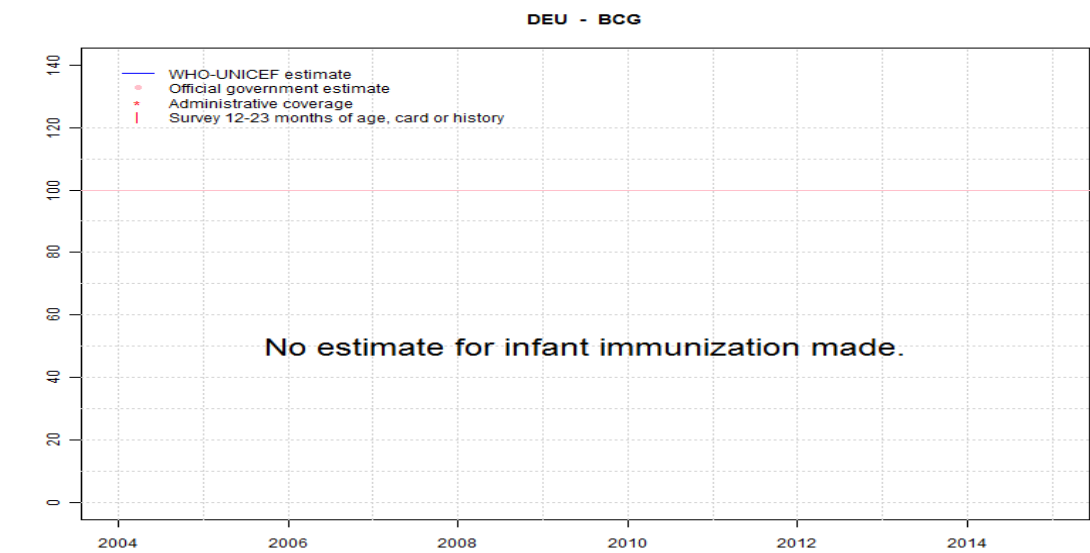


Germany - BCG



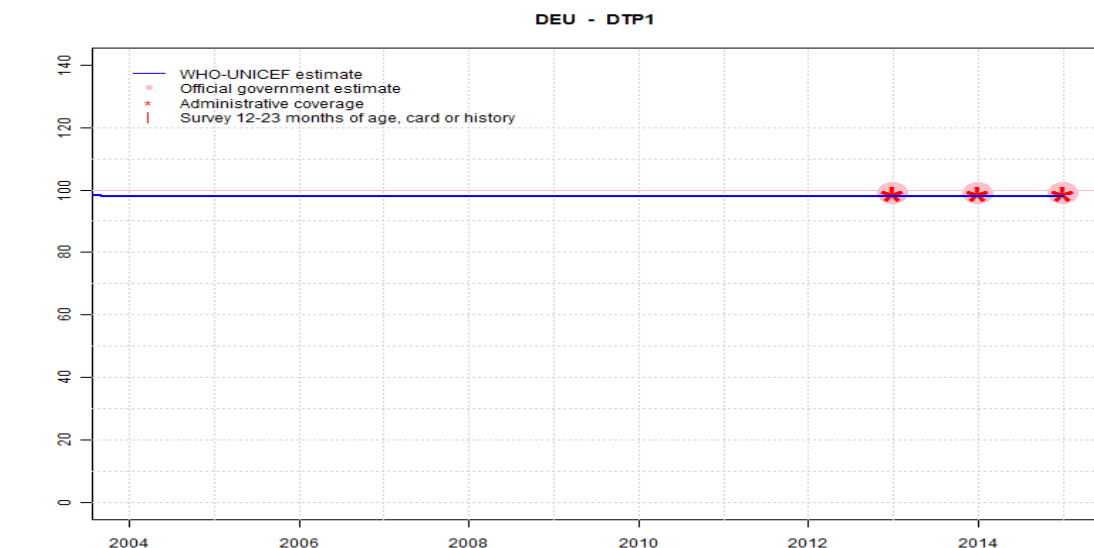
| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Estimate GoC | NA | NA | NA | NA |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

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

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

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

Germany - DTP1



| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| Estimate GoC | • | • | • | • | • | • | • | • | • | • | • | • |
| Official | NA | NA | NA | NA | NA | NA | NA | NA | NA | 99 | 99 | 99 |
| Administrative | NA | NA | NA | NA | NA | NA | NA | NA | NA | 99 | 99 | 99 |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

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

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

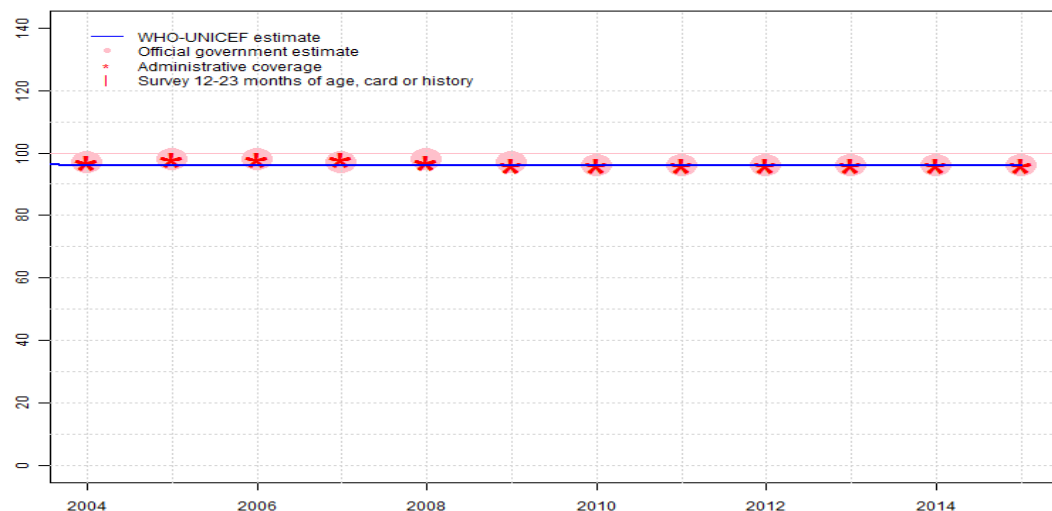
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: DTP1 coverage estimated based on DTP3 coverage of 96. GoC=No accepted empirical data
- 2005: DTP1 coverage estimated based on DTP3 coverage of 96. GoC=No accepted empirical data
- 2006: DTP1 coverage estimated based on DTP3 coverage of 96. GoC=No accepted empirical data
- 2007: DTP1 coverage estimated based on DTP3 coverage of 96. GoC=No accepted empirical data
- 2008: DTP1 coverage estimated based on DTP3 coverage of 96. GoC=No accepted empirical data
- 2009: DTP1 coverage estimated based on DTP3 coverage of 96. GoC=No accepted empirical data
- 2010: DTP1 coverage estimated based on DTP3 coverage of 96. GoC=No accepted empirical data
- 2011: DTP1 coverage estimated based on DTP3 coverage of 96. GoC=No accepted empirical data
- 2012: DTP1 coverage estimated based on DTP3 coverage of 96. GoC=No accepted empirical data
- 2013: DTP1 coverage estimated based on DTP3 coverage of 96. Estimate challenged by: D-R-
- 2014: DTP1 coverage estimated based on DTP3 coverage of 96. Estimate challenged by: D-R-
- 2015: DTP1 coverage estimated based on DTP3 coverage of 96. Estimate challenged by: D-R-

Germany - DTP3

DEU - DTP3



| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | 97 | 98 | 98 | 97 | 98 | 97 | 96 | 96 | 96 | 96 | 96 | 96 |
| Administrative | 97 | 98 | 98 | 98 | 97 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

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

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

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

Description:

- 2004: Estimates based on data reported by national government and reflects coverage for pertussis. Data reported by Germany reflect the immunization status of children 5-7 years of age collected on school entry for the 4th dose of DTP containing vaccine. Coverage levels are not reported for the 3rd dose of DTP containing vaccine. Estimates attributed to the birth cohort five years younger than the reporting year include immunizations given after one year of age and overestimate coverage during these years. The study by Rieck, et.al. suggest that coverage by 24 months of age is lower than that suggested by data reported on school entry. See <http://dx.doi.org/10.4161/hv.26986>. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2005: See explanation for the previous year. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2006: See explanation for the previous year. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2007: See explanation for the previous year. DTP3 data not available. Germany monitors DTP4 coverage rather than DTP3 coverage. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2008: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2009: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2010: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2011: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation of coverage from most recently available annual birth cohort.
- 2012: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation of coverage from most recently available annual birth cohort.
- 2013: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation of coverage from most recently available annual birth cohort.
- 2014: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working

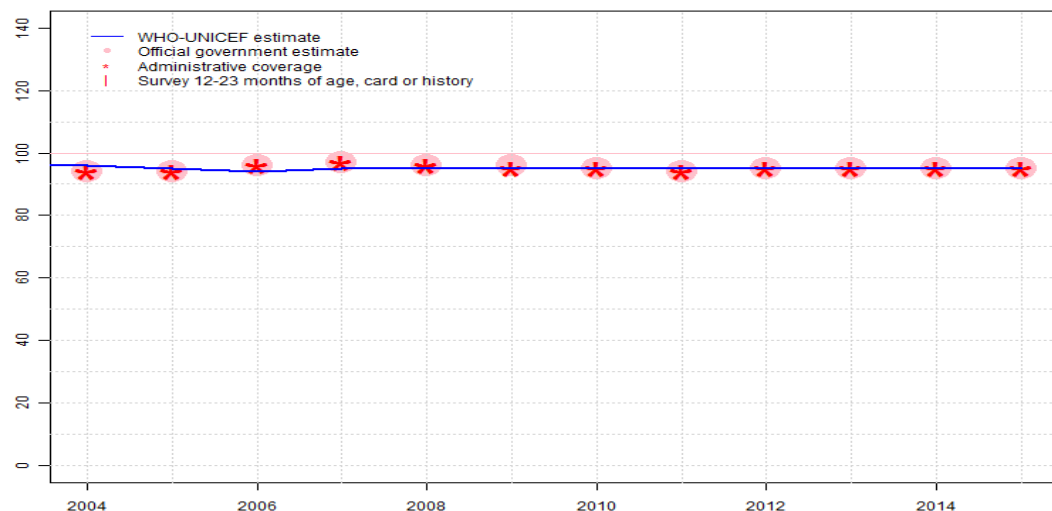
Germany - DTP3

group. GoC reflects extrapolation of coverage from most recently available annual birth cohort.

2015: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation of coverage from most recently available annual birth cohort.

Germany - Pol3

DEU - Pol3



| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 96 | 95 | 94 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | 94 | 94 | 96 | 97 | 96 | 95 | 94 | 95 | 95 | 95 | 95 | 95 |
| Administrative | 94 | 94 | 96 | 97 | 96 | 95 | 95 | 94 | 95 | 95 | 95 | 95 |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

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

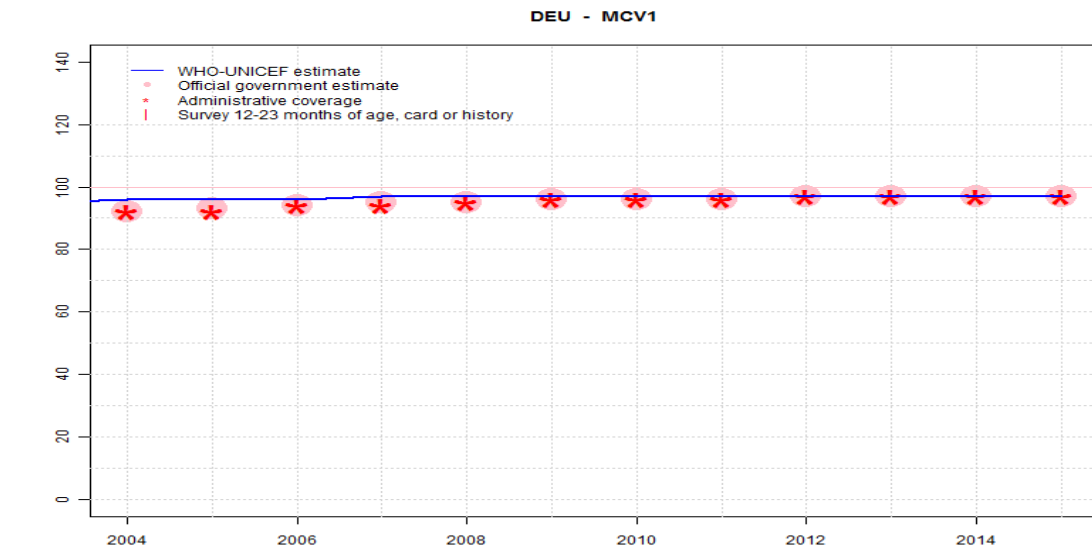
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

Description:

- 2004: Estimate is based on reported data. Data reported by Germany reflect the immunization status of children 5-7 years of age collected on school entry for the 4th dose of polio vaccine. Coverage levels are not reported for the 3rd dose of polio vaccine. Estimates attributed to the birth cohort five years younger than the reporting year include immunizations given after one year of age and overestimate coverage during these years. The study by Rieck, et.al. suggest that coverage by 24 months of age is lower than that suggested by data reported on school entry. See <http://dx.doi.org/10.4161/hv.26986>. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2005: See explanation for the previous year. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2006: See explanation for the previous year. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2007: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2008: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2009: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2010: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2011: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2012: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2013: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2014: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2015: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.

Germany - MCV1



| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 96 | 96 | 96 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | 92 | 93 | 94 | 95 | 95 | 96 | 96 | 96 | 97 | 97 | 97 | 97 |
| Administrative | 92 | 92 | 94 | 94 | 95 | 96 | 96 | 96 | 97 | 97 | 97 | 97 |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

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

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

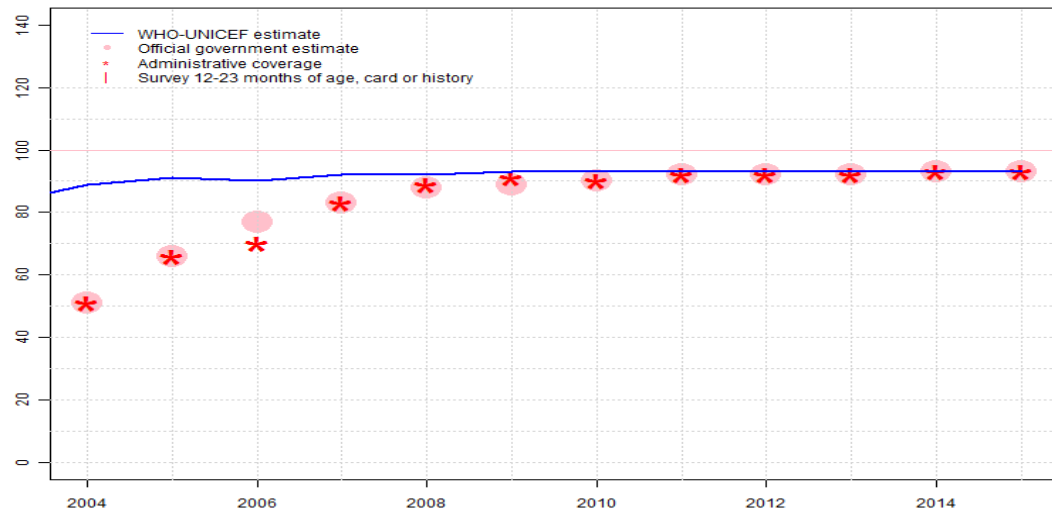
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate is based on reported data. Data reported by Germany reflect the immunization status collected on school entry of children 5-7 years of age. Estimates are attributed to the birth cohort five years younger than the reporting year. The study by Rieck, et.al. suggest that coverage by 24 months of age is lower than that suggested by data reported on school entry. See <http://dx.doi.org/10.4161/hv.26986>. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2005: See explanation for the previous year. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2006: See explanation for the previous year. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2007: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2008: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2009: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2010: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2011: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2012: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2013: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2014: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2015: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.

Germany - MCV2

DEU - MCV2



| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 89 | 91 | 90 | 92 | 92 | 93 | 93 | 93 | 93 | 93 | 93 | 93 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | 51 | 66 | 77 | 83 | 88 | 89 | 90 | 92 | 92 | 92 | 93 | 93 |
| Administrative | 51 | 66 | 70 | 83 | 89 | 91 | 90 | 92 | 92 | 92 | 93 | 93 |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

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

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

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

Description:

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

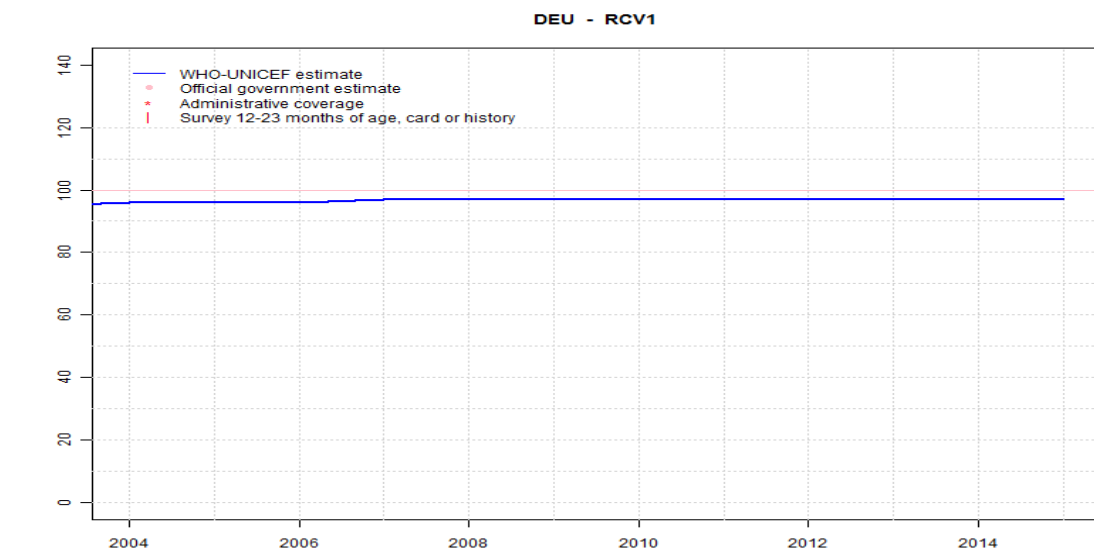
- 2004: . Data reported by Germany reflect the immunization status collected on school entry of children 5-7 years of age. Estimates are attributed to the birth cohort five years younger than the reporting year. The study by Rieck, et.al. suggest that coverage by 24 months of age is lower than that suggested by data reported on school entry. See <http://dx.doi.org/10.4161/hv.26986>. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2005: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2006: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2007: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2008: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2009: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 93 percent changed from previous revision value of 92 percent. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2010: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 93 percent changed from previous revision value of 92 percent. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2011: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 93 percent changed from previous revision value of 92 percent. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2012: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 93 percent changed from previous revision value of 92 percent. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2013: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 93 percent changed from previous revision value of 92 percent. GoC=Assigned by working

group. GoC reflects extrapolation from most recent annual birth cohort.

2014: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 93 percent changed from previous revision value of 92 percent. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.

2015: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.

Germany - RCV1



| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 96 | 96 | 96 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Administrative | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

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

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

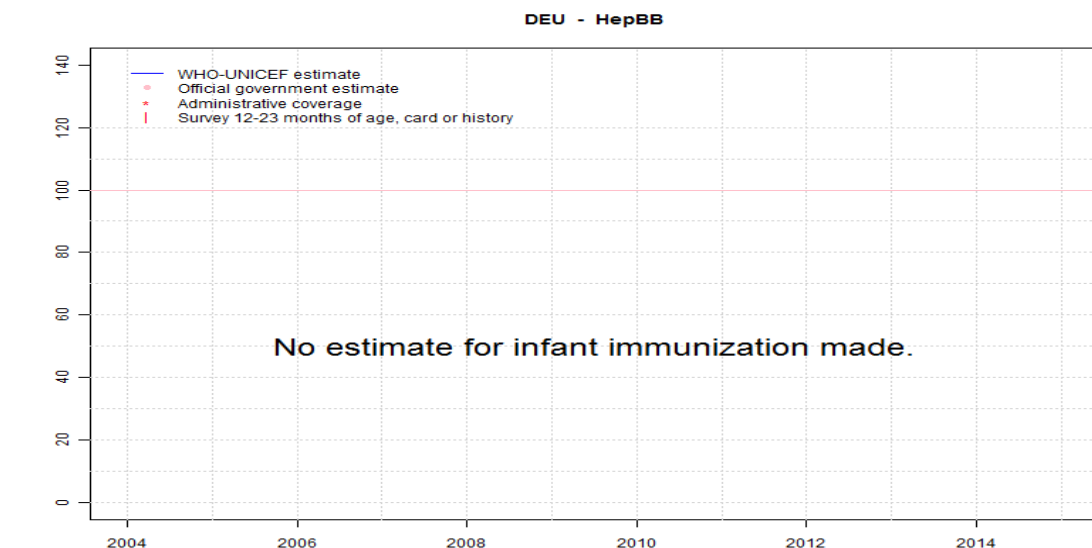
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

For this revision, coverage estimates for the first dose of rubella containing vaccine are based on WHO and UNICEF estimates of coverage of measles containing vaccine. Nationally reported coverage of rubella containing vaccine is not taken into consideration nor are they represented in the accompanying graph and data table.

- 2004: Estimate based on estimated MCV1. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2005: Estimate based on estimated MCV1. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2006: Estimate based on estimated MCV1. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2007: Estimate based on estimated MCV1. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2008: Estimate based on estimated MCV1. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2009: Estimate based on estimated MCV1. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2010: Estimate based on estimated MCV1. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2011: Estimate based on estimated MCV1. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2012: Estimate based on estimated MCV1. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2013: Estimate based on estimated MCV1. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2014: Estimate based on estimated MCV1. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2015: Estimate based on estimated MCV1. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.

Germany - HepBB



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

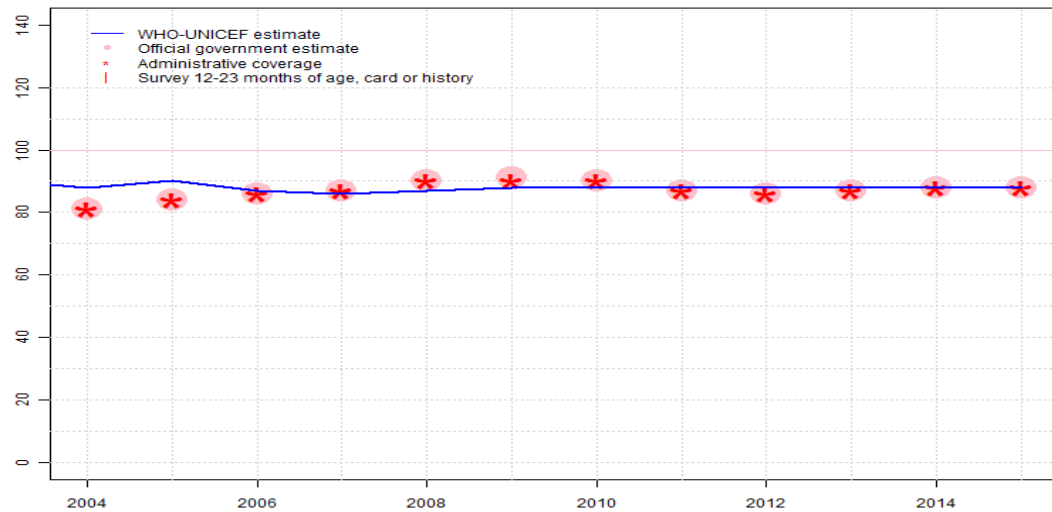
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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

Germany - HepB3

DEU - HepB3



| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 88 | 90 | 87 | 86 | 87 | 88 | 88 | 88 | 88 | 88 | 88 | 88 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | 81 | 84 | 86 | 87 | 90 | 91 | 90 | 87 | 86 | 87 | 88 | 88 |
| Administrative | 81 | 84 | 86 | 87 | 90 | 90 | 90 | 87 | 86 | 87 | 88 | 88 |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

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

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

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

Description:

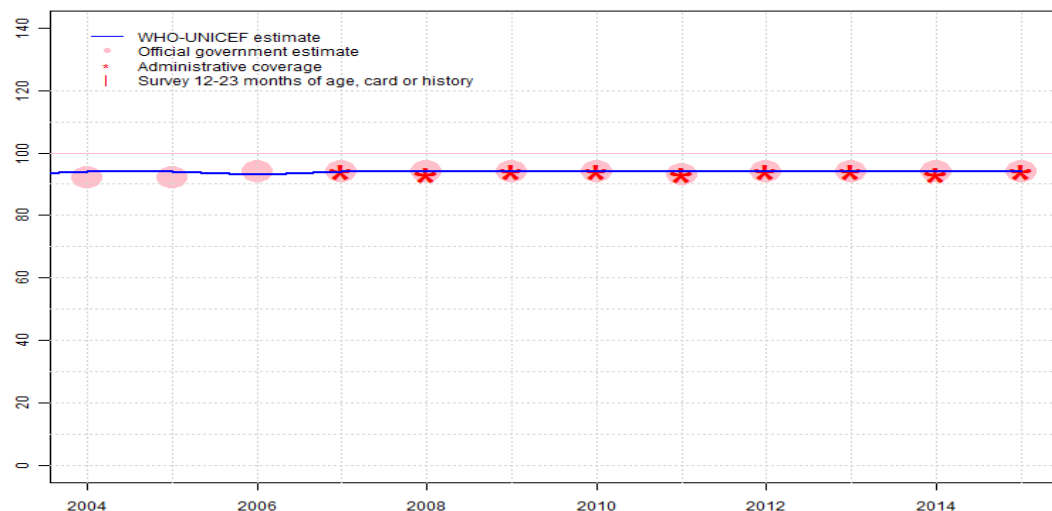
- 2004: Reported data calibrated to 2003 and 2005 levels. Data reported by Germany reflect the immunization status of children 5-7 years of age collected on school entry for the 4th dose of Hepatitis B containing vaccine. Coverage levels are not reported for the 3rd dose of Hepatitis B containing vaccine. Estimates attributed to the birth cohort five years younger than the reporting year include immunizations given after one year of age and overestimate coverage during these years. The study by Rieck, et.al. suggest that coverage by 24 months of age is lower than that suggested by data reported on school entry. See <http://dx.doi.org/10.4161/hv.26986>. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2005: See explanation for the previous year. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2006: See explanation for the previous year. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2007: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2008: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2009: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 88 percent changed from previous revision value of 87 percent. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2010: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 88 percent changed from previous revision value of 87 percent. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2011: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 88 percent changed from previous revision value of 87 percent. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2012: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 88 percent changed from previous revision value of 87 percent. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2013: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 88 percent changed from previous revision value of 87 percent. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.

Germany - HepB3

- 2014: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 88 percent changed from previous revision value of 87 percent. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2015: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.

Germany - Hib3

DEU - Hib3



| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 94 | 94 | 93 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | 92 | 92 | 94 | 94 | 94 | 94 | 94 | 93 | 94 | 94 | 94 | 94 |
| Administrative | NA | NA | NA | 94 | 93 | 94 | 94 | 93 | 94 | 94 | 93 | 94 |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

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

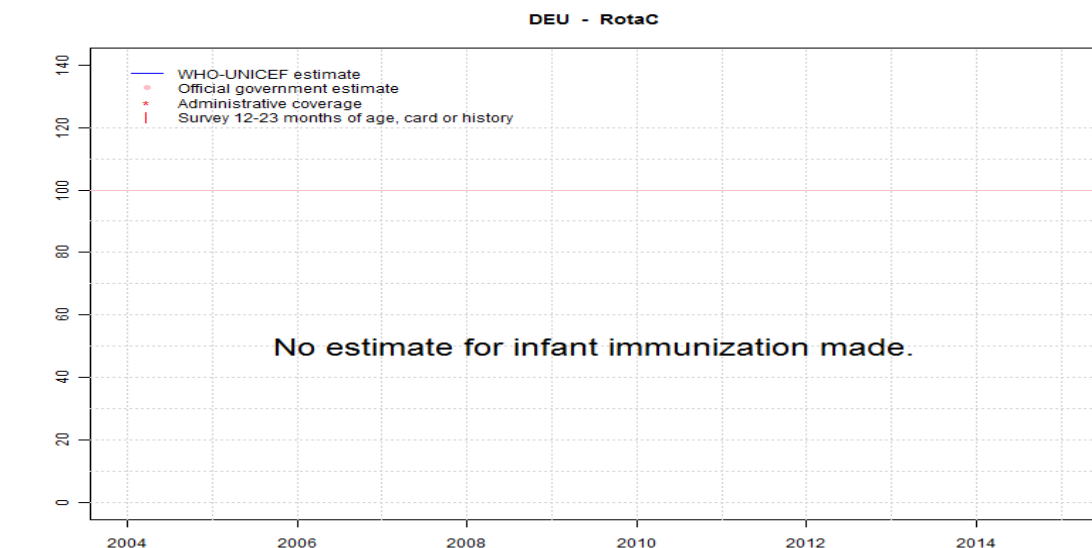
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

Description:

- 2004: Estimate is based on reported data. Data reported by Germany reflect the immunization status of children 5-7 years of age collected on school entry for the 4th dose of Hib containing vaccine. Coverage levels are not reported for the 3rd dose of Hib containing vaccine. Estimates attributed to the birth cohort five years younger than the reporting year include immunizations given after one year of age and overestimate coverage during these years. The study by Rieck, et.al. suggest that coverage by 24 months of age is lower than that suggested by data reported on school entry. See <http://dx.doi.org/10.4161/hv.26986>. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2005: See explanation for the previous year. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2006: See explanation for the previous year. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2007: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2008: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2009: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2010: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2011: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2012: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2013: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2014: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2015: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.

Germany - RotaC



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

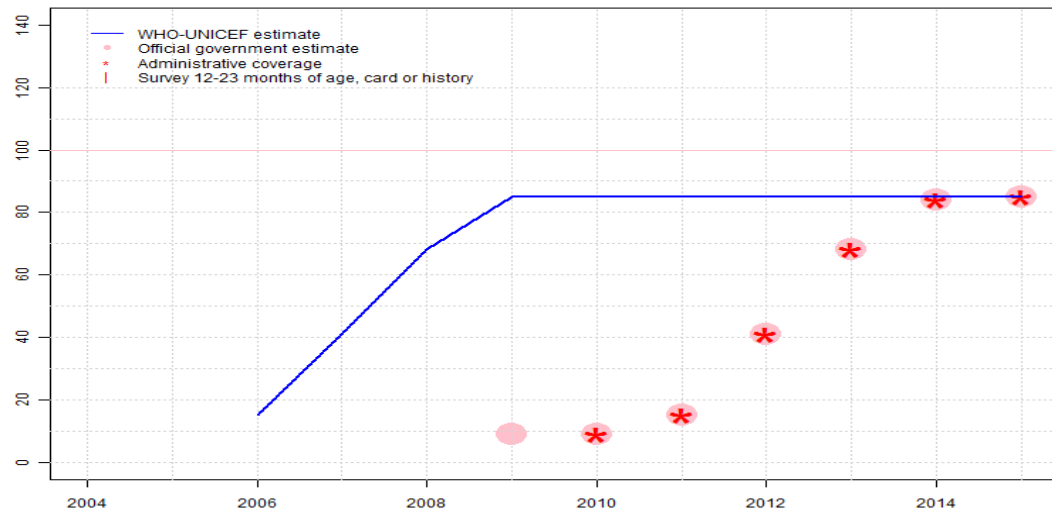
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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

Germany - PcV3

DEU - PcV3



| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | NA | NA | 15 | 41 | 68 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| Estimate GoC | NA | NA | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | NA | NA | NA | NA | NA | 9 | 15 | 41 | 68 | 84 | 85 | 85 |
| Administrative | NA | NA | NA | NA | NA | NA | 9 | 15 | 41 | 68 | 84 | 85 |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

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

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

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

Description:

- 2006: Data reported by Germany reflect the immunization status collected on school entry of children 5-7 years of age. Estimates are attributed to the birth cohort five years younger than the reporting year. The study by Rieck, et.al. suggest that coverage by 24 months of age is lower than that suggested by data reported on school entry. See <http://dx.doi.org/10.4161/hv.26986>. Pneumococcal conjugate vaccine was introduced in 2006. Data reported by Germany reflect the immunization status of children 5-7 years of age collected on school entry. Estimates attributed to the birth cohort five years younger than the reporting year include immunizations given after one year of age and overestimate coverage during these years. The study by Rieck, et.al. suggest that coverage by 24 months of age is higher than suggested by data reported on school entry. See <http://dx.doi.org/10.4161/hv.26986>. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2007: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2008: . GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2009: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 85 percent changed from previous revision value of 68 percent. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2010: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 85 percent changed from previous revision value of 68 percent. GoC=Assigned by working group. GoC reflects coverage data for birth cohort on school entry.
- 2011: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 85 percent changed from previous revision value of 68 percent. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2012: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 85 percent changed from previous revision value of 68 percent. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2013: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 85 percent changed from previous revision value of 68 percent. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.
- 2014: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. Estimate of 85 percent changed

from previous revision value of 68 percent. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.

2015: See explanation for the previous year. Estimates based on extrapolation from data reported by national government. GoC=Assigned by working group. GoC reflects extrapolation from most recent annual birth cohort.

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