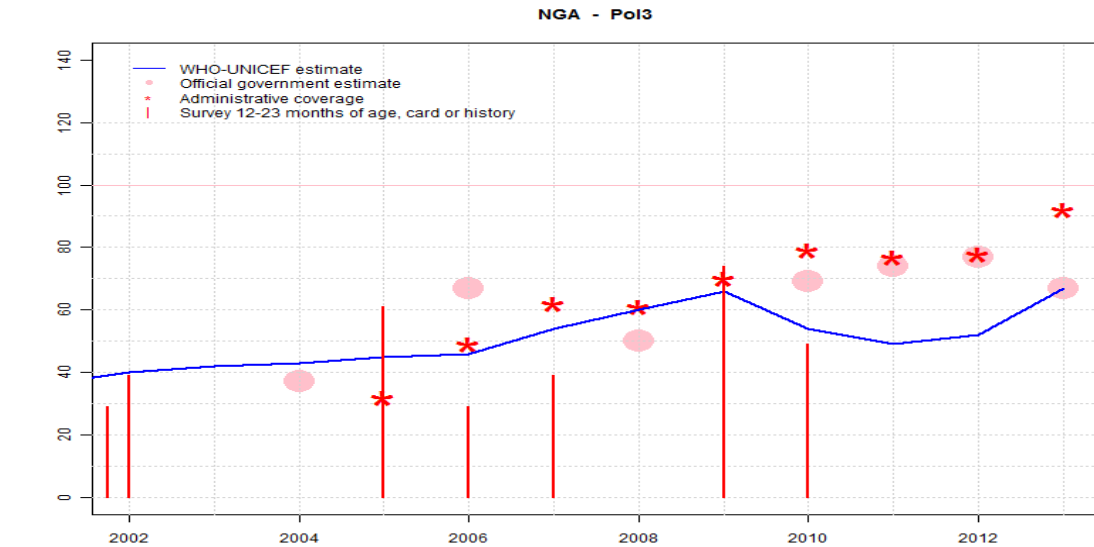
2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 54 percent based on 1 survey(s). Nigeria Multiple Indicator Cluster Survey 2011 card or history results of 45 percent modified for recall bias to 54 percent based on 1st dose card or history coverage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

2011: Reported data calibrated to 2010 levels. Estimate based on level established by the 2009 survey and follows trend in the reported data.Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011).. Estimate of 30 percent changed from previous revision value of 45 percent. Estimate challenged by: D-S-

2012: Reported data calibrated to 2010 levels. Summary Findings of Cross-Sectional Health and Nutrition Survey, Nigeria 2013 results ignored by working group. Sub-national survey conducted in twenty-four states, accounting for approximately sixty-four percent of national target population.DTP-HepB-Hib pentavalent vaccine introduced in 2012. Estimate of 26 percent changed from previous revision value of 41 percent. Estimate challenged by: D-S-

2013: Reported data calibrated to 2010 levels. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stock-out.Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout.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-S-

# Nigeria - Pol3



|                | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 40   | 42   | 43   | 45   | 46   | 54   | 60   | 66   | 54   | 49   | 52   | 67   |
| Estimate GoC   | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    |
| Official       | NA   | NA   | 37   | NA   | 67   | NA   | 50   | NA   | 69   | 74   | 77   | 67   |
| Administrative | NA   | NA   | NA   | 32   | 49   | 62   | 61   | 70   | 79   | 77   | 78   | 92   |
| Survey         | *    | NA   | NA   | 61   | 29   | 39   | NA   | 74   | 49   | NA   | NA   | NA   |

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

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

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

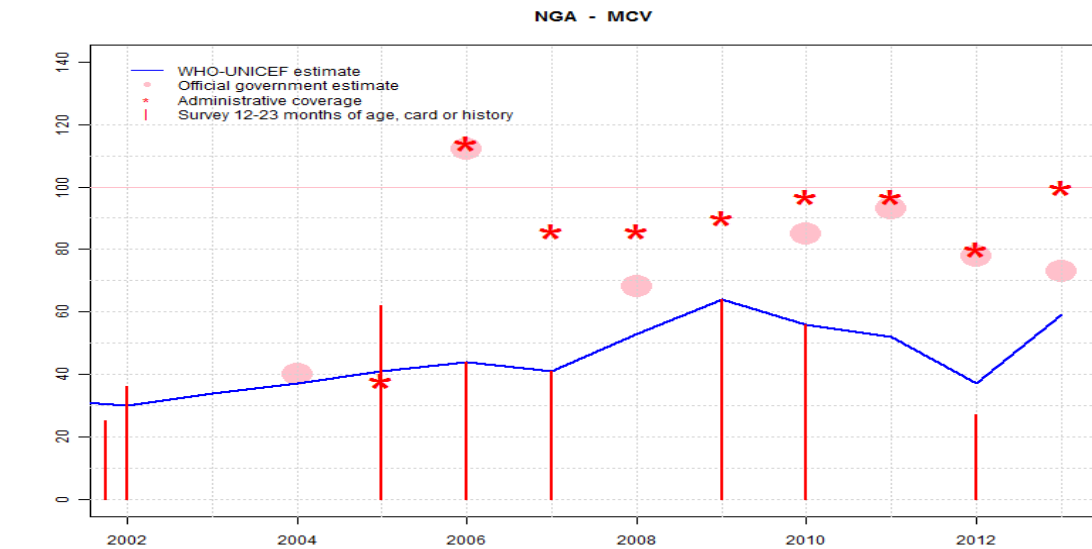
## Description:

- 2002: Anchor point resolved to survey data. Fluctuations in reported data suggest poor quality administrative recording and reporting. Nigeria Demographic and Health Survey 2003 card or history results of 29 percent modified for recall bias to 41 percent based on 1st dose card or history coverage of 67 percent, 1st dose card only coverage of 18 percent and 3d dose card only coverage of 11 percent. Estimate challenged by: D-
- 2003: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: S-
- 2004: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-S-
- 2005: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data. Nigeria National Immunization Coverage Survey (2006) card or history results of 61 percent modified for recall bias to 54 percent based on 1st dose card or history coverage of 78 percent, 1st dose card only coverage of 32 percent and 3d dose card only coverage of 22 percent. Estimate challenged by: D-R-S-
- 2006: Anchor point resolved to survey data. Fluctuations in reported data suggest poor quality administrative recording and reporting. Nigeria Multiple Indicator Cluster Survey 2007 card or history results of 29 percent modified for recall bias to 46 percent based on 1st dose card or history coverage of 56 percent, 1st dose card only coverage of 16 percent and 3d dose card only coverage of 13 percent. Estimate challenged by: R-S-
- 2007: Anchor point resolved to survey data. Fluctuations in reported data suggest poor quality administrative recording and reporting. Nigeria Demographic and Health Survey 2008 card or history results of 39 percent modified for recall bias to 54 percent based on 1st dose card or history coverage of 68 percent, 1st dose card only coverage of 24 percent and 3d dose card only coverage of 19 percent. Estimate challenged by: R-S-
- 2008: Reported data calibrated to 2007 and 2009 levels. Reported data excluded. Decline in reported coverage from 62 percent to 50 percent with increase to 70 percent. Estimate challenged by: S-
- 2009: Estimate based on survey results. Nigeria 2010 National Immunization Coverage Survey card or history results of 74 percent modified for recall bias to 66 percent based on 1st dose card or history coverage of 78 percent, 1st dose card only coverage of 27 percent and 3d dose card only coverage of 23 percent. Survey suggests that 60 percent of immunization services are



- obtained from fixed sites. Estimate challenged by: R-S-
- 2010: Estimate is based on DTP3 levels. Nigeria Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results likely include campaign doses. Nigeria Multiple Indicator Cluster Survey 2011 card or history results of 49 percent modified for recall bias to 68 percent based on 1st dose card or history coverage of 76 percent, 1st dose card only coverage of 28 percent and 3d dose card only coverage of 25 percent. Estimate based on level established by the 2009 survey and follows trend in the reported data.. Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: D-R-S-
- 2011: Reported data calibrated to 2010 levels. Estimate based on level established by the 2009 survey and follows trend in the reported data. Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011).. Estimate of 49 percent changed from previous revision value of 56 percent. Estimate challenged by: D-S-
- 2012: Reported data calibrated to 2010 levels. Estimate of 52 percent changed from previous revision value of 59 percent. Estimate challenged by: D-S-
- 2013: Reported data calibrated to 2010 levels. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. 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-S-

# Nigeria - MCV



|                | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 30   | 34   | 37   | 41   | 44   | 41   | 53   | 64   | 56   | 52   | 37   | 59   |
| Estimate GoC   | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    |
| Official       | NA   | NA   | 40   | NA   | 112  | NA   | 68   | NA   | 85   | 93   | 78   | 73   |
| Administrative | NA   | NA   | NA   | 38   | 114  | 86   | 86   | 90   | 97   | 97   | 80   | 100  |
| Survey         | *    | NA   | NA   | 62   | 44   | 41   | NA   | 64   | 56   | NA   | 27   | NA   |

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

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

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

## Description:

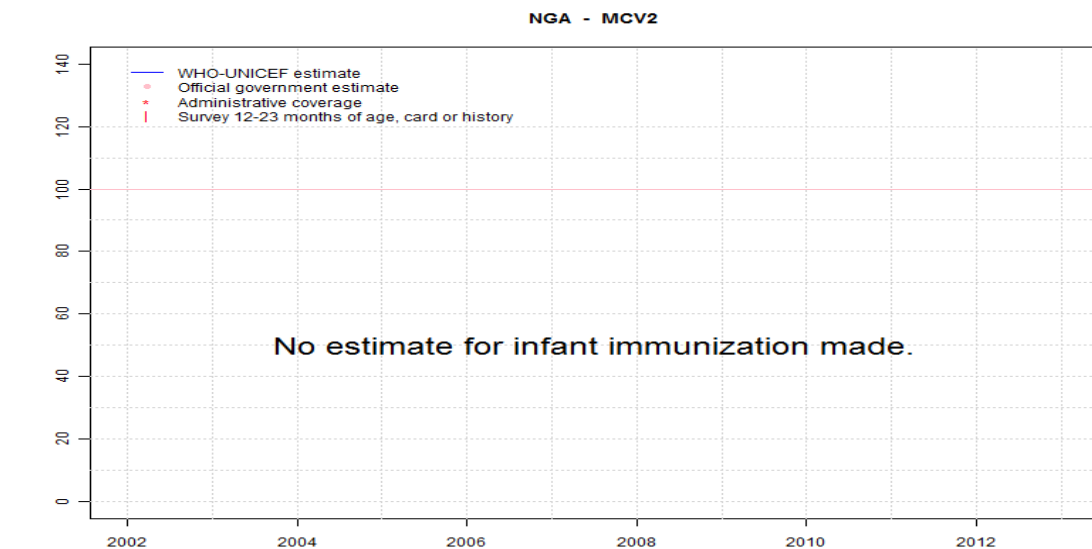
- 2002: Anchor point resolved to survey data. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: D-
- 2003: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: S-
- 2004: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-S-
- 2005: Estimate based on interpolation between 2002 and 2006 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data. Estimate challenged by: R-S-
- 2006: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 44 percent based on 1 survey(s). Reported data excluded. 112 percent greater than 100 percent. Reported data excluded. Unexplained increase from 38 percent to 112 percent with decrease 86 percent. Estimate challenged by: D-R-S-
- 2007: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 41 percent based on 1 survey(s). Estimate challenged by: D-R-S-
- 2008: Reported data calibrated to 2007 and 2009 levels. Reported data excluded. Decline in reported coverage from 86 percent to 68 percent with increase to 90 percent. Estimate challenged by: D-
- 2009: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 64 percent based on 1 survey(s). Survey suggests that 60 percent of immunization services are obtained from fixed sites. Estimate challenged by: D-R-
- 2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 56 percent based on 1 survey(s). Estimate based on level established by the 2009 survey and follows trend in the reported data..Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: D-R-S-
- 2011: Reported data calibrated to 2010 levels. Estimate based on level established by the 2009 survey and follows trend in the reported data.Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities

(measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011).. Estimate of 52 percent changed from previous revision value of 57 percent. Estimate challenged by: D-S-

2012: Reported data calibrated to 2010 levels. Summary Findings of Cross-Sectional Health and Nutrition Survey, Nigeria 2013 results ignored by working group. Sub-national survey conducted in twenty-four states, accounting for approximately sixty-four percent of national target population. Vaccine stockout reported at the district level. Estimate of 37 percent changed from previous revision value of 42 percent. Estimate challenged by: D-S-

2013: Reported data calibrated to 2010 levels. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. 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-S-

# Nigeria - MCV2



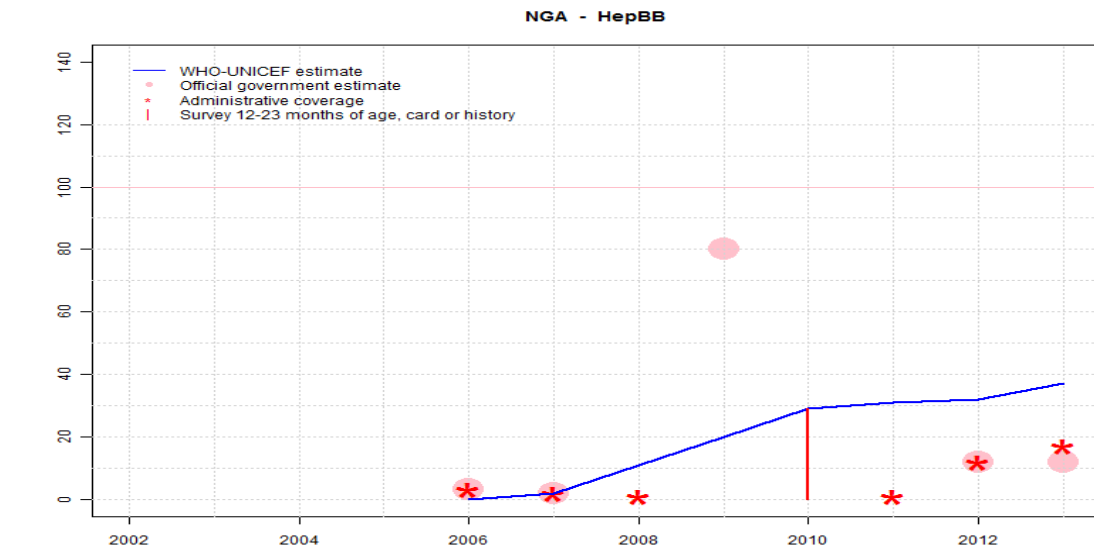
|                | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |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

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

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

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

# Nigeria - HepBB



|                | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | NA   | NA   | 0    | 2    | 11   | 20   | 29   | 31   | 32   | 37   |
| Estimate GoC   | NA   | NA   | NA   | NA   | ●●   | ●    | ●    | ●●   | ●    | ●    | ●    | ●    |
| Official       | NA   | NA   | NA   | NA   | 3    | 2    | NA   | 80   | NA   | NA   | 12   | 12   |
| Administrative | NA   | NA   | NA   | NA   | 3    | 2    | 1    | NA   | NA   | 1    | 12   | 17   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 29   | NA   | NA   | NA   |

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

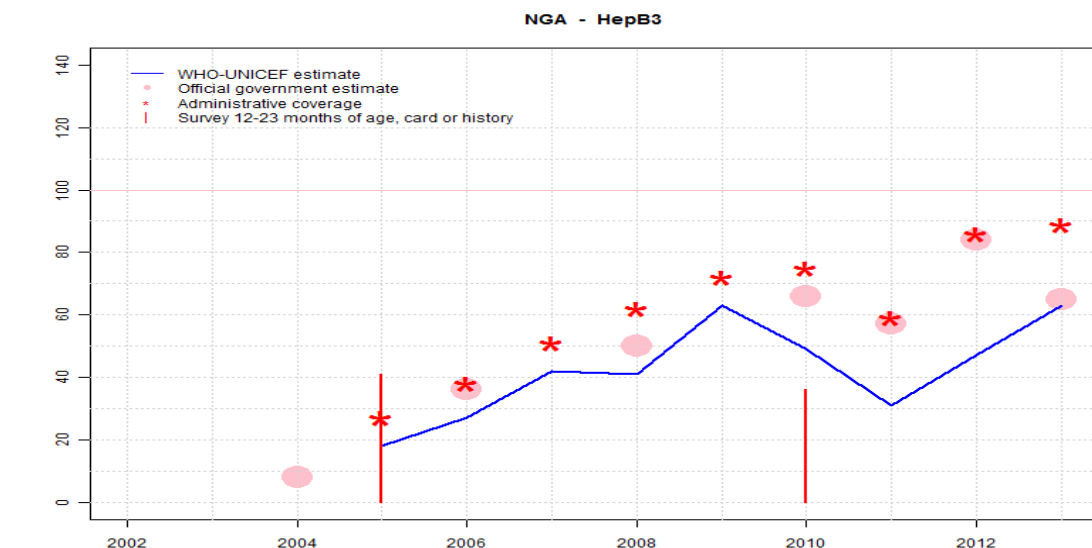
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

## Description:

- 2006: Reported data calibrated to 2007 levels. HepB birth dose introduced in 2004. Reporting began in 2006. GoC=D+
- 2007: . Reported data excluded. . Estimate challenged by: R-
- 2008: Reported data calibrated to 2007 and 2010 levels. Reported data excluded. . Estimate challenged by: D-
- 2009: Reported data calibrated to 2007 and 2010 levels. Reported data excluded. .Survey suggests that 60 percent of immunization services are obtained from fixed sites. GoC=S+
- 2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 29 percent based on 1 survey(s). Estimate based on level established by the 2009 survey and follows trend in the reported data.Institutional delivery is 45 percent..Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: S-
- 2011: Reported data calibrated to 2010 levels. Reported data excluded. . Estimate based on level established by the 2009 survey and follows trend in the reported data.Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011).. Estimate challenged by: D-S-
- 2012: Reported data calibrated to 2010 levels. Estimate challenged by: D-S-
- 2013: Reported data calibrated to 2010 levels. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout.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-S-

# Nigeria - HepB3



|                | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | NA   | 18   | 27   | 42   | 41   | 63   | 49   | 31   | 47   | 63   |
| Estimate GoC   | NA   | NA   | NA   | •    | •    | •    | •    | •    | •    | •    | •    | •    |
| Official       | NA   | NA   | 8    | NA   | 36   | NA   | 50   | NA   | 66   | 57   | 84   | 65   |
| Administrative | NA   | NA   | NA   | 27   | 38   | 51   | 62   | 72   | 75   | 59   | 86   | 89   |
| Survey         | NA   | NA   | NA   | 41   | NA   | NA   | NA   | NA   | 36   | NA   | NA   | NA   |

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

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

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

## Description:

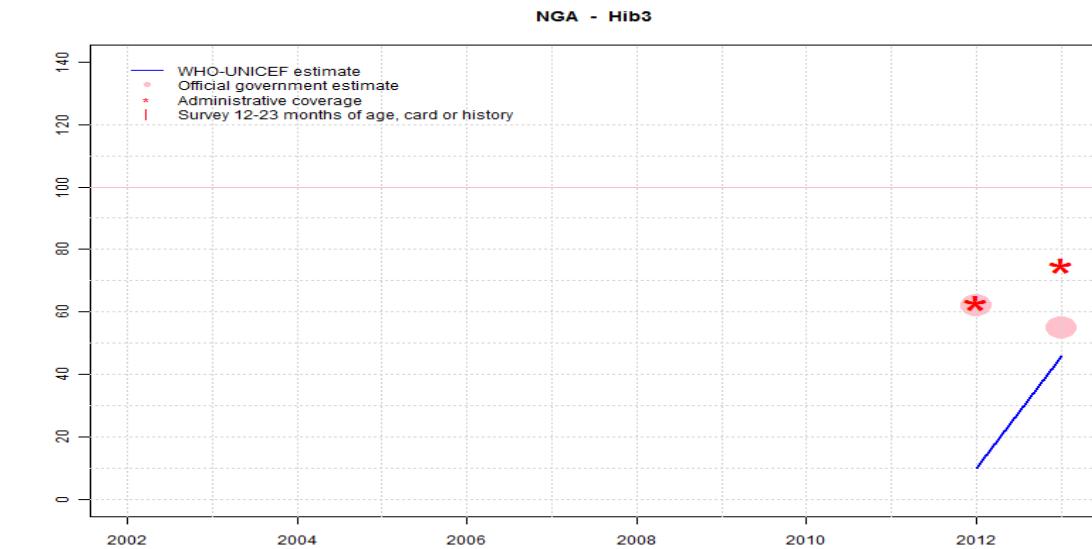
- 2005: Reported data calibrated to 2007 levels. Nigeria National Immunization Coverage Survey (2006) results ignored by working group. Survey results not consistent with comparable survey data. Nigeria National Immunization Coverage Survey (2006) card or history results of 41 percent modified for recall bias to 37 percent based on 1st dose card or history coverage of 56 percent, 1st dose card only coverage of 30 percent and 3d dose card only coverage of 20 percent. HepB vaccine introduced in 2004. Reporting started in 2005. Estimate challenged by: S-
- 2006: Reported data calibrated to 2007 levels. Estimate challenged by: S-
- 2007: Estimates based on DTP3 levels. Estimate challenged by: R-S-
- 2008: Reported data calibrated to 2007 and 2009 levels. Estimate challenged by: D-
- 2009: Estimates based on DTP3 levels. Survey suggests that 60 percent of immunization services are obtained from fixed sites. Estimate challenged by: R-
- 2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 49 percent based on 1 survey(s). Nigeria Multiple Indicator Cluster Survey 2011 card or history results of 36 percent modified for recall bias to 49 percent based on 1st dose card or history coverage of 55 percent, 1st dose card only coverage of 29 percent and 3d dose card only coverage of 26 percent. Estimate based on level established by the 2009 survey and follows trend in the reported data..Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: D-R-S-
- 2011: Reported data calibrated to 2010 levels. Estimate based on level established by the 2009 survey and follows trend in the reported data. Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011).. Estimate of 31 percent changed from previous revision value of 41 percent. Estimate challenged by: D-S-
- 2012: Reported data calibrated to 2010 levels. Reported data excluded. Sudden unexplained change from the previous year. DTP-HepB-Hib pentavalent vaccine introduced in 2012. Estimate of 47 percent changed from previous revision value of 41 percent. Estimate challenged by: D-S-
- 2013: Reported data calibrated to 2010 levels. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stock-out. Administrative data documents recovery from pentavalent DTP-HepB-

# Nigeria - HepB3

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Hib and MCV stockout. 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-S-

# Nigeria - Hib3



|                | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 10   | 46   |
| Estimate GoC   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | ●    | ●    |
| Official       | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 62   | 55   |
| Administrative | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 63   | 75   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |

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

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

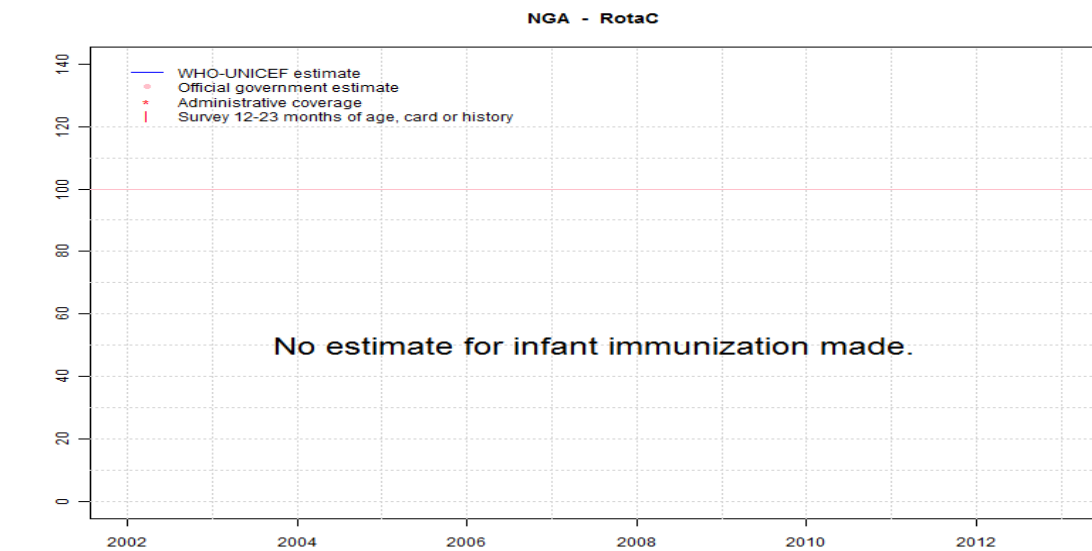
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2012: Sixty three percent coverage achieved in 16 percent of the national target population. Hib vaccine introduced in May 2012 at subnational level as part of the DTP-HepB-Hib presentation. Estimate challenged by: R-S-
- 2013: Estimated is based on DTP3 coverage adjusted for partial introduction. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. 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-S-



# Nigeria - RotaC

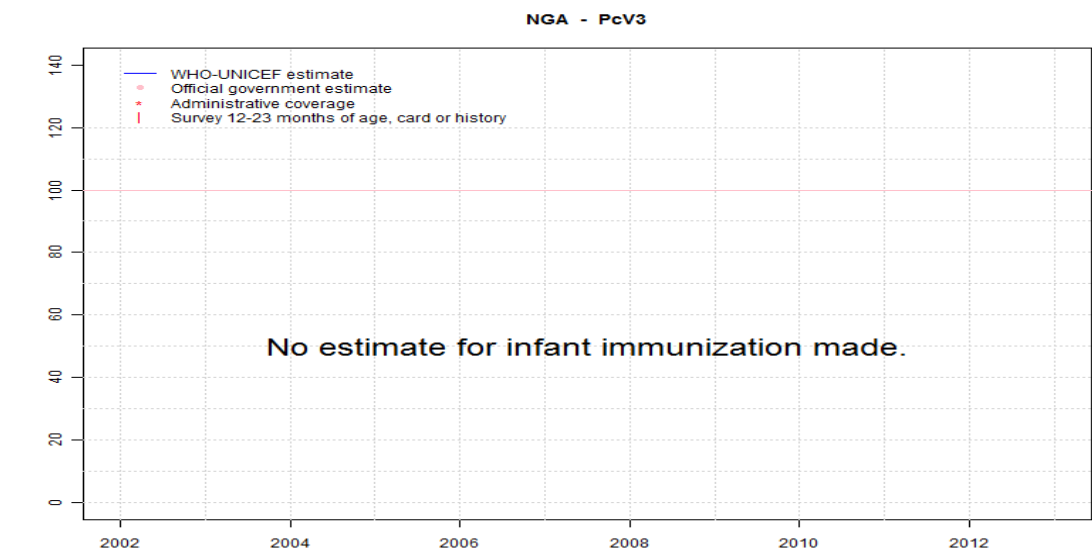


|                | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |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

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

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

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



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

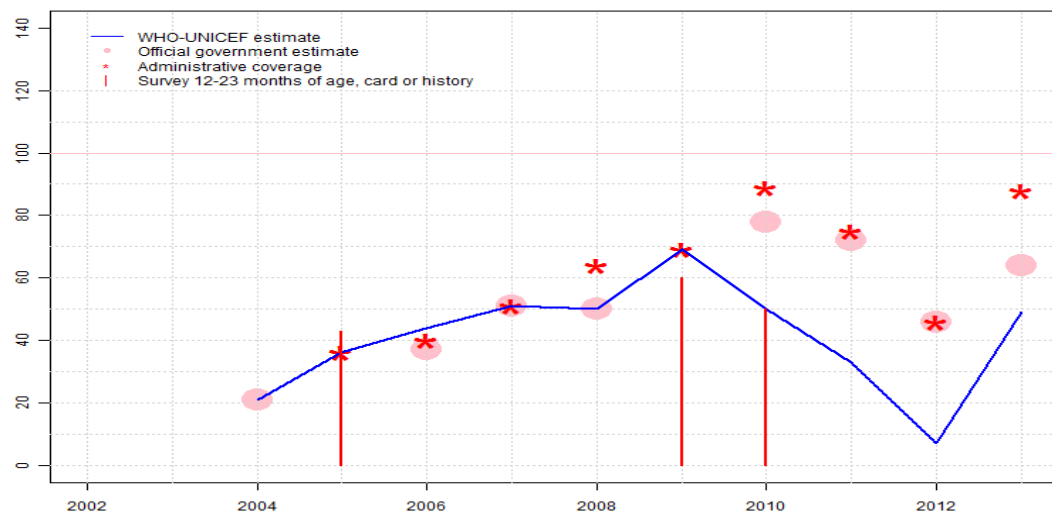
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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

# Nigeria - YFV

NGA - YFV



|                | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | 21   | 36   | 44   | 51   | 50   | 69   | 50   | 33   | 7    | 49   |
| Estimate GoC   | NA   | NA   | ••   | •••  | •    | •••  | •    | •••  | •    | •    | •    | •    |
| Official       | NA   | NA   | 21   | NA   | 37   | 51   | 50   | NA   | 78   | 72   | 46   | 64   |
| Administrative | NA   | NA   | NA   | 36   | 40   | 51   | 64   | 69   | 89   | 75   | 46   | 88   |
| Survey         | NA   | NA   | NA   | 43   | NA   | NA   | NA   | 60   | 50   | NA   | NA   | NA   |

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

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

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

## Description:

- 2004: Estimate based on reported data. YFV introduced in 2004 GoC=R+
- 2005: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 43 percent based on 1 survey(s). GoC=R+ S+ D+
- 2006: Estimate based on interpolation between 2005 and 2009 levels. Fluctuation in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-
- 2007: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 60 percent based on 1 survey(s). Survey suggests that 60 percent of immunization services are obtained from fixed sites. GoC=R+ S+ D+
- 2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 50 percent based on 1 survey(s). Estimate based on level established by the 2009 survey and follows trend in the reported data. Survey results support the trends but not the coverage levels intertemporally and across vaccines. Estimate challenged by: D-R-S-
- 2011: Reported data calibrated to 2010 levels. Estimate based on level established by the 2009 survey and follows trend in the reported data. Nigeria cites shortages of some vaccines and injection supplies (stock-out of AD syringes for 252 days), repeated health worker strike actions and security challenges in several northern states. The vaccine stock outs were due in part to the late release of funds for routine immunization in July 2012 and reallocation of routine immunization vaccine funds to other priorities (measles and polio campaigns) (2012 Nigeria GAVI progress report for 2011).. Estimate of 33 percent changed from previous revision value of 51 percent. Estimate challenged by: D-S-
- 2012: Reported data calibrated to 2010 levels. Five-month vaccine stockout reported at the national level. Estimate of 7 percent changed from previous revision value of 25 percent. Estimate challenged by: D-S-
- 2013: Reported data calibrated to 2010 levels. Administrative data documents recovery from pentavalent DTP-HepB-Hib and MCV stockout. 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-S-

# Nigeria - survey details

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

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

## 2010 Nigeria Multiple Indicator Cluster Survey 2011

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Cards seen |
|---------|---------------------|----------|------------|--------|------------|
| BCG     | C or H <12 months   | 62       | 12-23 m    | -      | 24         |
| BCG     | Card                | 28       | 12-23 m    | -      | 24         |
| BCG     | Card or History     | 62       | 12-23 m    | 4986   | 24         |
| BCG     | History             | 34       | 12-23 m    | -      | 24         |
| DTP1    | C or H <12 months   | 59       | 12-23 m    | -      | 24         |
| DTP1    | Card                | 29       | 12-23 m    | -      | 24         |
| DTP1    | Card or History     | 60       | 12-23 m    | 4986   | 24         |
| DTP1    | History             | 31       | 12-23 m    | -      | 24         |
| DTP3    | C or H <12 months   | 43       | 12-23 m    | 4986   | 24         |
| DTP3    | Card                | 26       | 12-23 m    | -      | 24         |
| DTP3    | Card or History     | 45       | 12-23 m    | 4986   | 24         |
| DTP3    | History             | 18       | 12-23 m    | -      | 24         |
| HepB1   | C or H <12 months   | 54       | 12-23 m    | 4986   | 24         |
| HepB1   | Card                | 29       | 12-23 m    | -      | 24         |
| HepB1   | Card or History     | 55       | 12-23 m    | 4986   | 24         |
| HepB1   | History             | 26       | 12-23 m    | -      | 24         |
| HepB3   | C or H <12 months   | 34       | 12-23 m    | 4986   | 24         |
| HepB3   | Card                | 26       | 12-23 m    | -      | 24         |
| HepB3   | Card or History     | 36       | 12-23 m    | 4986   | 24         |
| HepB3   | History             | 10       | 12-23 m    | -      | 24         |
| HepBB   | C or H <12 months   | 29       | 12-23 m    | 4986   | 24         |
| HepBB   | Card                | 18       | 12-23 m    | -      | 24         |
| HepBB   | Card or History     | 29       | 12-23 m    | 4986   | 24         |
| HepBB   | History             | 12       | 12-23 m    | -      | 24         |
| MCV     | C or H <12 months   | 49       | 12-23 m    | 4986   | 24         |
| MCV     | Card                | 24       | 12-23 m    | -      | 24         |
| MCV     | Card or History     | 56       | 12-23 m    | 4986   | 24         |

|      |                   |    |         |      |    |
|------|-------------------|----|---------|------|----|
| MCV  | History           | 32 | 12-23 m | -    | 24 |
| Pol1 | C or H <12 months | 75 | 12-23 m | 4986 | 24 |
| Pol1 | Card              | 28 | 12-23 m | -    | 24 |
| Pol1 | Card or History   | 76 | 12-23 m | 4986 | 24 |
| Pol1 | History           | 48 | 12-23 m | -    | 24 |
| Pol3 | C or H <12 months | 46 | 12-23 m | 4986 | 24 |
| Pol3 | Card              | 25 | 12-23 m | -    | 24 |
| Pol3 | Card or History   | 49 | 12-23 m | 4986 | 24 |
| Pol3 | History           | 24 | 12-23 m | -    | 24 |
| YFV  | C or H <12 months | 40 | 12-23 m | 4986 | 24 |
| YFV  | Card              | 23 | 12-23 m | -    | 24 |
| YFV  | Card or History   | 50 | 12-23 m | 4986 | 24 |
| YFV  | History           | 27 | 12-23 m | -    | 24 |

## 2009 Nigeria 2010 National Immunization Coverage Survey

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

## 2007 Nigeria Demographic and Health Survey 2008

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Cards seen |
|---------|---------------------|----------|------------|--------|------------|
| BCG     | C or H <12 months   | 48       | 12-23 m    | 4945   | 26         |
| BCG     | Card                | 24       | 12-23 m    | 4945   | 26         |
| BCG     | Card or History     | 50       | 12-23 m    | 4945   | 26         |

# Nigeria - survey details

|      |                   |    |         |      |    |
|------|-------------------|----|---------|------|----|
| BCG  | History           | 26 | 12-23 m | 4945 | 26 |
| DTP1 | C or H <12 months | 49 | 12-23 m | 4945 | 26 |
| DTP1 | Card              | 25 | 12-23 m | 4945 | 26 |
| DTP1 | Card or History   | 52 | 12-23 m | 4945 | 26 |
| DTP1 | History           | 27 | 12-23 m | 4945 | 26 |
| DTP3 | C or H <12 months | 33 | 12-23 m | 4945 | 26 |
| DTP3 | Card              | 20 | 12-23 m | 4945 | 26 |
| DTP3 | Card or History   | 35 | 12-23 m | 4945 | 26 |
| DTP3 | History           | 15 | 12-23 m | 4945 | 26 |
| MCV  | C or H <12 months | 34 | 12-23 m | 4945 | 26 |
| MCV  | Card              | 19 | 12-23 m | 4945 | 26 |
| MCV  | Card or History   | 41 | 12-23 m | 4945 | 26 |
| MCV  | History           | 22 | 12-23 m | 4945 | 26 |
| Pol1 | C or H <12 months | 64 | 12-23 m | 4945 | 26 |
| Pol1 | Card              | 24 | 12-23 m | 4945 | 26 |
| Pol1 | Card or History   | 68 | 12-23 m | 4945 | 26 |
| Pol1 | History           | 43 | 12-23 m | 4945 | 26 |
| Pol3 | C or H <12 months | 36 | 12-23 m | 4945 | 26 |
| Pol3 | Card              | 19 | 12-23 m | 4945 | 26 |
| Pol3 | Card or History   | 39 | 12-23 m | 4945 | 26 |
| Pol3 | History           | 20 | 12-23 m | 4945 | 26 |

## 2006 Nigeria Multiple Indicator Cluster Survey 2007

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Cards seen |
|---------|---------------------|----------|------------|--------|------------|
| BCG     | C or H <12 months   | 50       | 12-23 m    | 3187   | 18         |
| BCG     | Card                | 17       | 12-23 m    | 3187   | 18         |
| BCG     | Card or History     | 52       | 12-23 m    | 3187   | 18         |
| BCG     | History             | 35       | 12-23 m    | 3187   | 18         |
| DTP1    | C or H <12 months   | 46       | 12-23 m    | 3187   | 18         |
| DTP1    | Card                | 17       | 12-23 m    | 3187   | 18         |
| DTP1    | Card or History     | 49       | 12-23 m    | 3187   | 18         |
| DTP1    | History             | 32       | 12-23 m    | 3187   | 18         |
| DTP3    | C or H <12 months   | 28       | 12-23 m    | 3187   | 18         |
| DTP3    | Card                | 14       | 12-23 m    | 3187   | 18         |
| DTP3    | Card or History     | 30       | 12-23 m    | 3187   | 18         |
| DTP3    | History             | 16       | 12-23 m    | 3187   | 18         |
| MCV     | C or H <12 months   | 38       | 12-23 m    | 3187   | 18         |
| MCV     | Card                | 14       | 12-23 m    | 3187   | 18         |

|      |                   |    |         |      |    |
|------|-------------------|----|---------|------|----|
| MCV  | Card or History   | 44 | 12-23 m | 3187 | 18 |
| MCV  | History           | 30 | 12-23 m | 3187 | 18 |
| Pol1 | C or H <12 months | 52 | 12-23 m | 3187 | 18 |
| Pol1 | Card              | 16 | 12-23 m | 3187 | 18 |
| Pol1 | Card or History   | 56 | 12-23 m | 3187 | 18 |
| Pol1 | History           | 40 | 12-23 m | 3187 | 18 |
| Pol3 | C or H <12 months | 28 | 12-23 m | 3187 | 18 |
| Pol3 | Card              | 13 | 12-23 m | 3187 | 18 |
| Pol3 | Card or History   | 29 | 12-23 m | 3187 | 18 |
| Pol3 | History           | 16 | 12-23 m | 3187 | 18 |

## 2005 Nigeria National Immunization Coverage Survey (2006)

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

## 2002 Nigeria Demographic and Health Survey 2003

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Cards seen |
|---------|---------------------|----------|------------|--------|------------|
| BCG     | C or H <12 months   | 47       | 12-23 m    | 999    | 21         |

# Nigeria - survey details

|      |                   |    |         |     |    |
|------|-------------------|----|---------|-----|----|
| BCG  | Card              | 20 | 12-23 m | 999 | 21 |
| BCG  | Card or History   | 48 | 12-23 m | 999 | 21 |
| BCG  | History           | 28 | 12-23 m | 999 | 21 |
| DTP1 | C or H <12 months | 39 | 12-23 m | 999 | 21 |
| DTP1 | Card              | 18 | 12-23 m | 999 | 21 |
| DTP1 | Card or History   | 43 | 12-23 m | 999 | 21 |
| DTP1 | History           | 25 | 12-23 m | 999 | 21 |
| DTP3 | C or H <12 months | 20 | 12-23 m | 999 | 21 |
| DTP3 | Card              | 10 | 12-23 m | 999 | 21 |
| DTP3 | Card or History   | 21 | 12-23 m | 999 | 21 |
| DTP3 | History           | 11 | 12-23 m | 999 | 21 |
| MCV  | C or H <12 months | 31 | 12-23 m | 999 | 21 |
| MCV  | Card              | 14 | 12-23 m | 999 | 21 |
| MCV  | Card or History   | 36 | 12-23 m | 999 | 21 |
| MCV  | History           | 22 | 12-23 m | 999 | 21 |
| Pol1 | C or H <12 months | 64 | 12-23 m | 999 | 21 |
| Pol1 | Card              | 18 | 12-23 m | 999 | 21 |
| Pol1 | Card or History   | 67 | 12-23 m | 999 | 21 |
| Pol1 | History           | 49 | 12-23 m | 999 | 21 |
| Pol3 | C or H <12 months | 27 | 12-23 m | 999 | 21 |
| Pol3 | Card              | 11 | 12-23 m | 999 | 21 |
| Pol3 | Card or History   | 29 | 12-23 m | 999 | 21 |
| Pol3 | History           | 19 | 12-23 m | 999 | 21 |

## 2002 Nigeria National Immunization Coverage Survey 2003

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

## 1998 MICS Nigeria, 1999

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Cards seen |
|---------|---------------------|----------|------------|--------|------------|
|---------|---------------------|----------|------------|--------|------------|

|      |                 |    |         |      |    |
|------|-----------------|----|---------|------|----|
| BCG  | Card            | 17 | 12-23 m | 2841 | 25 |
| BCG  | Card or History | 43 | 12-23 m | 2841 | 25 |
| BCG  | History         | 26 | 12-23 m | 2841 | 25 |
| DTP1 | Card            | 16 | 12-23 m | 2841 | 25 |
| DTP1 | Card or History | 41 | 12-23 m | 2841 | 25 |
| DTP1 | History         | 25 | 12-23 m | 2841 | 25 |
| DTP3 | Card            | 12 | 12-23 m | 2841 | 25 |
| DTP3 | Card or History | 23 | 12-23 m | 2841 | 25 |
| DTP3 | History         | 11 | 12-23 m | 2841 | 25 |
| MCV  | Card            | 16 | 12-23 m | 2841 | 25 |
| MCV  | Card or History | 35 | 12-23 m | 2841 | 25 |
| Pol1 | Card            | 12 | 12-23 m | 2841 | 25 |
| Pol1 | Card or History | 37 | 12-23 m | 2841 | 25 |
| Pol3 | Card or History | 19 | 12-23 m | 2841 | 25 |

## 1998 Nigeria Demographic and Health Survey 1999, 2000

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

# Nigeria - survey details

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|      |                 |    |         |      |   |
|------|-----------------|----|---------|------|---|
| Pol3 | Card            | 10 | 12-23 m | 1161 | - |
| Pol3 | Card or History | 25 | 12-23 m | 1161 | - |
| Pol3 | History         | 15 | 12-23 m | 1161 | - |

Further information and estimates prior to 2002 are available at:

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

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

## Nigeria

### WHO/UNICEF Estimates of Protection at Birth (PAB) against tetanus

In countries where tetanus is recommended for girls and women coverage is usually reported as "TT2+", i.e. the proportion of (pregnant) women who have received their second or superior TT dose in a given year. TT2 + coverage, however, can under-represent the actual proportion of births that are protected against tetanus as it does not include women who have previously received protective doses, women who received one dose without documentation of previous doses, and women who received doses in TT (or Td) supplemental immunization activities (SIA). In addition, girls who have received DTP in their childhood and are entering childbearing age, may be protected with TT booster doses.

WHO and UNICEF have developed a model that takes into account the above scenarios, and calculates the proportion of births in a given year that can be considered as having been protected against tetanus - "Protection at Birth".

In this model, annual cohorts of women are followed from infancy through their life. A proportion receive DTP in infancy (estimated based on the WHO-UNICEF estimates of DTP3 coverage). In addition some of these women also receive TT through routine services when they are pregnant and may also receive TT during SIAs. The model also adjusts reported data, taking into account coverage patterns in other years, and/or results available through surveys. The duration of protection is then calculated, based on WHO estimates of the duration of protection by doses ever received. The proportion of births that are protected against tetanus as a result of maternal immunization reflects the tetanus immunization received by the mother throughout her life rather than simply the TT immunizations received during the current pregnancy.

| Year | PAB coverage estimate (%) |
|------|---------------------------|
| 2002 | 60                        |
| 2003 | 61                        |
| 2004 | 61                        |
| 2005 | 62                        |
| 2006 | 63                        |
| 2007 | 63                        |
| 2008 | 64                        |
| 2009 | 67                        |
| 2010 | 69                        |
| 2011 | 60                        |
| 2012 | 60                        |
| 2013 | 60                        |

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